Arizona State University

Academic Catalog Archive Addendum 2025-2026

This document, published in December 2025, is a supplement to the Academic Catalog Archive 2025-2026 published in August 2025. It is the record of policies and programs that experienced changes since the publication of the Academic Catalog Archive 2025-2026. It also contains additional policies that were not provided within the Academic Catalog Archive 2025-2026 because information was unavailable at the time of publication.

This addendum is a printable publication for accreditation organizations, agencies and university offices for data collection, evaluation purposes and referencing. Academic advisors, faculty and current students should refer to the online version of the academic catalog.

To navigate this document version of the Academic Catalog Addendum 2025-2026, refer to the table of contents and the bookmarks provided.

For inquiries or questions please contact academic.catalog@asu.edu.

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University academic policies

The following university academic policies experienced a change for the 2025-2026 academic year or were not available at the time of publication. These changes occurred after the publication of the 2025-2026 academic catalog archive.

Undergraduate policies and procedures

Course load and concurrent enrollment

Graduate credits earned by undergraduate students

Current policy:
ASU undergraduate students who have achieved senior status (they cannot be postbaccalaureate) with a cumulative GPA of 3.00 or higher may count up to 15 credit hours of graduate-level coursework toward their graduate degree at ASU (termed preadmission credit hours). Only graduate courses with a grade of "B" (3.00) or higher may be included on a graduate plan of study. Preadmission graduate courses cannot be used to meet any baccalaureate graduation requirements. Before registering for these courses, students are advised to check with their academic advisor to ensure the correct internal academic unit or college process is followed. Permission to take a preadmission graduate course does not guarantee admission to a graduate degree program or that the course may be used toward graduate degree requirements.

Previous policy:
ASU undergraduate students who have achieved senior status (they cannot be postbaccalaureate) with a cumulative GPA of 3.00 or higher may count up to 12 credit hours of graduate-level coursework toward their graduate degree at ASU (termed preadmission credit hours). Only graduate courses with a grade of "B" (3.00) or higher may be included on a graduate plan of study. Preadmission graduate courses cannot be used to meet any baccalaureate graduation requirements. Before registering for these courses, students are advised to check with their academic advisor to ensure the correct internal academic unit or college process is followed. Permission to take a preadmission graduate course does not guarantee admission to a graduate degree program or that the course may be used toward graduate degree requirements.

Source URL: https://catalog.asu.edu/course_load#accelerated

Credit by examination

Advanced Placement (AP)

Current policy:

Examination	Score	Credit Hours	Equivalency
Psychology	5 or 4	3	PSY 101

Previous policy:

Examination	Score	Credit Hours	Equivalency
Psychology	5 or 4	3	PGS 101 or PSY 101

Cambridge International Exam

Current policy:
No longer accepted as exam is no longer offered

Previous policy:

Examination	Score	Credit Hours	Equivalency
Mathematics – Further – AS-Level	E or better	4	MAT 270

College-level Examination Program (CLEP)

Current policy:

Examination	Score	Credit Hours	Equivalency
Introductory Psychology	5 or 4	3	PSY 101

Previous policy:

Examination	Score	Credit Hours	Equivalency
Introductory Psychology	5 or 4	3	PGS 101 or PSY 101

DANTES/DSST

Current policy:

Examination	Score	Credit Hours	Equivalency
Math for Liberal Arts	400	3	MAT 114

Previous policy:

Examination	Score	Credit Hours	Equivalency
Math for Liberal Arts	400	3	MAT 142

International Baccalaureate (IB)

Current policy:

Examination	Score	Credit Hours	Equivalency
Psychology – high level	7, 6 or 5	3	PSY 101

Previous policy:

Examination	Score	Credit Hours	Equivalency
Psychology – high level	7, 6 or 5	3	PGS 101 or PSY 101

Source URL: https://catalog.asu.edu/credit_exam

Academic programs (descriptions and requirements)

The following degree programs experienced a change for the 2025-2026 academic year or were not available at the time of publication. These changes occurred after publication of the 2025-2026 academic catalog archive.

Graduate certificates and degree programs

Artificial Intelligence Engineering (Chemical Engineering), MS (ESAIECEMS). Establishment. Spring 2026.

Degree awarded: MS Artificial Intelligence Engineering (Chemical Engineering)
Campus: Tempe

Program description:
The Master of Science program in artificial intelligence engineering with a concentration in chemical engineering combines advanced study in AI approaches with deep domain expertise in chemical engineering.

The use of AI approaches, including machine learning, large language models, robotics and pattern recognition, is becoming widespread in chemical engineering. Chemical engineers can use such AI tools to develop new production processes, improved and more sustainable chemical products for human health, accelerated manufacturing, optimal nutritional profiles for bioprocesses, and many other applications.

Students learn how to develop and customize relevant AI approaches to chemical engineering problems. A core curriculum in AI engineering foundations, AI systems and tools, AI ethics and social responsibility, and data collection and evaluation for AI systems is complemented by chemical engineering-specific courses to ensure breadth and depth in AI and in chemical engineering.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

STEM-OPT for international students on F-1 visas
This program may be eligible for an Optional Practical Training extension for up to 24 months. This OPT work authorization period may help international students gain skills and experience in the U.S. Those interested in an OPT extension should review ASU degrees that qualify for the STEM-OPT extension at ASU's International Students and Scholars Center website.

The OPT extension only applies to students on an F-1 visa and does not apply to students completing a degree through ASU Online.

Degree requirements:
Required Core (3 credit hours)
FSE 561 Artificial Intelligence Ethics and Social Responsibility (3)

AI Engineering Foundations (3 credit hours)

AI Systems and Tools (3 credit hours)

Data Collection and Evaluation for AI Systems (3 credit hours)

Concentration (9 credit hours)
CHE 533 Transport Processes I (3)
CHE 543 Thermodynamics of Chemical Systems (3)
CHE 544 Chemical Reactor Engineering (3)

Electives (3 or 6 credit hours)

Culminating Experience (3 or 6 credit hours)
CHE 593 Applied Project (3)
CHE 599 Thesis (6)

Additional Curriculum Information
Students should see their program advisor for a complete list of approved courses.

Admission requirements:
General university admission requirements:

All students are required to meet general university admission requirements.
U.S. applicants | International applicants | English proficiency

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in computing, engineering, mathematics, statistics or a related field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:
1. graduate admissions application and application fee
2. official transcripts
3. professional resume
4. proof of English proficiency

Additional Admission Information
An applicant whose native language is not English must provide proof of English proficiency regardless of current residency by scoring at least 90 on the Internet-based TOEFL (iBT) taken in a testing center, 7 on the IELTS or 115 on the Duolingo English test.

The professional resume should specify familiarity with Matlab, Python, SQL, R or other relevant programming skills.

Career opportunities:
Chemical engineers with a background in AI can pursue opportunities in a variety of fields to develop, customize and apply AI systems and tools while taking ethical and societal considerations into account. These skills can be applied to industries including:
- chemicals manufacturing
- petroleum refining
- pharmaceuticals
- polymer processing
- semiconductor processing

Contact information:
Engineering, Ira A. Fulton Schools of
School for Engineering of Matter, Transport and Energy
https://semte.engineering.asu.edu/
ECG 202
semtegrad@asu.edu
480-965-2335

Artificial Intelligence Engineering (Manufacturing), MS (ESAIEMMS). Establishment. Spring 2026.

Degree awarded: MS Artificial Intelligence Engineering (Manufacturing)
Campus: Polytechnic

Program description:
The Master of Science program in artificial intelligence engineering with a concentration in manufacturing combines advanced study in AI approaches with deep domain expertise in manufacturing engineering.

Students learn how to develop AI tools, including machine learning, computer vision and natural language processing, to make production processes more efficient. This can be done through leveraging a variety of manufacturing data (sales, throughput, videos, images, etc.) to improve productivity, including predictive maintenance. Students learn from a core curriculum spanning AI engineering foundations, AI systems and tools, data collection and evaluation for AI systems, as well as a required course on AI ethics and social responsibility. These classes are complemented by manufacturing-specific courses, such as manufacturing systems management, modern manufacturing methods, and metal additive manufacturing, to develop the advanced manufacturing systems essential to realize the promise of Industry 4.0.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

STEM-OPT for international students on F-1 visas
This program may be eligible for an Optional Practical Training extension for up to 24 months. This OPT work authorization period may help international students gain skills and experience in the U.S. Those interested in an OPT extension should review ASU degrees that qualify for the STEM-OPT extension at ASU's International Students and Scholars Center website.

The OPT extension only applies to students on an F-1 visa and does not apply to students completing a degree through ASU Online.

Degree requirements:
Required Core (3 credit hours)
FSE 561 Artificial Intelligence Ethics and Social Responsibility (3)

AI Engineering Foundations (3 credit hours)

AI Systems and Tools (3 credit hours)

Data Collection and Evaluation for AI Systems (3 credit hours)

Concentration (9 credit hours)
MFG 523 Artificial Intelligence for Smart Manufacturing (3)
MFG coursework (6)

Electives (3, 6 or 9 credit hours)

Culminating Experience (0, 3 or 6 credit hours)
MFG 593 Applied Project (3)
MFG 599 Thesis (6)
portfolio (0)

Additional Curriculum Information
Any additional core classes taken will be treated as electives. No class can be taken to satisfy both a core requirement and a concentration requirement. Additional electives are decided by the Graduate Program Committee.

Admission requirements:
General university admission requirements:

All students are required to meet general university admission requirements.
U.S. applicants | International applicants | English proficiency

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in computing, engineering, mathematics, statistics, manufacturing or a related field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:

1. graduate admissions application and application fee
2. official transcripts
3. personal statement
4. professional resume
5. short-answer questions
6. self-reported test scores
7. unofficial transcripts
8. proof of English proficiency

Additional Admission Information
An applicant whose native language is not English must provide proof of English proficiency regardless of their current residency by scoring at least 90 on the Internet-based TOEFL (iBT) taken in a testing center, a 7 on the IELTS, or 115 on the Duolingo English test.

The professional resume should specify familiarity with Matlab, Python, SQL, R or other relevant programming skills.

Career opportunities:
Manufacturing engineers with a background in AI can pursue opportunities in a variety of fields to develop, customize and apply AI systems and tools while taking ethical and societal considerations into account. These skills can be applied to industries including:

- data-driven modeling and simulation
- factory operations management
- industrial robotics
- microelectronics manufacturing
- smart automation

Contact information:
Engineering, Ira A. Fulton Schools of
School of Manufacturing Systems and Networks
https://msn.engineering.asu.edu/degrees/graduate/
TECH 105
msninfo@asu.edu
480-965-2272

Artificial Intelligence Engineering (Materials Science and Engineering), MS (ESAIEMSEMS). Establishment. Spring 2026.

Degree awarded: MS Artificial Intelligence Engineering (Materials Science and Engineering)
Campus: Tempe

Program description:
The Master of Science program in artificial intelligence engineering with a concentration in materials science and engineering combines advanced study in AI approaches with deep domain expertise in materials science.

The use of AI approaches, including machine learning, natural language processing, computer vision, robotics and pattern recognition is becoming widespread in many fields, including all engineering disciplines. Yet, the majority of engineering occupations require subject matter expertise beyond AI.

Students learn how to develop and customize relevant AI approaches, such as those mentioned above, to materials science problems. A core curriculum in AI engineering foundations, AI systems and tools, AI ethics and social responsibility, and data collection and evaluation for AI systems is complemented by materials science and engineering-specific courses to ensure breadth and depth in AI and in materials science and engineering.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

STEM-OPT for international students on F-1 visas
This program may be eligible for an Optional Practical Training extension for up to 24 months. This OPT work authorization period may help international students gain skills and experience in the U.S. Those interested in an OPT extension should review ASU degrees that qualify for the STEM-OPT extension (https://issc.asu.edu/f-1j-1-students/employment/stem) at ASU's International Students and Scholars Center website.

The OPT extension only applies to students on an F-1 visa and does not apply to students completing a degree through ASU Online.

Degree requirements:
30 credit hours including a thesis, or
30 credit hours including the required applied project course (MSE 593)

Required Core (3 credit hours)
FSE 561 Artificial Intelligence Ethics and Social Responsibility (3)

AI Engineering Foundations (3 credit hours)

AI Systems and Tools (3 credit hours)

Data Collection and Evaluation for AI Systems (3 credit hours)

Concentration (12 credit hours)
MSE 551 Applied Machine Learning for Mechanical Engineers (3)
MSE coursework (9)

Electives (0 or 3 credit hours)

Culminating Experience (0 or 6 credit hours)
MSE 593 Applied Project (3)
MSE 599 Thesis (6)

Additional Curriculum Information
Students should see their program advisor for a complete list of approved courses.

Admission requirements:
General university admission requirements:
All students are required to meet general university admission requirements.
U.S. applicants | International applicants | English proficiency

https://admission.asu.edu/apply/graduate/admission
https://admission.asu.edu/apply/international/graduate
https://admission.asu.edu/apply/international/graduate/english-proficiency

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in computing, engineering, mathematics, statistics, materials science or a related field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of a student's first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:

1. graduate admissions application and application fee
2. official transcripts
3. personal statement
4. professional resume
5. proof of English proficiency

Additional Admission Information
An applicant whose native language is not English must demonstrate English proficiency by scoring at least 90 on the Internet-based TOEFL (iBT) or 7 on the IELTS and 115 on the Duolingo English test.

Familiarity with Matlab, Python, SQL, R or other relevant programming skills must be present in the professional resume.

Career opportunities:
Materials scientists with a background in AI can pursue opportunities in a variety of fields to develop, customize and apply AI systems and tools while taking ethical and societal considerations into account. These skills can be applied to industries including:

- biomaterials
- energy conversion systems
- manufacturing
- materials development

Contact information:
Engineering, Ira A. Fulton Schools of
School for Engineering of Matter, Transport & Energy
https://semte.engineering.asu.edu/
ECG 202
semtegrad@asu.edu
480-965-2335

Artificial Intelligence Engineering (Software Engineering), MS (ESAIESEMS). Establishment. Spring 2026.

Degree awarded: MS Artificial Intelligence Engineering (Software Engineering)
Campus: Polytechnic

Program description:
The Master of Science program in artificial intelligence engineering with a concentration in software engineering combines advanced study in AI approaches with deep domain expertise in software engineering.

The use of AI approaches, including machine learning, natural language processing, computer vision, robotics and pattern recognition is becoming widespread in many fields, including all engineering disciplines. Yet, the majority of engineering occupations require subject matter expertise beyond AI.

Students learn how to develop and customize relevant AI approaches to software engineering problems. A core curriculum in AI engineering foundations, AI systems and tools, AI ethics and social responsibility and data collection and evaluation for AI systems is complemented by software engineering-specific courses to ensure breadth and depth in AI and in software engineering.

GI Bill® benefits

This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

STEM-OPT for international students on F-1 visas
This program may be eligible for an Optional Practical Training extension for up to 24 months. This OPT work authorization period may help international students gain skills and experience in the U.S. Those interested in an OPT extension should review ASU degrees that qualify for the STEM-OPT extension (https://issc.asu.edu/f-1j-1-students/employment/stem) at ASU's International Students and Scholars Center website.

The OPT extension only applies to students on an F-1 visa and does not apply to students completing a degree through ASU Online.

Degree requirements:
30 credit hours and a thesis, or
30 credit hours including a portfolio, or
30 credit hours including the required applied project course (SER 593)

Required Core (3 credit hours)
FSE 561 Artificial Intelligence Ethics and Social Responsibility (3)

AI Engineering Foundations (3 credit hours)

AI Systems and Tools (3 credit hours)

Data Collection and Evaluation for AI Systems (3 credit hours)

Concentration (9 credit hours)
SER 501 Advanced Data Structures and Algorithms (3)
SER 502 Emerging Languages and Programming Paradigms (3)
SER 515 Foundations of Software Engineering (3)
SER 531 Semantic Web Engineering (3)
SER 541 Data Science for Software Engineers (3)

Electives (3, 6 or 9 credit hours)

Culminating Experience (0 or 6 credit hours)
SER 593 Applied Project (3)
SER 599 Thesis (6)
portfolio (0)

Additional Curriculum Information
For concentration coursework, students select three courses from the list. Students should see their program advisor for a complete list of approved courses.

Admission requirements:
General university admission requirements:
All students are required to meet general university admission requirements.
U.S. applicants | International applicants | English proficiency

https://admission.asu.edu/apply/graduate/admission
https://admission.asu.edu/apply/international/graduate
https://admission.asu.edu/apply/international/graduate/english-proficiency

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor’s or master's degree in computing, engineering, mathematics, statistics, operations research, information technology or a related field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of a student's first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:

1. graduate admissions application and application fee
2. official transcripts
3. personal statement
4. professional resume
5. proof of English proficiency

Additional Admission Information
An applicant whose native language is not English must demonstrate English proficiency by scoring at least 90 on the Internet-based TOEFL (iBT), 7 on the IELTS or 115 on the Duolingo English test.

Familiarity with Matlab, Python, SQL, R, or other relevant programming skills must be present in the professional resume.

Career opportunities:
Software engineers with a background in AI can pursue opportunities in a variety of fields to develop, customize and apply AI systems and tools while taking ethical and societal considerations into account. These skills can be applied to industries including:

- blockchain application
- cybersecurity
- interface development
- software development

Contact information:
Engineering, Ira A. Fulton Schools of
Software Engineering
https://scai.engineering.asu.edu/graduate/
CTRPT 105
scai.grad.admission@asu.edu
480-965-3199

Educational Leadership, MEd (EDSUPVMED). Campus removal. Spring 2026.

Current Campuses: West Valley, Online

Previous Campuses: Polytechnic, West Valley, Online

Entertainment Engineering, MS (HIEEMS). Establishment. Spring 2026

Degree awarded: MS Entertainment Engineering
Campus: Tempe

This program has a fee pending ABOR approval.

Program description:

The Master of Science program in entertainment engineering provides students with the technical expertise to design and develop the systems that power immersive experiences across gaming, virtual reality and related media. Emphasizing innovation, the program prepares students to engineer the underlying technologies that drive the entertainment industry's rapid evolution.

Through a multidisciplinary curriculum that integrates engineering, media and design, students gain a deep understanding of real-time interactive systems, computer graphics, computer vision and immersive technologies. The program is designed for students with technical backgrounds who seek to expand their skill sets into areas that combine creativity with computational precision.

Students are equipped to create transformative tools and platforms that support storytelling, interactivity, simulation and entertainment. They are well-positioned for careers in industries such as game development, extended reality, simulation, virtual production and interactive media.

By preparing students to lead in a dynamic, technology-driven field, the MS in entertainment engineering supports ASU's broader mission to address global challenges through forward-thinking research and education.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

Degree requirements:
30 credit hours including the required applied project course (AME 593)

Required Core (15 credit hours)
AME 530 Philosophy of Media Technology (3)
AME 534 Machine Learning for Media Arts (3)
AME 551 Designing Extended-reality Experiences (3)
AME 554 Integrated Entertainment Systems (3)
DSC 551 Immersive Experience Design I (3)

Restricted Electives (12 credit hours)
AME 520 Movement and Computing (3)
AME 532 Creating Interactive Media (3)
CSE 570 Advanced Computer Graphics I (3)
CSE 578 Data Visualization (3)
EEE 515 Machine Vision and Pattern Recognition (3)
THP 555 Advanced Media Design (3)

Culminating Experience (3 credit hours)
AME 593 Applied Project (3)

Additional Curriculum Information
Students select four of the courses in the restricted electives section in consultation with their program advisor.

Admission requirements:
General university admission requirements:
All students are required to meet general university admission requirements.
U.S. applicants | International applicants | English proficiency

https://admission.asu.edu/apply/graduate/admission
https://admission.asu.edu/apply/international/graduate
https://admission.asu.edu/apply/international/graduate/english-proficiency

Applicants must fulfill the requirements of both the Graduate College and the Herberger Institute for Design and the Arts.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in entertainment engineering, media arts, animation, game design, computer graphics, computer music, computer science, engineering or a related field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of a student's first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:

1. graduate admissions application and application fee
2. official transcripts
3. personal statement
4. professional resume
5. two letters of recommendation
6. proof of English proficiency

Additional Admission Information
An applicant whose native language is not English must provide proof of English proficiency regardless of current residency.

The statement of purpose should explain in a concise and persuasive manner how the student's educational, professional and personal experiences inform their research and creative interests, and the student should elaborate on any aspect of their background that supports candidacy to The GAME School program.

Career opportunities:
Graduates of this program can pursue the following careers:

- interaction content producer or designer
- LED volume network engineer or technical director
- media programmer
- multimedia installation integrator
- playback developer
- prototyping integrator
- technical director or VP supervisor
- video systems engineer or designer
- virtual production supervisor

Contact information:
Design and the Arts, Herberger Institute for
The GAME School
https://thegameschool.asu.edu/
STAUF-B 217
ameed@asu.edu
480-965-9432

Foundations of Computing, Microcertificate (ESFOCGRCT). Establishment. Spring 2026.

Degree awarded: Foundations of Computing (Certificate)
Campus: Online

This program is offered for Mandarin-speaking students in China. Instruction is offered entirely in Mandarin.

Program description:
The foundations of computing microcertificate program offers a rigorous curriculum designed to build a strong theoretical and practical understanding of the core principles that drive modern computing.

The program prepares students who do not have backgrounds in science, technology, engineering or mathematics for professional roles that require a solid understanding of computing. It also prepares students interested in applying to Ira A. Fulton Schools of Engineering's computing-focused graduate degree programs.

Students develop proficiency in key areas such as logic, proof strategies, combinatorics, algorithm analysis, discrete structures (including sets, relations and trees), and the fundamentals of finite automata. Concepts learned include foundations of engineering mathematics, multivariable calculus, differential equations and optimization, probability and statistics as well as programming paradigms.

In addition to theoretical foundations, the microcertificate program emphasizes hands-on experience in computer programming. Learners engage with multiple programming paradigms and programming language design, and they gain the skills necessary to design and implement robust, object-oriented and service-oriented software systems.

Program requirements:
9 credit hours

Required Core (9 credit hours)
FSE 598 Topic: Emerging Computing Technologies (3)
FSE 598 Topic: Foundations of Engineering Mathematics (3)
FSE 598 Topic: Programming Languages and Paradigms (3)

Admission requirements:
General university admission requirements:

All students are required to meet general university admission requirements.
U.S. applicants | International applicants | English proficiency

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in any field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:

1. graduate admissions application and application fee
2. official transcripts
3. professional resume
4. proof of English proficiency

Additional Admission Information
Eligibility is strictly limited to Mandarin-speaking applicants from China. Applicants who hold a Benke Graduation Certificate or Zhuanke without a bachelor's degree equivalent are eligible to apply.

The professional resume should include all degrees earned and professional work experience.

Career opportunities:
Graduates of the foundations of computing microcertificate program have strengthened technical and analytical skills that are valuable in computing and related fields. This credential can open doors to roles that require computing fluency or prepare students for graduate study.

Potential career opportunities include:

- business or systems analyst
- project coordinator for tech or engineering projects
- software support specialist or application specialist
- STEM educator or trainer (with computing emphasis)
- technical analyst or data analyst

This credential also boosts employability in non-STEM fields where digital literacy, problem-solving and programming skills are increasingly expected (e.g., finance, health care, consulting, government and education).

Contact information:
Engineering, Ira A. Fulton Schools of
Dean, Ira A. Fulton Schools of Engineering
https://asuonline.asu.edu/online-degree-programs/graduate/master-engineering-area-study-engineering-management/
HLMK 372
student-fseonline@asu.edu
480-965-1740

Immersive Experience Design, MS (HIIMEXDMS). Establishment. Spring 2026.

Degree awarded: MS Immersive Experience Design
Campus: ASU at Mesa City Center

Program description:
The Master of Science in immersive experience design is a comprehensive, two-year graduate program designed to advance students' skills in creating immersive experiences that transcend traditional boundaries. The program emphasizes developing expertise in extended reality, immersive storytelling, real-time rendering engines, generative art, 3D asset generation and animation, data visualization, computational media, artificial intelligence, creative programming, human-computer interaction and world-building across both physical and virtual realms.

Unique among emerging media and design programs, this program leverages these technologies with a focus on immersive media experiences from extended reality applications to large-scale media installations. Students gain practical and theoretical insights through rigorous coursework and research that includes technical skillsets development, critical discussion and collaborative opportunities across the Herberger Institute for Design and the Arts diverse programs. The curriculum is enriched with courses, critiques and one-on-one mentorship, ensuring graduates produce a compelling and impactful body of work that addresses real-world challenges and possibilities for the future.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

STEM-OPT for international students on F-1 visas
This program may be eligible for an Optional Practical Training extension for up to 24 months. This OPT work authorization period may help international students gain skills and experience in the U.S. Those interested in an OPT extension should review ASU degrees that qualify for the STEM-OPT extension (https://issc.asu.edu/f-1j-1-students/employment/stem) at ASU's International Students and Scholars Center website.

The OPT extension only applies to students on an F-1 visa and does not apply to students completing a degree through ASU Online.

Degree requirements:
36 credit hours including the required capstone course (DSC 559)

Required Core (18 credit hours)
DSC 551 Immersive Experience Design I (3)
DSC 552 Interactive Art and Media Installations (3)
DSC 553 Designing Digital Worlds (3)
DSC 554 Introduction to Extended Realities (3)
DSC 556 Programming Fundamentals for Immersive Experience Design (3)
DSC 557 Ethics and Social Impact in Immersive Experiences (3)

Research (3 credit hours)
DSC 558 Applied Research in Immersive Experience Design (3)

Electives (12 credit hours)

Culminating Experience (3 credit hours)
DSC 559 Immersive Experience Integration and Realization (3)

Additional Curriculum Information
Students should see the academic unit for an approved elective list.

The culminating experience course is a final design studio with a written component, taken under the guidance of studio faculty and industry professionals.

Admission requirements:
General university admission requirements:
All students are required to meet general university admission requirements.

U.S. applicants | International applicants | English proficiency

https://admission.asu.edu/apply/graduate/admission
https://admission.asu.edu/apply/international/graduate
https://admission.asu.edu/apply/international/graduate/english-proficiency

Applicants must fulfill the requirements of both the Graduate College and the Herberger Institute for Design and the Arts.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in design and media arts or a related field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of a student's first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:
1. graduate admissions application and application fee
2. official transcripts
3. contact information of two references
4. letter of intent
5. portfolio
6. professional resume
7. proof of English proficiency

Additional Admission Information
An applicant whose native language is not English must provide proof of English proficiency regardless of their current residency.

The portfolio, letter of intent, resume and contact information of two references must be submitted via SlideRoom. The Design School requires that these be submitted in addition to the graduate application requirements.

Admission to the program is selective. Students must enroll in the semester for which they are admitted; otherwise, they will need to go through the entire application process again for the year in which they are applying.

In the letter of intent, applicants are required to express their intention to apply to the program by outlining the reasons for their application, their motivation for pursuing the program, and their future goals in the field, briefly touching upon their background, experiences, and qualifications that make them a suitable candidate for the program.

The portfolio must be a curated collection of a candidate's design works, projects and creations to visually represent the applicant's skills, creativity, design sensibilities and ability to conceptualize, innovate and effectively communicate design ideas.

Applicants must submit contact information for two professional references. These can come from current and past faculty members, professional mentors, supervisors or community leaders and elders.

Career opportunities:
Immersive design is a dynamic and rapidly evolving field with increasing demand for skilled professionals. Graduates of this program are equipped with a powerful blend of technical expertise, critical thinking and creative design methodologies. This unique skill set enables them to lead innovation in immersive technologies and apply them across industries that require not just digital tools, but integrated design strategies for physical, social and spatial experiences. Possible career fields include:
- creative and design leadership
- extended realities and interactive systems
- experience and interface design
- media technology and content development
- spatial and environmental systems

Possible careers in these fields include:
- creative technologist
- experience design lead
- extended reality developer

- human-computer interaction specialist
- immersive media developer
- immersive user experience designer
- spatial computing designer
- smart environment designer
- simulation designer (digital twins, real-time training environments)
- technical artist

Contact information:
Design and the Arts, Herberger Institute for
The Design School
https://design.asu.edu/
CDN 162
MIXStudents@asu.edu
480-965-3436

Interdisciplinary Studies (Interdisciplinary Arts and Performance), MA (ASIDSIPMA). Disestablishment. Spring 2026.

Leadership and Management, MLM (TBLDMGMLM). Campus addition. Spring 2026.

Current campuses: Online, ASU Sync

Previous campuses: Online

Management of Technology, MS (ESMGMTCHMS). Campus addition. Spring 2026.

Current campuses: Polytechnic, Online

Previous campuses: Polytechnic

Medicine, MD (MDMEDMD). Establishment. Summer 2026.

Degree awarded: MD Medicine
Campus: Downtown Phoenix

Program description:
The Doctor of Medicine program prepares students to become licensed medical doctors with a comprehensive foundation in clinical skills, biomedical and engineering sciences. Through small-group learning, laboratory and simulations, clinical rotations and utilizing advanced medical technologies, students gain expertise in basic sciences, organ systems and clinical medicine. The program is fully integrated with medical engineering, allowing students to explore innovations such as biomedical devices, robotics and artificial intelligence in health care throughout foundational and clinical curricula. This interdisciplinary approach enhances clinical problem-solving and the application of engineering to improve patient care. Emphasizing lifelong learning, critical thinking and technical proficiency, the program ensures graduates stay at the forefront of medical advancements and technological innovations.

Students in the MD program also complete the requirements for the MS in Medical Engineering.

Accreditation
The John Shufeldt School of Medicine and Medical Engineering, Doctor of Medicine program has received preliminary accreditation by the Liaison Committee on Medical Education (LCME). This is the U.S. Department of Education-recognized accrediting body for programs leading to an MD degree in the United States.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

Degree requirements:
160 credit hours, national board exams and an internal comprehensive clinical exam

Pre-Clerkship (First 16 months; 69 credit hours): Students gain a robust foundation in biomedical sciences, clinical skills and medical engineering through small group active learning and early clinical exposure. Courses weave together core medical concepts with real-world applications of artificial intelligence, or AI, health systems science and the health humanities

Clerkship (12 months; 48 credit hours): Six core clerkships are paired with longitudinal family medicine experiences and four one-week engineering clinical clerkships. Thematic Innovation weeks reinforce foundational sciences and explore advanced clinical and engineering applications. Core clerkships include Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Neurology, Psychiatry, Family Medicine, and the Engineering Clerkship. This phase culminates with USMLE Step 1.

Post-Clerkship (Final 18 months; 43 credit hours): Students personalize their education with electives, selectives, advanced clerkships, and a longitudinal capstone project in medical engineering, preparing them to lead in both clinical practice and innovation. During this phase, students will be required to complete four-week rotations in Emergency Medicine, Critical Care, two Sub-Internships, and electives. Residency preparedness will occur throughout the phase, including a three-week Transition to Residency course prior to convocation.

Admission requirements:
This program is only available to U.S. citizens and permanent residents.

Medical College Admissions Test
To be considered for admission to the School of Medicine and Medical Engineering at ASU, applicants must have taken the MCAT and scored a minimum of 504. The MCAT must be taken no more than three years before matriculation to be eligible.

Recommended coursework
The school does not require specific majors or coursework for entry into the concurrent degree program. However, to maximize student preparedness and chances for success in the program, candidates are strongly recommended to have successfully completed the following courses:

Medical curriculum preparedness:
biological sciences, including anatomy and physiology
chemistry, including organic and biological chemistry
behavioral sciences
humanities
English

Engineering curriculum preparedness:
calculus
multivariate calculus
differential equations
linear algebra
statistics
physics

Personal and professional experiences
As part of the holistic review for the School of Medicine and Medical Engineering admission process, the school will also consider the personal and professional experiences of applicants to help discover well-rounded students in research and clinical exposure, contributions, and goals for the future. Recommended experiences include:

clinical exposure
engineering or data science
leadership
service
extracurricular activities

Letters of recommendation
The school requires four letters of recommendation. One from a clinical experience and one from an engineering or data science experience or course instructor are recommended.

Additional requirements
background check
AZ fingerprint clearance
criminal background check
U.S. citizenship
technical standards and essential qualifications
acknowledgement of concurrent degree program

For more detailed information on admission requirements, how to apply to the John Shufeldt School of Medicine and Medical Engineering, and important dates and deadlines, applicants should visit the main admission page at https://medicine.asu.edu/future-students/admissions.

Career opportunities:
Graduates of the MD program are uniquely positioned for careers that blend clinical practice with biomedical innovation. In addition to traditional medical roles, they can lead the development of advanced medical technologies and health care innovation.

Potential job titles include:
- academic faculty or researcher
- biotech startup founder or advisor
- clinical practitioner in various specialties
- global health specialist
- government health advisor
- health care consultant
- leadership in medical technology companies
- medical device engineer
- medical researcher

Contact information:
Medicine and Medical Engineering, John Schufeldt School of
John Schufeldt School of Medicine and Medical Engineering
https://medicine.asu.edu/
MERCB
medschooladmission@asu.edu
480-727-8005

Psychological Science, Certificate (ASPSYSGRCT). Establishment. Spring 2026.

Degree awarded: Psychological Science (Certificate)
Campus: Online

This program is offered for Mandarin-speaking students in China. Instruction is offered entirely in Mandarin. This program has a fee pending approval.

Program description:
The graduate certificate program in psychological science provides students with a strong foundation in understanding human behavior, decision-making and well-being. Unlike many certificate programs, this curriculum includes training in research methods, reflecting psychology's emphasis on evidence-based knowledge and preparing students to critically evaluate how findings are produced. Coursework emphasizes the application of psychological concepts across a wide variety of professional contexts, encouraging students to think critically about how psychology informs both personal and organizational growth.

Students engage with material relevant to fields such as education, human resources, organizational development and community services. While the program is designed as preparation for further graduate study in psychology, it also equips students with practical insights that enhance effectiveness in their current or future careers. Through a rigorous curriculum, students develop skills in analysis, reflection, research literacy and problem-solving that deepen professional competence and broaden opportunities for impact.

Degree requirements:
15 credit hours

Required Core (9 credit hours)
PSY 503 History and Scope of Psychological Science (3)
PSY 585 Advanced Positive Psychology (3)
PSY 586 Emotion (3)

Electives (3 credit hours)
PSY 598 Topic: Family Dynamics in Chinese Culture (3)

Research (3 credit hours)
PSY 500 Research Methods (3)
PSY 513 Fundamentals in Quantitative Methods (3)

Additional Curriculum Information
For the research courses, students select PSY 500 or PSY 513. Courses should be selected in consultation with the student's program advisor.

Admission requirements:
General university admission requirements:

All students are required to meet general university admission requirements.
U.S. applicants | International applicants | English proficiency

Applicants must fulfill the requirements of both the Graduate College and the New College of Interdisciplinary Arts and Sciences.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in psychology or a related field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants are required to submit:
1. graduate admissions application and application fee
2. official transcripts
3. proof of English proficiency

Additional Application Information
Eligibility is strictly limited to Mandarin-speaking applicants from China. Applicants who hold a Benke Graduation Certificate or Zhuanke without a bachelor's degree equivalent are eligible to apply.

Career opportunities:
The foundational knowledge in psychology gained through the program can support students in a wide variety of professional contexts. Concepts related to human behavior, decision-making, and well-being are broadly applicable and may enhance students' effectiveness in fields such as:
- community services
- education
- human resources
- organizational development

In this way, while the program's central role is as a pathway to admission for graduate study, it also provides students with insights that can contribute positively to their current or future careers.

Contact information:
Interdisciplinary Arts and Sciences, New College of
School of Social and Behavioral Sciences
https://newcollege.asu.edu/advising/graduate
FAB N101
NC.AZXSupport@asu.edu

602-543-0000

Social Work – Advanced Standing (Policy, Administration and Community Practice), MSW (PPCPDTMSW). Campus change. Summer 2026.

Current campuses: ASU Sync

Previous campuses: Downtown Phoenix

Strategic Project Management, Microcertificate (LSSPMGRCT). Establishment. Spring 2026.

Degree awarded: Certificate Strategic Project Management (Certificate)
Campuses: Polytechnic, Tempe

Program description:
Students can boost their careers with a strategic project management microcertificate designed for busy professionals. This targeted program delivers high-impact skills in sustainable project planning, assessment and execution without the time or cost of a full degree. Students gain hands-on experience through practical case studies and build a competitive edge with preparation for industry certifications like PMP, CAPM and GPMb. Whether aiming to lead larger projects, shift into a new role, or stay ahead in a project-driven economy, this microcertificate program offers practical expertise and credentials.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

Degree requirements:
Required Core (9 credit hours)
PMG 503 Impact Analysis and Sustainability in Project Management (3)
PMG 510 Interactive Learning: Scope, Schedule and Cost Management (1)
PMG 511 Interactive Learning: Risk and Procurement Management (1)
PMG 512 Interactive Learning: Quality, Resource and Communication Management (1)
PMG 587 Project Management Professional Prep (3)

Admission requirements:
General university admission requirements:

All students are required to meet general university admission requirements.
U.S. applicants | International applicants | English proficiency

Applicants must fulfill the requirements of both the Graduate College and the College of Integrative Sciences and Arts.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in any subject area from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants must submit:
1. graduate admissions application and application fee
2. official transcripts
3. proof of English proficiency

Additional Admission Information
An applicant whose native language is not English must provide proof of English proficiency regardless of current residency.

Career opportunities:
Graduates of the strategic project management microcertificate program are well-equipped for a variety of roles across industries, including:

- operations manager
- program manager
- project coordinator
- project manager

With expertise in sustainable project practices and industry-recognized certifications, graduates are prepared to take on higher-level responsibilities in both private and public sectors, including nonprofit organizations. Whether managing cross-functional teams, driving efficiency initiatives, or overseeing large-scale projects, this program opens doors to leadership roles that demand strong project management skills and strategic thinking.

Contact information:
Interdisciplinary Sciences and Arts, College of
School of Applied Professional Studies
https://cisa.asu.edu/project-management
EDB 308
480-965-1970

Theatre (Performance Design), MFA (FAPERDMFA). Disestablishment. Fall 2025.

Minor programs

Instructional Design, minor (TELDTMIN). Campus addition. Spring 2026.

Current campuses: Downtown Phoenix, Polytechnic, Tempe, West Valley, Online

Previous campus: Online

Undergraduate certificate programs

Border Studies, certificate (LABDRSCERT). Establishment. Spring 2026.

Campus: Tempe

Program description:
The certificate program in border studies equips students with the theoretical and practical knowledge to understand and contribute to the transformation of borders and transborder communities across nations. Students become effective agents of change by leveraging the history, culture, economics and environmental conditions of borders to advocate for prosperous, resilient and safe border communities and develop informed and innovative solutions.

The certificate program is offered through Arizona State University's School of Transborder Studies, the only school in the U.S. focused on the challenges, opportunities and populations of the U.S.-Mexico transborder space. An optional internship provides students with hands-on experience in the field.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

Curriculum:

The certificate in border studies requires 15 upper-division credit hours. A minimum of six upper-division credit hours must be completed through The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in Class Search. Only courses completed with a grade of "C" (2.00 on a scale of 4.00) or better may be applied toward the certificate requirements.

Core Requirements		
TCL 303 Transborder Theory	C	3
TCL 305 Transborder Practicum and Field Research	C	3
TCL 472 The U.S.-Mexico Border: People, Place, Power	C	3
Electives		
Upper Division Electives TCL 314 Transborder Latin American Migration to the U.S. (SOBE) TCL 327 Health and Migration (SOBE) TCL 332 Mexican American History Since 1900 (GCSI) TCL 348 The Borders of Language (SOBE) TCL 377 Arizona, Immigration, Latinos and Politics TCL 378 Globalization: Migration, Mass Media, McDonald's (GCSI) TCL 425 Geography of the Mexican American Borderland TCL 431 Language Hegemony and Culture TCL 443 Political Ecology of the Border TCL 444 The Ethnography of Mexico and the Borderlands	C	6

TCL 447 Gender, Culture, and Development (GCSI)
TCL 484 Internship
TCL 494 Topic: Ethnography of Schooling in the Borderlands
TCL 494 Topic: Feminism on the Border
TCL 494 Topic: Indigenous Nations & Human Rights on the Border

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Enrollment requirements:
A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded prior to the award of an undergraduate degree. A student already holding an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

Career opportunities:
Students acquire knowledge and skills for careers in government, community and nonprofit organizations; international organizations and businesses; and consulting. The certificate is also appropriate for students preparing for graduate education in political science, economics, public administration, environmental management, public health, cultural studies, migration and other fields where globalization as well as transnational and border processes pose particular challenges and opportunities for society.

Contact information:
Liberal Arts and Sciences, The College of
School of Transborder Studies
https://sts.asu.edu/
INTDSB B165
sts.undergrad@asu.edu
480-965-5091

Legal Systems and Governance, Certificate (LALSGCERT). Establishment. Spring 2026.

Campus: Tempe

Program description:
The legal systems and governance certificate program offers a structured pathway for students to explore legal systems and institutions while securing life-transforming internships in the fields of law, government relations and public policy. Drawing on expertise and networks within the School of Politics and Global Studies and across ASU, the program equips students with practical skills applicable to careers in public, private, nongovernmental and nonprofit entities. Students gain experience analyzing the legal dynamics of political events and public policy.

This 15 credit-hour certificate program focuses on four areas: foundations of legal systems; institutions that structure, revise and enforce the law; principles and ethics that guide the development and revision of laws and regulations; and the applications and impacts of law and legal institutions on civil society. The interdisciplinary program combines high-impact experiential learning, classroom and internship opportunities that draw from local embeddedness in the Phoenix area; Washington, D.C. network; and global reach.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

Program requirements:

The certificate requires a total of 15 credit hours, of which at least 12 credit hours must be completed at the upper-division level. Six credit hours must be from courses offered by The College of Liberal Arts and Sciences. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		
Foundations of Law Course AIS 280 American Indian Sovereignty and the Courts (CIVI) AIS 285 Federal Indian Policy (CIVI) CRJ 260 Criminal Law I: Introduction to Substantive Criminal Law LES 210 Introduction to American Legal System and Business Law PHI 103 Principles of Sound Reasoning (QTRS) POS 110 American Government and Politics (AMIT) POS 150 Comparative Government (GCSI) POS 216 State and Local Government (CIVI)	C	3
Upper Division Institutions Courses CRJ 460 Criminal Law II: Advanced Substantive Criminal Law POS 315 The Supreme Court POS 325 Public Policy Development (CIVI) POS 465 International Organization and Law (GCSI) POS 471 Constitutional Law I (AMIT) POS 472 Constitutional Law II	C	6
Upper Division Principles Course LES 305 Business Law and Ethics for Managers PHI 307 Philosophy of Law (AMIT) PHI 347 Philosophical Theories of Constitutional Law POS 368 Ethics and Human Rights (GCSI) POS 370 Law and Society (CIVI) POS 442 American Political Thought (HUAD) SGS 340 Violence, Conflict and Human Rights (GCSI)	C	3
Upper Division Applications and Impacts Course AIS 380 Contemporary Issues of American Indian Nations JUS 475 / SPA 470 Law, Societies and Justice in Latino-America LES 380 Consumer Perspective of Business Law MGT 430 Negotiations PHI 336 Social and Political Philosophy POS 348 Do You Want to Build a Nation? (CIVI) POS 484 Topic: Arizona State Legislative Internship POS 494 / SGS 494 Topic: Diplomacy/PolicyDesignStudio I	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Enrollment requirements:
A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded before the completion of an undergraduate degree. A student who already holds an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

Career opportunities:
Graduates are able to analyze legal systems related to governance, policymaking, business and nonprofit organizations. The certificate program provides a valuable overview of legal systems and development of analytic and writing skills that

are required for advanced legal training and careers in:

- arbitration
- corporate law
- employment law and human resources
- environmental law
- immigration and asylum
- intellectual property and trademarks
- legislative research and policymaking
- lobbying
- public advocacy
- sports law
- trial law

Graduates are able to demonstrate their knowledge of legal systems and applied analytic and writing skills in their applications to top-tier law schools, and graduate and professional schools in public policy, diplomacy and leadership. The certificate program also provides an excellent foundation for those seeking graduate opportunities in STEM or other fields that intersect with public policy or regulation.

Contact information:
Liberal Arts and Sciences, The College of
School of Politics and Global Studies
https://spgs.asu.edu
COOR 6700
Spgs-ugadvising@asu.edu
480-965-8563

Work+Life Design, Certificate (UCWLDCERT). Establishment. Spring 2026.

Campuses: Downtown Phoenix, Polytechnic, Tempe, West Valley

Program description:
The work+life design certificate program equips students with real-world experience, essential soft skills, and a deeper understanding of their career goals through hands-on learning opportunities like internships, research and service projects. The program helps students stand out to employers and graduate schools by showcasing their initiative and readiness.

Students begin with a foundational course in experiential learning where they explore how to integrate their academic and personal experiences while fostering a growth mindset for lifelong success. They gain confidence and clarity by applying classroom knowledge in practical settings and reflecting on their growth so that they can bridge academic learning and professional success.

GI Bill® benefits
This new program is not yet approved for use with GI Bill® benefits.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill/.

Program requirements:

This certificate requires 15 credit hours, of which at least 12 must be upper division.		
ASU 230 Life by Design	C	3
Upper Division Experiential Focused Courses	C	12

Students work with University College advisors to select courses from the ASU Course Catalog in the following categories: study abroad, work-integrated learning, internship (XXX 484), service learning, research, experiential learning, and career development.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Enrollment requirements:
A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded prior to the award of an undergraduate degree. A student already holding an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

Career opportunities:
Graduates have tailored hands-on learning in this flexible program to fit their career goals, giving them a competitive edge in any field. Graduates who earn the certificate are distinguished individuals with real-world experience and career-ready skills.

Contact information:
University College
Dean, University College
https://universitycollege.asu.edu/
INTDSB 354
worklifedesign@asu.edu
480-965-9256

Undergraduate degree programs

English (Narrative Studies), BA (LAENGNSBA). Campus addition. Spring 2026.

Current campuses: Tempe, Online

Previous campuses: Tempe

Social and Cultural Analysis (Latin American Studies), BA (ASSCALABA). Disestablishment. Spring 2026.

Dual objective programs

For the purposes of the Arizona State Approving Agency, ASU has identified the following program combinations as viable combinations applicable to a single career objective. This information was not available at the time of publication of the 2025-2026 academic catalog archive.

Graduate-level combinations

Shared coursework policy

Coursework common to two or more programs must constitute a well-planned and meaningful part of each program. In all cases, the guidelines below must be followed:

- Coursework from graduate microcertificates or graduate certificates may be shared with a degree program if the microcertificate or certificate was completed within three years of admission to the degree program.
- Culminating experiences and comprehensive examinations cannot be shared between degree programs but may be shared between a graduate certificate and a master's degree, when appropriate.

If all other criteria are met, the table below outlines the maximum number of credits that can be shared between different credentials with appropriate approvals:

	Microcertificate	**Certificate**
Microcertificate	None	All
Certificate	All	20% of total credits with one semester of program overlap
Master's	All	All
Doctorate	All	All

DNP/CERT Advanced Nursing Practice (Family Nurse Practitioner) and Nurse Education in Academic and Practice Settings (NUANPFNDNP and NUNURSEDCE)

Program description:
The Family Nurse Practitioner (FNP) concentration in ASU's Doctor of Nursing Practice (DNP) program prepares nurses for advanced, holistic, and client-centered primary care across the lifespan in various settings.

The hybrid program requires students to attend campus for orientation (one week) and 2–3 visits per semester. Coursework includes pharmacology, advanced pathophysiology, and health assessment, with specialty classes on diagnosis, management, and prevention of acute and chronic conditions, emphasizing health promotion and cultural competence.

Students gain doctoral-level competencies in systems thinking, quality and safety, evidence-based practice, and complete a doctoral project aimed at improving outcomes at the patient, provider, or system level. The program develops leaders skilled in translating research into practice, interdisciplinary collaboration, and health policy advocacy.

Clinical placements are primarily in Maricopa County, though students outside the area must secure their own approved sites. Clinical rotations include underserved and rural areas to build multicultural experience.

ASU is a participant in the State Authorization Reciprocity Agreement (SARA), allowing distance education in most states, though California is not a member; specific program exceptions are listed on ASU's authorization website.

This certificate program in nurse education in academic and practice settings prepares registered nurses and other health professionals who have earned a master's degree to teach in academic or practice settings.

Courses include curriculum development, teaching methods, design and delivery of mediated instruction, producing and evaluating educational programs, and a teaching practicum.

DNP At a Glance:
Offered by: Edson College of Nursing and Health Innovation
Location: Downtown Phoenix campus
STEM-OPT extension eligible: No

Certificate At a Glance:
College/school: Edson College of Nursing and Health Innovation
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

DNP
84 credit hours including the required applied project course (DNP 707)

Required Core (13 credit hours)
DNP 704 Principles of Evidence-Based Care in Advanced Practice (4)
DNP 705 Health Care Outcomes Management (3)
DNP 708 Systems Thinking in a Complex Healthcare Environment (3)
DNP 709 Individual and Innovation Leadership in Healthcare Practice (3)

Concentration (22 credit hours)
DNP 633 Family Health Promotion (3)
DNP 634 Family Health Promotion Practicum (3)
DNP 635 Management of Common Health Problems in Children, Adults and Families (3)
DNP 636 Management of Common Health Problems in Children, Adults and Families Practicum (5)
DNP 637 Management of Complex and Chronic Health Problems in Children, Adults and Families (3)
DNP 638 Management of Complex and Chronic Health Problems in Children, Adults and Families Practicum (5)

Certificate
15 credit hours

Required Core (15 credit hours)
NUR 670 Curriculum Development in Academic and Practice Settings (3)
NUR 671 Teaching in Academic and Practice Settings (3)
NUR 672 Design and Delivery of Mediated Instruction (3)
NUR 673 Producing and Evaluating Programs for Academic and Practice Settings (3)
NUR 579 Role-Focused Practicum: Nurse Educator (3) or NUR 677 Scholarly Citizenship: Teaching Intensive (3)

Additional Curriculum Information
A teaching practicum (comprising 135 clock hours) is required.

As part of the required core, MS and DNP students take NUR 579, and PhD students take NUR 677.

Other Requirement (40 credit hours)
DNP 601 Theoretical Foundations for Advance Practice Nursing (3)
DNP 602 Evaluating Research for Practice (3)
DNP 604 Advanced Human Pathophysiology Across Lifespan (4)
DNP 605 Advanced Health Assessment Across Lifespan (3)
DNP 608 Applied Pharmacotherapeutics Across Lifespan (3)
DNP 609 Advanced Practice Nursing Role (1)
DNP 679 Biostatistics: Principles of Statistical Inference (3)
DNP 703 Innovation in Communication-scholarly and Professional Writing (2)
DNP 711 Healthcare Policy and Innovation (3)
DNP 712 Clinical Residency and Management (12)
DNP 715 Dynamics and Principles of Information in Health Care (3)

Electives and Research (6 credit hours)

Culminating Experience (3 credit hours)
DNP 707 Disseminating Evidence to Advance Best Practice in Health Care and Health Policy (3)

Additional Curriculum Information
Completion of an evidence-based doctoral applied project focused on a clinical issue relevant to advanced practice nursing is required.

The American Nurses Credentialing Center has recommended a minimum of 1,000 postbaccalaureate practicum hours for all students completing a DNP program. This program includes 1,125 practicum hours, exceeding the ANCC requirement.

For electives or research, students should see the academic unit for the approved course list. Other coursework may be used with the approval of the academic unit.

When approved by the student's supervisory committee and the Graduate College, this program allows up to 30 credit hours from a previously awarded master's degree to be used for this program.

Other requirement coursework may be substituted with approval of the academic unit if the student is in an approved concurrent program.

Career opportunities:
The Edson College of Nursing and Health Innovation prepares graduates for excellence upon entering the workplace. DNP graduates are prepared to practice at the most advanced level of nursing.

Graduates of the family nurse practitioner concentration have the knowledge and training to provide health care for patients across the life span in a wide variety of settings. This broad base of comprehension and clinical expertise enables them to participate effectively and lead within clinical, community and academic arenas.

Career examples:
- business owner
- community advocate
- nurse practitioner
- professor

The nurse educator certificate prepares graduates for a variety of careers, helping to educate the future nursing workforce. Possible careers include:
- academic faculty
- charge nurse
- chief nursing officer
- nurse educator
- nursing supervisor

MS/CERT Applied Behavior Analysis and Project Management (LAAPBAMS and LSPMGGRCT)

Program description:
The Master of Science in Applied Behavior Analysis is a two-year, full-time program aligned with the Behavior Analyst Certification Board’s standards. It includes 345 classroom hours and 2,000 supervised practicum hours. The curriculum focuses on foundational behavior-analytic skills, client-centered practice, and core knowledge. Students study key principles such as reinforcement, shaping, and communication training to promote positive behavioral change using evidence-based methods. The program emphasizes ethics, data collection, experimental design, and professional development in communication, leadership, and training others in behavior analysis.

Project managers play a pivotal role in shaping an organization's direction by overseeing complex projects from inception to completion. Their expertise helps reduce costs, maximize efficiencies and increase revenue, driving the industry forward.

Students explore multiple project management methodologies, including waterfall, agile and scrum. Each course emphasizes applied learning through case studies that involve professional projects, enabling students to apply their knowledge and develop practical solutions.

Graduates of this program are well-prepared to pursue key industry certifications, including Certified Associate in Project Management, Green Project Management and Project Management Professional Certification. For more information, students should visit the school website.

MS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe or Online

STEM-OPT extension eligible: No

Degree requirements:

MS

45 credit hours including the required applied project course (PSB 593)

Required Core (27 credit hours)
PSB 501 Basic Principles of Applied Behavior Analysis (3)
PSB 510 Basic Principles of Experimental Analysis of Behavior (3)
PSB 511 Advanced Research Methods (3)
PSB 520 Ethical Issues and Professional Standards in Applied Behavior Analysis (3)
PSB 530 Behavioral Observation and Functional Assessment (3)
PSB 540 Development of Applied Behavioral Intervention Programs (3)
PSB 563 Basic Principles of Organizational Behavior Management (3)
PSB 573 Advanced Principles of Learning and Analysis of Behavior (3)
PSB 578 Applied Behavior Analysis in Developmental Disorders (3)

Electives or Research (4 credit hours)
PSB 591 Seminar (2)
PSB 598 Special Topics (2)

Other Requirements (9 credit hours)
PSB 580 Practicum (5)
PSB 583 Fieldwork (4)

Culminating Experience (5 credit hours)
PSB 593 Applied Project (5)

Certificate

15 credit hours

Required Core (15 credit hours)
OGL 520 Organizational Leadership: Social Psychological Perspectives (3)
PMG 501 Project Management Theory (3)
PMG 502 The Thoughtful Project: Aligning Purpose with Approach (3)
PMG 503 Impact Analysis and Sustainability in Project Management (3)
PMG 510 Interactive Learning: Scope, Schedule and Cost Management (1)
PMG 511 Interactive Learning: Risk and Procurement Management (1)
PMG 512 Interactive Learning: Quality, Resource and Communication Management (1)

Career opportunities:

With a strong foundation in evidence-based practices, graduates have obtained the essential knowledge, skills and practical experience needed to pursue state licensure and establish themselves as proficient Board-Certified Behavior Analysts®. This program prepares students for highly sought-after roles within the human services sector, and upon graduation, students are well-prepared to pursue rewarding careers such as:

- assistant clinical director
- behavior specialist
- clinical director

The graduate certificate in project management equips students with the skills needed for roles as project managers across various sectors, including public, private and nonprofit organizations. Graduates are prepared for a variety of careers such as:

- director of project management
- portfolio or project manager
- senior project manager
- technical project manager

CERT/CERT Applied Behavior Analysis and Autism Spectrum Disorders (TEABAGRCT and EDSPEGRCA)

Program description:

The graduate certificate in Applied Behavior Analysis allows students to specialize in their chosen population while gaining skills applicable across diverse settings. Offered through Mary Lou Fulton Teachers College, the program provides Association for Behavior Analysis International–verified coursework meeting the academic requirements for the

Board Certified Behavior Analyst® (BCBA®) exam. The curriculum includes 315 hours of graduate-level instruction aligned with the BCBA/BCaBA Task List (5th edition) and Test Content Outline (6th edition). Students complete required supervised fieldwork independently, with an optional remote practicum available. Those pursuing both a master's degree and BCBA eligibility should apply to the Master of Arts in Special Education (Applied Behavior Analysis concentration).

The graduate certificate program in autism spectrum disorders is ideal for educators, interventionists, paraprofessionals, psychologists, behavior analysts and family members who want to enhance their preparation for working with individuals living with autism spectrum disorders.

Students can complete the graduate certificate within two years while pursuing a graduate degree, or they can complete it as a stand-alone certificate.

Students interested in sitting for the national Board Certified Behavior Analyst® exam should apply for the Master of Arts program in special education with a concentration in applied behavior analysis or the applied behavior analysis graduate certificate, depending on interest and need.

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

Certificate 1
21 credit hours

Required Core (21 credit hours)
SPE 525 Measurement, Data Display, Interpretation and Experimental Design (3)
SPE 526 Concepts and Principles of Applied Behavior Analysis (3)
SPE 528 Assessment and Intervention Programming for Skill Acquisition (3)
SPE 529 Functional Behavior Assessment and Behavior Change Procedures (3)
SPE 530 Fundamentals of Organizational Behavior Management (3)
SPE 563 Philosophical Foundations of Applied Behavior Analysis in Educational Settings (3)
SPE 567 Ethics of Applied Behavior Analysis (3)

Certificate 2
15 credit hours

Required Core (9 credit hours)
SPE 521 Foundations of Autism Spectrum Disorders (3)
SPE 525 Measurement, Data Display, Interpretation and Experimental Design (3)
SPE 540 Family-Centered Practices (3)

Restricted Electives (6 credit hours)
SPE 520 Verbal Behavior (3)
SPE 527 Behavior Analytic Assessment (3)
SPE 541 Consultation Frameworks and Issues (3)
SPE 560 Behavior Change Procedures: Implementing Interventions in Behavior Analysis (3)
SPE 564 Controversial Therapies; Science, Fad and Pseudoscience in Educational Settings (3)
SPE 566 Applied Behavior Analysis in Inclusive Settings (3)
SPE 567 Ethics of Applied Behavior Analysis (3)
SPE 598 Special Topics (3)

Career opportunities:
The graduate certificate program in applied behavior analysis pairs research and experience to prepare professionals to work with individuals with diverse learning and behavioral needs using the principles of applied behavior analysis. Professionals with expertise in evidence-based practices in applied behavior analysis are in high demand across sectors and industries, including education, business and health care.

Career examples include:
- applied behavior analysis therapist
- behavior consultant
- behavior specialist
- Board Certified Behavior Analyst®
- early interventionist
- educator

- organizational behavior management specialist

Students gain specialized skills and knowledge to work effectively and compassionately with children and adults, including family members, impacted by autism.

Career examples include:
- adapted physical education specialist
- clinical psychologist
- counselor
- special education teacher
- speech-language pathologist

CERT/CERT Applied Behavior Analysis and Corrections Leadership and Management (TEABAGRCT and PPCMGGRCT)

Program description:
The graduate certificate in Applied Behavior Analysis allows students to specialize in their chosen population while gaining skills applicable across diverse settings. Offered through Mary Lou Fulton Teachers College, the program provides Association for Behavior Analysis International–verified coursework meeting the academic requirements for the Board Certified Behavior Analyst® (BCBA®) exam. The curriculum includes 315 hours of graduate-level instruction aligned with the BCBA/BCaBA Task List (5th edition) and Test Content Outline (6th edition). Students complete required supervised fieldwork independently, with an optional remote practicum available.

The graduate certificate program in corrections management gives students already holding a bachelor's degree a solid foundational understanding of correctional administration, leadership and policy analysis.

The curriculum provides coursework in criminal justice organizations, corrections and community supervision, and institutional management, and in cross-disciplines such as public administration.

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

Certificate 1
21 credit hours

Required Core (21 credit hours)
SPE 525 Measurement, Data Display, Interpretation and Experimental Design (3)
SPE 526 Concepts and Principles of Applied Behavior Analysis (3)
SPE 528 Assessment and Intervention Programming for Skill Acquisition (3)
SPE 529 Functional Behavior Assessment and Behavior Change Procedures (3)
SPE 530 Fundamentals of Organizational Behavior Management (3)
SPE 563 Philosophical Foundations of Applied Behavior Analysis in Educational Settings (3)
SPE 567 Ethics of Applied Behavior Analysis (3)

Certificate 2
15 credit hours

Required Core (9 credit hours)
CRJ 514 Seminar in Corrections (3)
CRJ 516 Seminar in Criminal Justice Organization and Management (3)
CRJ 529 Community Corrections (3)

Electives (6 credit hours)

Additional Curricular Information
For electives, students should see the academic unit for the approved course list. A culminating experience is not required for this program.

Career opportunities:
The graduate certificate program in applied behavior analysis pairs research and experience to prepare professionals to work with individuals with diverse learning and behavioral needs using the principles of applied behavior analysis. Professionals with expertise in evidence-based practices in applied behavior analysis are in high demand across sectors and industries, including education, business and health care.

Career examples include:

- applied behavior analysis therapist
- behavior consultant
- behavior specialist
- Board Certified Behavior Analyst®
- early interventionist
- educator
- organizational behavior management specialist

Graduates of the corrections leadership and management graduate certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local) such as the National Institute of Corrections, the Federal Bureau of Prisons and corrections departments.

CERT/CERT Applied Behavior Analysis and Domestic Violence and Evidence-Based Practice (TEABAGRCT and PPDVEPGRCT)

Program description:
The graduate certificate in Applied Behavior Analysis allows students to specialize in their chosen population while gaining skills applicable across diverse settings. Offered through Mary Lou Fulton Teachers College, the program provides Association for Behavior Analysis International–verified coursework meeting the academic requirements for the Board Certified Behavior Analyst® (BCBA®) exam. The curriculum includes 315 hours of graduate-level instruction aligned with the BCBA/BCaBA Task List (5th edition) and Test Content Outline (6th edition). Students complete required supervised fieldwork independently, with an optional remote practicum available. Those pursuing both a master's degree and BCBA eligibility should apply to the Master of Arts in Special Education (Applied Behavior Analysis concentration).

ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024.

The certificate program in domestic violence intervention and evidence-based practice provides students with the experience and knowledge to intervene safely and effectively on behalf of survivors of gender-based violence, a vulnerable group that helping professionals are likely to encounter in all areas of practice. Graduates who have learned the dynamics of domestic violence and other forms of gender-based violence are better equipped to assist those suffering its negative physical and mental health consequences.

Evidence-based care is crucial in domestic violence settings. Students in the certificate program engage in service-based and classroom learning to understand the role of evidence-based interventions in promoting survivor safety and client empowerment. Upon completion of the program, certificate holders become verified advocates for victims of domestic violence in the state of Arizona.

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

Certificate 1
21 credit hours

Required Core (21 credit hours)
SPE 525 Measurement, Data Display, Interpretation and Experimental Design (3)
SPE 526 Concepts and Principles of Applied Behavior Analysis (3)
SPE 528 Assessment and Intervention Programming for Skill Acquisition (3)
SPE 529 Functional Behavior Assessment and Behavior Change Procedures (3)
SPE 530 Fundamentals of Organizational Behavior Management (3)
SPE 563 Philosophical Foundations of Applied Behavior Analysis in Educational Settings (3)
SPE 567 Ethics of Applied Behavior Analysis (3)

Certificate 2
15 credit hours

Required Core (3 credit hours)
SWG 545 Domestic Violence Prevention and Intervention (3)

Restricted Electives (6 credit hours)
SWG 546 Approaches to Teen Dating Violence Prevention (3)
SWG 618 Advanced Practice in Domestic Violence (3)
SWG 647 The Domestic Violence Movement: An Intersectional Framework (3)
SWG 648 Intimate Partner Violence Risk Assessment (3)

Other Requirement (6 credit hours)
SWG 541 Generalist Practicum I (3) or SWG 641 Advanced Practicum: Direct Practice I (3) or SWG 643 Advanced Practicum: Planning, Social Work Administration and Community Practice I (3)
SWG 542 Generalist Practicum II (3) or SWG 642 Advanced Practicum: Direct Practice II (3) or SWG 644 Advanced Practicum: Planning, Social Work Administration and Community Practice II (3)

Additional Curriculum Information
For restricted electives, students select two courses from the approved course list. Other coursework may be used with the approval of the academic unit.

For the Other Requirement section, students must select one course from SWG 541, SWG 641 or SWG 643 and one course from SWG 542, SWG 642 or SWG 643. Other coursework may be used with approval of the academic unit.

The student's department-specific practicum experience credits may be substituted for those listed in the Other Requirement section with department approval.

All students are required to complete 300 hours (minimum) of domestic violence service through a practicum experience. Students should work with the academic unit in coordinating the practicum experience. Concurrent with the beginning of their practicum experience, students take the Domestic Violence Prevention and Intervention core course (SWG 545) to learn about the foundations for working with domestic violence victims. The coursework and practicum experience maximize experiential learning opportunities.

Career opportunities:
The graduate certificate program in applied behavior analysis pairs research and experience to prepare professionals to work with individuals with diverse learning and behavioral needs using the principles of applied behavior analysis. Professionals with expertise in evidence-based practices in applied behavior analysis are in high demand across sectors and industries, including education, business and health care.

Career examples include:

- applied behavior analysis therapist

- behavior consultant
- behavior specialist
- Board Certified Behavior Analyst®
- early interventionist
- educator
- organizational behavior management specialist

Prospective administrators, helping professionals and community activists gain practical knowledge, implement interventions backed by evidence, and develop the tools and networks to create change for survivors, families and communities.

Career examples include:

- clinician or therapist
- domestic violence or lay legal advocate
- domestic violence support group facilitator
- shelter case manager

CERT/CERT Applied Behavior Analysis and Nonprofit Leadership and Management (TEABAGRCT and PPNONPROCE)

Program description:
The graduate certificate in Applied Behavior Analysis allows students to specialize in their chosen population while gaining skills applicable across diverse settings. Offered through Mary Lou Fulton Teachers College, the program provides Association for Behavior Analysis International–verified coursework meeting the academic requirements for the Board Certified Behavior Analyst® (BCBA®) exam. The curriculum includes 315 hours of graduate-level instruction aligned with the BCBA/BCaBA Task List (5th edition) and Test Content Outline (6th edition). Students complete required supervised fieldwork independently, with an optional remote practicum available. Those pursuing both a master's degree and BCBA eligibility should apply to the Master of Arts in Special Education (Applied Behavior Analysis concentration).

The graduate certificate program in nonprofit leadership and management provides students with an understanding of the nonprofit sector's role in society, as well as the skills necessary to lead and make a positive impact in nonprofit work.

Students with diverse academic backgrounds are exposed to knowledge needed by leaders in the nonprofit sector, including understanding the historical and philosophical context for nonprofit organizations in society, the theory and practice of philanthropy, financial management practices and other topical content areas.

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

Certificate 1
21 credit hours

Required Core (21 credit hours)
SPE 525 Measurement, Data Display, Interpretation and Experimental Design (3)
SPE 526 Concepts and Principles of Applied Behavior Analysis (3)
SPE 528 Assessment and Intervention Programming for Skill Acquisition (3)
SPE 529 Functional Behavior Assessment and Behavior Change Procedures (3)
SPE 530 Fundamentals of Organizational Behavior Management (3)
SPE 563 Philosophical Foundations of Applied Behavior Analysis in Educational Settings (3)
SPE 567 Ethics of Applied Behavior Analysis (3)

Certificate 2
15 credit hours

Required Core (9 credit hours)
NLM 510 The Nonprofit Sector (3)
NLM 520 Financial and Resource Management (3)
NLM 540 Strategic Human Resources Management (3)
or NLM 545 Volunteer Resource Management (3)

Electives (6 credit hours)

Additional Curriculum Information
Students select either NLM 540 or NLM 545 as part of the required core coursework.

Career opportunities:
The graduate certificate program in applied behavior analysis pairs research and experience to prepare professionals to work with individuals with diverse learning and behavioral needs using the principles of applied behavior analysis. Professionals with expertise in evidence-based practices in applied behavior analysis are in high demand across sectors and industries, including education, business and health care.

Career examples include:
- applied behavior analysis therapist
- behavior consultant
- behavior specialist
- Board Certified Behavior Analyst®
- early interventionist
- educator
- organizational behavior management specialist

Graduates of this program have built expertise in nonprofit leadership and management. Career opportunities include:
- administrative officers
- community services officers
- executive officers
- financial officers
- foundation officers

MS/CERT Construction Management and Technology and Nonprofit Leadership and Management (ESCONSTMS and PPNONPROCE)

Program description:
The transdisciplinary Master of Science program in construction management and technology enables students with a bachelor's degree in construction or a related field such as architecture, business or engineering to broaden and improve their professional capabilities in construction. This meets the growing need for professionals with advanced technical, management and applied research skills in the construction industry.

The program enables a candidate's plan of study to reflect individual interests and career goals. Courses are offered in several areas, so students have options to tailor their degree to their interests:
- commercial and residential areas
- construction management --- project, program and company
- facilities management --- maintenance, operation, renovation or decommissioning of existing facilities
- heavy construction --- infrastructure development
- specialty construction

This program is facilitated by the faculty of the Del E. Webb School of Construction.

The graduate certificate program in nonprofit leadership and management provides students with an understanding of the nonprofit sector's role in society, as well as the skills necessary to lead and make a positive impact in nonprofit work.

Students with diverse academic backgrounds are exposed to knowledge needed by leaders in the nonprofit sector, including understanding the historical and philosophical context for nonprofit organizations in society, the theory and practice of philanthropy, financial management practices and other topical content areas.

MS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe or Online
STEM-OPT extension eligible: Yes

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

MS

30 credit hours and a thesis, or
30 credit hours and a written comprehensive exam, or
30 credit hours including the required applied project course (CON 593), or
30 credit hours including the required capstone course (CON 597)

Required Core (6 credit hours)

Project Management and Controls Core Area (3 credit hours)
CON 502 Front-end Planning (3)
CON 530 Facilities Operations and Maintenance (3)
CON 532 Facilities Project Management (3)
CON 534 Retrofit Construction (3)
CON 540 Construction Productivity (3)
CON 541 Public Works Capital Construction (3)
CON 545 Construction Project Management (3)
CON 548 Sustainable Construction (3)
CON 551 Project Delivery Methods (3)
CON 557 Principles of Leadership for Project Managers (3)
CON 567 Advanced Procurement Systems (3)
CON 589 Construction Company Financial Control (3)

Construction Technology Core Area (3 credit hours)
CON 508 Engineering and Construction Failures (3)
CON 509 Advanced Concrete Materials (3)
CON 510 Sustainable Bio-based Construction (3)
CON 531 Facility Management: Building Energy Management (3)
CON 554 Trenchless Construction Methods (3)
CON 570 Introduction to Advanced Technology Facilities (3)
CON 571 Construction of Advanced Technology Facilities (3)
CON 575 Information Technology in Construction (3)

Electives or Research (18-24 credit hours)

Culminating Experience (0-6 credit hours)
CON 593 Applied Project (3)
CON 597 Graduate Capstone in Construction (3)
CON 599 Thesis (6)
written comprehensive exam (0)

Certificate

15 credit hours

Required Core (9 credit hours)
NLM 510 The Nonprofit Sector (3)
NLM 520 Financial and Resource Management (3)
NLM 540 Strategic Human Resources Management (3)
or NLM 545 Volunteer Resource Management (3)

Electives (6 credit hours)

Additional Curriculum Information
Students select either NLM 540 or NLM 545 as part of the required core coursework.

Additional Curriculum Information
Students choose one three-credit-hour course from each of the core areas listed above for a total of six credit hours. If a course is chosen as a core area course, it cannot be used as an elective course simultaneously.

The number of electives and research is adjusted depending on the culminating experience chosen by the student.

Career opportunities:
Graduates of the construction management and technology program are well prepared for numerous types of careers, depending upon which subject area they focused their coursework:

- commercial and residential --- real estate developers, commercial construction managers, managers and supervisors of health care and special industrial building projects or home production systems, and managers or supervisors of sustainable or green construction
- construction management --- project managers, project engineers, estimators or schedulers who can eventually become principals of firms engaged in the construction of industrial, commercial or residential projects
- facilities management --- managers who supervise the maintenance, operation, renovation or decommissioning of existing facilities
- heavy construction --- supervisors of the construction and maintenance of public works such as highways, airports, bridges, utility systems, and water or waste treatment facilities
- specialty construction --- organizers, leaders and managers of the building process at the subcontractor or contractor level working with mechanical and electrical systems, and in management at specialty contracting firms, such as those who do work in control systems, electrical distribution or HVAC systems for large and complex facilities such as data centers, health care organizations and semiconductor manufacturing plants as well as commercial facilities

Graduates of this program have built expertise in nonprofit leadership and management. Career opportunities include:

- administrative officers
- community services officers
- executive officers
- financial officers
- foundation officers

MS/CERT Construction Management and Technology and Project Management (Certificate) (ESCONSTMS and LSPMGGRCT)

Program description:
The transdisciplinary Master of Science program in construction management and technology enables students with a bachelor's degree in construction or a related field such as architecture, business or engineering to broaden and improve their professional capabilities in construction. This meets the growing need for professionals with advanced technical, management and applied research skills in the construction industry.

The program enables a candidate's plan of study to reflect individual interests and career goals. Courses are offered in several areas, so students have options to tailor their degree to their interests:

- commercial and residential areas
- construction management --- project, program and company
- facilities management --- maintenance, operation, renovation or decommissioning of existing facilities
- heavy construction --- infrastructure development
- specialty construction

This program is facilitated by the faculty of the Del E. Webb School of Construction.

Project managers play a pivotal role in shaping an organization's direction by overseeing complex projects from inception to completion. Their expertise helps reduce costs, maximize efficiencies and increase revenue, driving the industry forward.

Students explore multiple project management methodologies, including waterfall, agile and scrum. Each course emphasizes applied learning through case studies that involve professional projects, enabling students to apply their knowledge and develop practical solutions.

Graduates of this program are well-prepared to pursue key industry certifications, including Certified Associate in Project Management, Green Project Management and Project Management Professional Certification. For more information, students should visit the school website.

Students also have the option to pursue this graduate certificate in project management and combine it with another certificate to complete the Master of Advanced Study. This pathway provides a powerful blend of practical skills and strategic insight, preparing students for career growth across diverse industries. This flexible approach not only boosts their marketability and earning potential but also positions them for leadership roles in a dynamic job market, offering a comprehensive skill set that employers highly value.

MS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe or Online
STEM-OPT extension eligible: Yes

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe or Online
STEM-OPT extension eligible: No

Degree requirements:

MS

30 credit hours and a thesis, or
30 credit hours and a written comprehensive exam, or
30 credit hours including the required applied project course (CON 593), or
30 credit hours including the required capstone course (CON 597)

Required Core (6 credit hours)

Project Management and Controls Core Area (3 credit hours)
CON 502 Front-end Planning (3)
CON 530 Facilities Operations and Maintenance (3)
CON 532 Facilities Project Management (3)
CON 534 Retrofit Construction (3)
CON 540 Construction Productivity (3)
CON 541 Public Works Capital Construction (3)
CON 545 Construction Project Management (3)
CON 548 Sustainable Construction (3)
CON 551 Project Delivery Methods (3)
CON 557 Principles of Leadership for Project Managers (3)
CON 567 Advanced Procurement Systems (3)
CON 589 Construction Company Financial Control (3)

Construction Technology Core Area (3 credit hours)
CON 508 Engineering and Construction Failures (3)
CON 509 Advanced Concrete Materials (3)
CON 510 Sustainable Bio-based Construction (3)
CON 531 Facility Management: Building Energy Management (3)
CON 554 Trenchless Construction Methods (3)
CON 570 Introduction to Advanced Technology Facilities (3)
CON 571 Construction of Advanced Technology Facilities (3)
CON 575 Information Technology in Construction (3)

Electives or Research (18-24 credit hours)

Certificate

15 credit hours

Required Core (15 credit hours)
OGL 520 Organizational Leadership: Social Psychological Perspectives (3)
PMG 501 Project Management Theory (3)
PMG 502 The Thoughtful Project: Aligning Purpose with Approach (3)
PMG 503 Impact Analysis and Sustainability in Project Management (3)
PMG 510 Interactive Learning: Scope, Schedule and Cost Management (1)
PMG 511 Interactive Learning: Risk and Procurement Management (1)
PMG 512 Interactive Learning: Quality, Resource and Communication Management (1)

Culminating Experience (0-6 credit hours)
CON 593 Applied Project (3)
CON 597 Graduate Capstone in Construction (3)
CON 599 Thesis (6)
written comprehensive exam (0)

Additional Curriculum Information
Students choose one three-credit-hour course from each of the core areas listed above for a total of six credit hours. If a course is chosen as a core area course, it cannot be used as an elective course simultaneously.

The number of electives and research is adjusted depending on the culminating experience chosen by the student.

Career opportunities:
Graduates of the construction management and technology program are well prepared for numerous types of careers, depending upon which subject area they focused their coursework:

- commercial and residential --- real estate developers, commercial construction managers, managers and supervisors of health care and special industrial building projects or home production systems, and managers or supervisors of sustainable or green construction
- construction management --- project managers, project engineers, estimators or schedulers who can eventually become principals of firms engaged in the construction of industrial, commercial or residential projects facilities management --- managers who supervise the maintenance, operation, renovation or decommissioning of existing facilities
- heavy construction --- supervisors of the construction and maintenance of public works such as highways, airports, bridges, utility systems, and water or waste treatment facilities
- specialty construction --- organizers, leaders and managers of the building process at the subcontractor or contractor level working with mechanical and electrical systems, and in management at specialty contracting firms, such as those who do work in control systems, electrical distribution or HVAC systems for large and complex facilities such as data centers, health care organizations and semiconductor manufacturing plants as well as commercial facilities

The graduate certificate in project management equips students with the skills needed for roles as project managers across various sectors, including public, private and nonprofit organizations. Graduates are prepared for a variety of careers such as:

- director of project management
- portfolio or project manager
- senior project manager
- technical project manager

MA/CERT Criminal Justice and Homeland Security (PPCRIMJMA and PPHLSGRCT)

Program description:
The Master of Arts program in criminal justice is designed to provide criminal justice agency professionals with training in research methods and statistics.

Coursework covers topics of criminology and the operation of the criminal justice system. The degree program also provides students with advanced training in program planning and management, policy analysis and program evaluation.

The graduate certificate in homeland security focuses on homeland security as a field related to organizational security.

Students can study topics related to current international and domestic terrorism issues, global security, intelligence analysis, cybersecurity issues, crime prevention and law enforcement.

MA At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

MS

33 credit hours including the required capstone course (CRJ 505)

Required Core (12 credit hours)
CRJ 501 Seminar in Criminal Justice (3)
CRJ 502 Seminar in Criminology (3)
CRJ 510 Criminal Justice Planning and Program Evaluation (3)
CRJ 511 Applied Data Analysis in Criminal Justice (3)

Electives (18 credit hours)

Culminating Experience (3 credit hours)
CRJ 505 Theory and Practice in Criminal Justice (3)

Additional Curriculum Information
Students can develop specializations in areas such as policing, corrections and management by combining required and elective coursework.

Students should see the academic unit for an approved elective course list. Electives must be at the 500 level.

Certificate

15 credit hours

Required Core (12 credit hours)
CRJ 553 Terrorism and Weapons of Mass Destruction (3)
CRJ 554 Homeland Security (3)
CRJ 557 Seminar in Domestic Terrorism (3)
CRJ 558 Seminar in International Terrorism (3) or CRJ 559 Seminar in Cyber Terrorism (3)

Electives or Research (3 credit hours)

Additional Curriculum Information
Students should see the academic unit for available elective and research coursework.

Students may choose to participate in a study abroad experience in counterterrorism in Israel during the summer term that may be used to fulfill elective coursework. Students who choose this option enroll in CRJ 555 Police and International Terrorism and CRJ 556 Etiology of Martyrdom.

Career opportunities:

The MA program in criminology and criminal justice is designed to help graduates advance their career in criminal justice.

Graduates find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies at federal, state and local levels, such as:

- city, county and state government liaison to criminal justice agencies
- communications supervisor (911 and dispatch)
- court administrator
- evidence and crime scene supervisor (CSI activities)
- intelligence analyzer
- law enforcement professional
- police crime analysis supervisor
- pretrial release specialist
- probation, parole or community supervisor
- property management and evidence retention supervisor
- risk manager
- veterans services specialist

Opportunities also include supervisory and management positions in social service agencies, such as:

- child and family services (e.g., Head Start, child support enforcement, foster care, elder care)
- Department of Economic Security
- homeless outreach

Graduates also have the opportunity to work in supervisory and management positions in the private sector, including online security, as well as in the cybersecurity sector.

Graduates of the homeland security graduate certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local), such as the Cybersecurity and Infrastructure Security Agency, U.S. Customs and Border Protection, the U.S. Secret Service and local law enforcement agencies.

CERT/CERT Criminal Sentencing and Sentencing Advocacy and Human Factors in Forensic Science (PPCSAGRCT and ASHFFSGRCT)

Program description:
ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024 and No. 2 for best graduate criminology and criminal justice programs by U.S. News & World Report, 2023.

The certificate program in criminal sentencing and sentencing advocacy assumes that for any professional to function effectively, they must have a fundamental knowledge of the respective roles that sentencing professionals play during various phases of the criminal justice process.

In keeping with this viewpoint, all students are required to take courses for practice as both a presentence investigator and a sentencing advocate. Those courses are seminars in courts and sentencing, in presentence investigations, and in alternatives to penal sanctions. After taking these required courses, students select an area of specialization to further their expertise as a probation professional, sentencing advocate, mitigation specialist or victim advocate. They take these courses from a range of electives available in the School of Criminology and Criminal Justice and in the School of Social Work.

This interprofessional certificate program also provides participants with content on the relationship between mental disorders and crime, and the way in which differential sentencing frameworks affect the sentencing of offenders suffering from mental disorders.

This program is highly recommended for social workers, forensic psychologists and other criminal justice professionals seeking specialized expertise as a sentencing professional responsible for making sentencing recommendations addressing relevant offender risks and needs, victim impacts, treatment alternatives to incarceration, community safety and other relevant sentencing considerations.

Human factors that involve motivational and cognitive biases can undermine justice by negatively affecting the collection, analysis and interpretation of forensic evidence. By accounting for human factors, forensic examiners can enhance the objectivity and accuracy of their work.

The certificate program in human factors in forensic science provides students with an interdisciplinary education, a background in next-generation research in human factors, and the skills to make a positive impact in the field. The curriculum involves specialized coursework at the intersection of psychology and forensic science to promote a comprehensive understanding of the effects of human factors in the forensic sciences. Courses focus on the way that limitations in human cognition can adversely affect the collection, analysis and interpretation of physical forensic evidence, and identify practical solutions to these problems.

Students have the opportunity to join an exciting group of faculty and learn about the importance of human

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

Certificate 1
15 credit hours

Required Core (9 credit hours)
CRJ 513 Seminar in Courts and Sentencing (3)
SWG 528 Presentence Investigations (3)
SWG 529 Alternatives Penal Sanctions (3)

Electives (6 credit hours)

Additional Curriculum Information
For electives, students should see the academic unit for the approved course list.

Certificate 2
15 credit hours

Required Core (12 credit hours)
FOR 525 Forensic Science and Governance (3)
PSY 506 Advanced Cognitive Science (3)
PSY 514 Fundamentals of Forensic Psychology Research (3)
PSY 562 Advanced Human Factors (3)

Other Requirements (3 credit hours)
FOR 598 Special Topics (3) or
PSY 598 Special Topics (3)

Additional Curriculum Information
The approved topic for FOR/PSY 598 is Psychology of Forensic Decision Making. Students take the course once for three credit hours. The course can be substituted with department approval.

Career opportunities:
Social workers, criminal justice professionals and recent graduates of psychology and other social and behavioral sciences programs perform a number of roles in the disposition and sentencing of public offenders. They also provide support for victims of crime during the criminal justice process.

Career examples include:
- mitigation specialist
- presentence investigator
- probation professional
- sentencing advocate
- victim advocate

Graduates of the certificate program in human factors in forensic science have developed skills and knowledge that enable them to perform their jobs more effectively and that can be applied in a variety of professional settings within the field. Many job opportunities are available to graduates, including these positions:
- crime scene investigator
- expert witness
- forensic technician

MSE/CERT Electrical Engineering and Nuclear Power Generation (ESEEMSE and ESNPGGRCT)

Program description:
The electrical engineering faculty in the Ira A. Fulton Schools of Engineering offer a professional program leading to the Master of Science in Engineering degree in electrical engineering.

Graduate courses and programs are offered in six areas of specialization:
- control systems (not an option for the online degree but available to on-campus students)
- electric power and energy systems
- electromagnetics, antennas and microwave circuits
- electronic and mixed-signal circuit design
- physical electronics and photonics
- signal processing and communications

A concurrent degree, the MBA/MSE in electrical engineering, is available as an online option. For more information, students should visit the W. P. Carey School of Business page on concurrent degrees.

The nuclear power generation graduate certificate program is a transdisciplinary professional option within the Ira A. Fulton Schools of Engineering.

Students typically begin with the study of nuclear science and engineering fundamentals. Subsequent core courses focus on nuclear power plant dynamics and diagnostics, nuclear power plant operations and safety, and nuclear reactor theory and design.

Elective courses enable students to tailor their remaining studies toward facilitating their career goals and to focus on studies tied to their academic interests. Example elective courses include nuclear power engineering, health physics and electrical power plants.

MSE At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe or Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe or Online
STEM-OPT extension eligible: No

Degree requirements:

MSE
30 credit hours and a portfolio

This is a professional degree program that requires a minimum of 30 credit hours of coursework (a minimum of 10 classes) and a portfolio based on attendance and review of seminars hosted by the School of Electrical, Computer and Energy Engineering.

Requirements include:

at least five EEE courses
at least three EEE 500-level courses
at least two courses outside the area of specialization
at most one EEE 590 Reading and Conference or FSE course
at most two 400-level courses

Certificate
15 credit hours

Required Core (9 credit hours)
EEE 562 Nuclear Reactor Theory and Design (3)
EEE 563 Nuclear Reactor System Dynamics and Diagnostics (3)
EEE 564 Interdisciplinary Nuclear Power Operations (3)

Electives (6 credit hours)

Career opportunities:
Graduates of the MSE program in electrical engineering have an advanced understanding of electrical engineering concepts and theories.

Career examples include:

- computer hardware engineer
- computer and information research scientist
- computer network architect
- director of engineering
- electrical engineer
- energy engineer

The program prepares students and professionals from a variety of engineering and scientific disciplines to work effectively in the nuclear energy industry. Career options include positions in nuclear power plants, government regulatory agencies and national laboratories.

MENG/CERT Engineering and Lean Six Sigma Black Belt (ESENGRMENG and ESLSSBGRCT)

Program description:
Engineers have the opportunity to gain valuable experience applicable to their chosen industry while gaining an advanced degree.

The Master of Engineering program is designed to meet the specific needs of professional engineers and is delivered entirely online. In this practice-oriented program, students can customize their learning experience by selecting a curriculum that addresses their academic and professional goals.

Multiple emphasis areas are available in the program. Within each area of study are specific course requirements, in addition to the general program requirements. Students can select one of several areas of study available, including engineering management, quality, reliability and statistical engineering, and systems engineering. A computing and technology area of study has been developed to support ASU's global initiatives.

Convenience and flexibility are key advantages of this program. The MEng is a 30 credit hour program that does not require GRE results, a thesis or on-campus attendance; it is only available through distance learning. The program is supported through online courses available from the Ira A. Fulton Schools of Engineering.

The Lean Six Sigma Black Belt graduate certificate is designed for engineers and managers who oversee tactical and strategic projects as well as various operational functions in their organizations.

This certificate program provides students with a set of contemporary tools to produce measurable improvements in business processes. Students gain an in-depth understanding of the Six Sigma control process and the tools used to define, measure, analyze, and improve effective process and product improvement. They develop the leadership and team-building skills necessary for overseeing continuous improvement projects with many stakeholders, and they understand how lean principles and design for Six Sigma fit into the overall task of product and process improvement.

The culminating experience is in line with the black belt certification requirements used nationwide in similar certification programs.

MENG At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe or Online
STEM-OPT extension eligible: No

Degree requirements:

MENG

30 credit hours and a portfolio, or
30 credit hours and a written comprehensive exam, or
30 credit hours and an oral comprehensive exam, or
30 credit hours including the required applied project course (CSE 593 or IEE 585 or IEE 593)

Students must complete 30 credit hours equaling 10 courses to earn a MEng. Half of all coursework, excluding the practice-oriented project, must be in engineering.

Students must complete three credit hours of applied engineering mathematics and three credit hours of engineering management or business.

A culminating event is required and is identified by the student's advisory committee. It could be a final written or oral examination, portfolio, or the final report of a practice-oriented project. Some academic units and emphasis areas of the MEng program may have additional requirements.

Certificate

15 credit hours including the required capstone course (IEE 585)

Required Core (6 credit hours)
IEE 570 Advanced Quality Control (3)
IEE 581 Six Sigma Methodology (3)

Electives (6 credit hours)

Culminating Experience (3 credit hours)
IEE 585 Six Sigma Capstone (3)

Additional Curriculum Information
For electives, students should see the academic unit for the approved course list.

A minimum grade of "B" is required for capstone course IEE 585.

Career opportunities:
Engineers approach a wide variety of disciplinary and transdisciplinary opportunities by applying new approaches and technologies to solve problems, innovate and create value.

The interdisciplinary MEng program prepares engineering, science and technology majors with more advanced technical, management and practical skills that enhance their marketability to potential employers. The program is designed for people who are already employed in engineering or technical roles, or who are interested in expanding their skill set before entering a technical organization as a manager or individual contributor.

According to the Bureau of Labor Statistics, engineers are highly paid, and there is significant growth in the number of employment opportunities. Graduates of this program are able to fill these roles in the following career paths:

- Engineering managers hold leadership positions in the management of projects, processes and people, combining engineering competency with managerial skills to support the efficient development of new technology and products.
- Quality and reliability engineers use engineering principles to make business and production processes and products more efficient and dependable. They may also look for ways to seek efficiencies while maintaining reliable products and production methods.
- Systems engineers may become technical managers who develop the technical design of complex systems and manage them by building on their interdisciplinary expertise, systems engineering principles and practical experience.

Six Sigma is a proven systematic approach to continuous improvement of critical processes in a wide range of industrial environments such as banks, manufacturing facilities and hospitals. The American Society of Quality defines the certified Six Sigma Black Belt as a professional who can explain Six Sigma philosophies and principles, including supporting systems and tools.

MSE/CERT Engineering Science (Software Engineering) and Lean Six Sigma Black Belt (ESSFEMSE and ESLSSBGRCT)

Program description:
The Master of Science in Engineering program in engineering science with a software engineering concentration offers specialized courses founded on the fundamentals and principles of software engineering. Students gain the knowledge and skills needed to become software engineers or software task leaders on large and small projects that require either agile methodologies or formal capability maturity model integration approaches.

The program addresses major software development methodologies, techniques, tools and processes for developing and managing software projects. The curriculum is based on the Software Engineering Body of Knowledge under the leadership of the IEEE Computer Society. Each course places an emphasis on applied assignments and projects that are relative to the student's workplace.

The Lean Six Sigma Black Belt graduate certificate is designed for engineers and managers who oversee tactical and strategic projects as well as various operational functions in their organizations.

This certificate program provides students with a set of contemporary tools to produce measurable improvements in business processes. Students gain an in-depth understanding of the Six Sigma control process and the tools used to define, measure, analyze, and improve effective process and product improvement. They develop the leadership and team-building skills necessary for overseeing continuous improvement projects with many stakeholders, and they understand how lean principles and design for Six Sigma fit into the overall task of product and process improvement.

The culminating experience is in line with the black belt certification requirements used nationwide in similar certification programs.

MSE At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe or Online
STEM-OPT extension eligible: No

Degree requirements:

MSE

30 credit hours and a portfolio, or
30 credit hours including the required applied project course (CSE 593)

Required Core (6 credit hours)
CSE 565 Software Verification, Validation and Testing (3)
CSE 566 Software Project, Process and Quality Management (3)

Concentration (3 credit hours)
CSE 591 Topic: Software Engineering Principles and Concepts (3)

Restricted Electives (18 or 21 credit hours)

Culminating Experience (0 or 3 credit hours)
CSE 593 Applied Project (3)
portfolio (0)

Additional Curriculum Information
For an approved list of restricted electives, students should see the academic unit.

Students select five or six elective courses: five for the applied project option or six for the portfolio option.

Two faculty member-approved 400-level courses may also be selected as electives for the restricted electives.

Certificate

15 credit hours including the required capstone course (IEE 585)

Required Core (6 credit hours)
IEE 570 Advanced Quality Control (3)
IEE 581 Six Sigma Methodology (3)

Electives (6 credit hours)

Culminating Experience (3 credit hours)
IEE 585 Six Sigma Capstone (3)

Additional Curriculum Information
For electives, students should see the academic unit for the approved course list.

A minimum grade of "B" is required for capstone course IEE 585.

Career opportunities:

Software engineers solve a wide variety of disciplinary and transdisciplinary problems and apply new technologies to improve quality of life. Graduates of this master's program are prepared for advanced study in computing and engineering, and to become leaders of software engineering development projects and teams. Graduates have experience using the software development life cycle and tools to solve complex, practical problems.

According to the Bureau of Labor Statistics, software engineers are highly paid, and there is significant growth in the number of employment opportunities. Some software engineering jobs may include:

- developing software to manage new regulatory requirements in industries such as health care, and administering existing policies digitally
- identifying requirements and developing testing plans for computer systems being built into consumer electronics
- leading software development teams and projects for organizations of various sizes and complexities

Six Sigma is a proven systematic approach to continuous improvement of critical processes in a wide range of industrial environments such as banks, manufacturing facilities and hospitals. The American Society of Quality defines the certified Six Sigma Black Belt as a professional who can explain Six Sigma philosophies and principles, including supporting systems and tools.

MS/CERT Forensic Psychology and Applied Behavior Analysis (ASFPSYMS and TEABAGRCT)

Program description:

In the Master of Science program in forensic psychology, students gain a strong foundation in psychological theory and research, legal decision-making and criminological theory, and a basic understanding of forensic assessment. The degree provides working professionals with an understanding of mental health issues and human behavior with respect to crime and the criminal justice and legal systems.

The curriculum involves specialized coursework in criminal law, criminal behavior, the diagnosis and treatment of mental

disorders, and legal decision-making. Students learn about the various roles for psychologists in the legal system, helping them discover roles they might wish to pursue through careers in mental health or criminal justice, or through additional graduate training.

Graduates are not license-eligible for clinical practice but are well prepared to pursue advanced degree and continuing education programs in counseling and related fields.

The graduate certificate program in applied behavior analysis enables students to focus on the population with which they plan to work while gaining the knowledge and skills they need to use applied behavior analysis across various populations and settings.

Mary Lou Fulton Teachers College offers university coursework verified by the Association for Behavior Analysis International as meeting academic requirements for eligibility to sit for the Behavior Analyst Certification Board® Board Certified Behavior Analyst® examination. Once certified, these professionals are equipped to meet diverse behavior needs and make a lasting difference in the community. The course sequence meets the Behavior Analyst Certification Board-required 315 classroom hours of graduate-level instruction aligned with the BCBA/BCaBA Task List (fifth edition) and Test Content Outline (TCO sixth edition). BCBA-supervised independent fieldwork supervision hours, required for certification, are arranged and completed by the student separately from their ASU coursework. An optional remote BCBA supervised independent fieldwork practicum (SPE 580 Applied Behavior Analysis Practicum) is available.

Students seeking the master's degree as well as the verified university coursework to qualify to sit for the BCBA® exam should apply to the Master of Arts program in special education with a concentration in applied behavior analysis.

MS At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

MS
33 credit hours including the required capstone course (PSY 549)

Required Core (15 credit hours)
PSY 544 Advanced Psychology of Criminal Investigation (3)
PSY 545 Advanced Legal Psychology (3)
PSY 546 Advanced Forensic Psychology (3)
PSY 547 Advanced Correctional Psychology (3)
PSY 573 Psychopathology (3)

Electives (9 credit hours)

Statistics and Methods (3 credit hours)
PSY 514 Fundamentals of Forensic Psychology Research (3)

Criminal Justice System Courses (3 credit hours)
Choose one of the following:
CRJ 501 Seminar in Criminal Justice (3)
CRJ 513 Seminar in Courts and Sentencing (3)

Culminating Experience (3 credit hours)
PSY 549 Capstone in Forensic Psychology (3)

Certificate
21 credit hours

Required Core (21 credit hours)
SPE 525 Measurement, Data Display, Interpretation and Experimental Design (3)
SPE 526 Concepts and Principles of Applied Behavior Analysis (3)
SPE 528 Assessment and Intervention Programming for Skill Acquisition (3)
SPE 529 Functional Behavior Assessment and Behavior Change Procedures (3)
SPE 530 Fundamentals of Organizational Behavior Management (3)
SPE 563 Philosophical Foundations of Applied Behavior Analysis in Educational Settings (3)
SPE 567 Ethics of Applied Behavior Analysis (3)

Career opportunities:
The MS in forensic psychology opens the door to a wide variety of careers. The field of forensic psychology offers career options as varied as consulting on public policy and working within the criminal justice system. Many forensic psychologists work in the court system to help lawyers, judges and juries better understand the motivations behind criminal behavior. Some graduates choose this path to advocate on behalf of underserved populations, including African Americans, Latinos, those from lower economic areas, children or those with mental illness. Additionally, the degree provides a foundation for graduates pursuing doctoral degrees, which are required to become a forensic psychologist, and continuing education programs in psychology, criminology and related fields.

Career examples include:

- correctional counselor
- crime analyst
- forensic research psychologist
- forensic social worker
- investigative journalist
- jail supervisor
- jury consultant
- police consultant
- probation officer
- victim advocate

The graduate certificate program in applied behavior analysis pairs research and experience to prepare professionals to work with individuals with diverse learning and behavioral needs using the principles of applied behavior analysis. Professionals with expertise in evidence-based practices in applied behavior analysis are in high demand across sectors and industries, including education, business and health care.

Career examples include:

- applied behavior analysis therapist
- behavior consultant
- behavior specialist
- Board Certified Behavior Analyst®
- early interventionist
- educator
- organizational behavior management specialist

MA/CERT Gender, Women and Sexuality Studies and Gender Studies (LAWSTMA and LAWSTGRCT)

Program description:
The Master of Arts program in gender, women and sexuality studies is designed for students who wish to gain research skills and knowledge about gender analysis and to apply those tools to current problems and solutions.

This flexible, 30 credit hour graduate program provides advanced training in feminist research, theory and methodologies. All students must complete an applied project in which they conduct research that addresses practical, often site-specific problems linked to gender. Final projects may take a variety of forms, including program assessments, grant proposals, and tests of new interventions or curricula.

Full-time students can complete the program within two years, while part-time students take longer but can work while studying.

The graduate certificate program in gender studies offers graduate students the opportunity to enhance their advanced degrees with demonstrated proficiency in and knowledge about gender research and theories that they may apply in their own fields.

The certificate is pursued in tandem with any graduate degree program at ASU.

MA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
STEM-OPT extension eligible: No

Degree requirements:

MA
30 credit hours including the required applied project course (WST 593)

Required Core (6 credit hours)
WST 501 Foundations of Feminist Thought (3)
WST 502 Interdisciplinary Gender Research Methodologies (3)

Electives (18 credit hours)

Culminating Experience (6 credit hours)
WST 593 Applied Project (6)

Additional Curriculum Information
Students must successfully provide an oral defense of the applied project.

Certificate
15 credit hours

Required Core (6 credit hours)
WST 601 Critical Concepts of Gender (3)
WST 602 Mapping the Intersections of Gender (3)

Electives (9 credit hours)

Additional Curriculum Information
Elective courses may be chosen from other WST graduate courses or from more than 30 approved courses from other departments throughout the university. Other courses may also be used with the graduate director's approval.

Up to six credit hours not used for another ASU degree or certificate can be transferred from another university, with the graduate director's approval. Courses should be recorded on the transfer section of the student's interactive program of study.

Career opportunities:
Graduates of the program have gone on to careers at universities, research and policy institutes, government organizations and nonprofit organizations. They may also work in the fields of human services and public policy.

CERT/CERT Gifted Education (Certificate) and Autism Spectrum Disorders (TEGEDGRCT and EDSPEGRCA)

Program description:
In the graduate certificate program in gifted education, students learn the theory and pedagogy needed to identify and serve gifted children. This program is for teachers, school administrators, school psychologists, early interventionists and family members who want to strengthen their ability to work with this population of learners.

Students learn how to identify learning potential and address specific needs of gifted and talented students. They acquire an understanding of gifted students' affective and academic needs and learn how to design and provide appropriately challenging, differentiated curriculum and instruction.

Students learn how to develop a continuum of gifted programs and services; work with school administrators, teachers, school boards and parents; and advocate for gifted students at local and national levels.

The program also provides coursework in gifted education required for the Gifted Education (K--12) endorsement from the Arizona Department of Education. Students should refer to the Arizona Department of Education website for additional requirements.

This program does not lead to any type of teacher certification in Arizona. This program also does not include the field experience and student teaching components or meet other requirements needed to become certified to teach.

The graduate certificate program in autism spectrum disorders is ideal for educators, interventionists, paraprofessionals, psychologists, behavior analysts and family members who want to enhance their preparation for working with individuals living with autism spectrum disorders.

Students can complete the graduate certificate within two years while pursuing a graduate degree, or they can complete it as a stand-alone certificate.

Students interested in sitting for the national Board Certified Behavior Analyst® exam should apply for the Master of Arts program in special education with a concentration in applied behavior analysis or the applied behavior analysis graduate certificate, depending on interest and need.

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

Certificate 1
15 credit hours

Required Core (12 credit hours)
SPE 585 Creativity: Foundations of Research and Development in Gifted Education (3)
SPE 586 Advising the Gifted Learner: Social and Emotional Needs (3)
SPE 587 Special Populations in Gifted Education (3)
SPE 588 The Gifted Learner: Foundations of Identification, Education and Development (3)

Electives (3 credit hours)
SPE 572 Testing and Measurement in Gifted Education: Methods (3)
SPE 573 Differentiating Instruction for Gifted Learners: Teaching Methods (3)
SPE 589 Gifted Education Programming: Models, Methods and Services (3)

Additional Curriculum Information
A culminating experience is not required for this certificate program.

Certificate 2
15 credit hours

Required Core (9 credit hours)
SPE 521 Foundations of Autism Spectrum Disorders (3)
SPE 525 Measurement, Data Display, Interpretation and Experimental Design (3)
SPE 540 Family-Centered Practices (3)

Restricted Electives (6 credit hours)
SPE 520 Verbal Behavior (3)
SPE 527 Behavior Analytic Assessment (3)
SPE 541 Consultation Frameworks and Issues (3)
SPE 560 Behavior Change Procedures: Implementing Interventions in Behavior Analysis (3)
SPE 564 Controversial Therapies; Science, Fad and Pseudoscience in Educational Settings (3)
SPE 566 Applied Behavior Analysis in Inclusive Settings (3)
SPE 567 Ethics of Applied Behavior Analysis (3)
SPE 598 Special Topics (3)

Career opportunities:
Graduates have skills in creating and strengthening gifted programs, developing instructional methods, advocating for learners, teaching gifted learners and working with school districts and families.

Students gain specialized skills and knowledge to work effectively and compassionately with children and adults, including family members, impacted by autism.

Career examples include:
- adapted physical education specialist
- clinical psychologist
- counselor
- special education teacher
- speech-language pathologist

DPP/CERT Global Leadership and Management and Global Management (TBGLMDPP and TBTGMGERT)

Program description:
The Doctor of Professional Practice program in global leadership and management is crafted to prepare practitioners to be responsive to growing challenges and develop potential leaders and managers facing these challenges. Those with senior-level work experience who are interested in developing their leadership and management capabilities in today's

digital environment to help organizations transform are especially sought for the program.

Students develop the models, strategies, networks and solutions to address increasingly pressing challenges across the public, private and nonprofit sectors through this high-touch and high-tech program, which is delivered synchronously online in dynamic and interactive ways. This format provides working professionals the greatest convenience and flexibility while enabling them to benefit from the live delivery of courses provided by Thunderbird's world-class faculty.

Students on F-1 or J-1 immigration status are not permitted to complete courses via ASU Sync.

Students seeking to use GI Bill® benefits for ASU Sync programs should contact the Pat Tillman Veterans Center regarding certain limitations.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at www.benefits.va.gov/gibill.

The undergraduate certificate program in global management provides students with broad-based training in global business and global studies, helping to prepare them for a global management career. It offers distinct courses that integrate an in-depth understanding of the political, economic and cultural aspects of doing business in specific regions with tools to assess business trends in specific countries.

Thunderbird School of Global Management has produced world-class leaders for more than 75 years. The ideal Thunderbird student is curious, globally minded, and eager to develop and advance their careers in leadership and management within the global and digital landscape. Upon completion of this program, graduates join a thriving global alumni network nearly 50,000 strong, managing some of the world's largest institutions, companies, nonprofits and NGOs.

DPP At a Glance:
College/school: Thunderbird School of Global Management
Location: ASU Sync
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Thunderbird School of Global Management
Location: Downtown Phoenix

Degree requirements:

DPP

60 credit hours including the required applied project course (TGM 793)

Required Core (15 credit hours)
TGM 705 Philosophies, Theories and Methods of Research (3)
TGM 710 Shaping the Future: The Fourth Industrial Revolution and Digital Transformation in a Global Economy (3)
TGM 720 Qualitative Analysis for Systems Thinkers: Learning from the Field (3)
TGM 740 Leading and Managing Global Organizations: Advanced Topics (3)
TGM 745 Data Analysis for Global Leaders (3)

Restricted Electives (3 credit hours)
TGM 715 States and Markets in the Fourth Industrial Revolution Global Economy: Applications for Global Leaders (3) or
TGM 730 Systems Change and Transformation in the Anthropocene (3)

Electives (24 credit hours)

Research (15 credit hours)
TGM 790 Reading and Conference (3)
TGM 792 Research (12)

Culminating Experience (3 credit hours)
TGM 793 Applied Project (3)

Additional Curriculum Information
With approval from the student's supervisory committee and Graduate College, 15 credit hours from a previously awarded master's degree can be used for this degree.

Students should consult with the academic unit for selection of open electives and restricted electives.

Certificate

The global management certificate requires 18 credit hours as outlined below, with a minimum of 12 upper-division credits. Students are encouraged to take courses that develop breadth within their sector rather than limiting their selection to courses in one particular subject area. Minimum "C" (2.00) grade is required in all course work in this certificate.

TGM 101 Principles of Global Management (GCSI) (3)
It is recommended that students take TGM 101 prior to or concurrently with other TGM courses.

Electives (3 credit hours)
TGM 204 Principles of Marketing for Global Organizations
TGM 300 Principles of Finance for Global Organizations
TGM 310 Supply Chain Operations for Global Organizations
TGM 312 Big Data in the Global Economy
TGM 353 Regional Management Environment (GCSI)
TGM 468 States and Markets in a Global Economy (GCSI)
TGM 478 Cross-Cultural Communication and Negotiation
TGM 487 Global Entrepreneurship
TGM 489 Multinational Organizational Leadership

Upper Division Electives (12 credit hours)
TGM 300 Principles of Finance for Global Organizations
TGM 310 Supply Chain Operations for Global Organizations
TGM 312 Big Data in the Global Economy
TGM 353 Regional Management Environment (GCSI)
TGM 468 States and Markets in a Global Economy (GCSI)
TGM 478 Cross-Cultural Communication and Negotiation
TGM 487 Global Entrepreneurship
TGM 489 Multinational Organizational Leadership

Notes
Prerequisite courses may be needed in order to complete the requirements of this certificate.
Study abroad or international experience is encouraged but not required. Consider ASU Global Education Office opportunities.

Career opportunities:

Graduates of this program have gained knowledge and skills and developed their leadership and management capabilities to manage the rapid disruptions happening now in traditional business and industry processes. They can advance and transform their careers through practical, research-based approaches and apply them to globally oriented public, private, governmental or nonprofit organizations.

Career examples include:

- chief executive officer
- chief operating officer
- director
- financial manager
- general manager

- government official
- public policy analyst
- senior organization consultant
- supply chain manager
- sustainability officer

Graduates who have combined the certificate in global management with their major program of study may become more marketable to employers. Many decide to pursue employment in corporations, governments or nonprofits in positions such as business analyst, global entrepreneur or marketing manager.

CERT/CERT Health Care Innovation and Medical Nutrition (NUHCINGRCT and NHMNTRGRCT)

Program description:
The growing field of health care innovation requires individuals who can lead and facilitate change.

In the health care innovation graduate certificate program, offered in a flexible online format, students learn through reflection, personality assessment, exercises in interdisciplinary team-case study analyses, system intervention, idea pitching and change-readiness assessment. Related entrepreneurial and intrapreneurial concepts, such as prototyping, business plan or project plan design, budgeting and presentation skills, are also covered.

Emphasizing complexity leadership and vulnerability along with emotional competence, this certificate prepares students to work in this interdisciplinary and highly sought-after area.

The certificate program in medical nutrition enables working health care professionals to acquire practical nutrition knowledge that can be immediately implemented in practice.

Students learn to discuss diet therapies, supplement use and nutritional concepts with their patients and clients. Students also gain in-depth knowledge of evidence-based nutrition research and the role of nutrition in managing chronic disease.

CERT At a Glance:
College/school: Edson College of Nursing and Health Innovation
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: College of Health Solutions
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

Certificate 1
15 credit hours

Required Core (3 credit hours)
HCI 538 Innovation and the Individual (3)

Electives (12 credit hours)

Additional Curriculum Information
Students work closely with an advisor to select electives tailored to their individual goals and interests. Elective coursework includes 12 credit hours at the 500 level or above focused on entrepreneurship and innovation. A minimum of six credit hours must be completed from HCI courses.

Certificate 2
15 credit hours

Required Core (15 credit hours)
NTR 510 Food and Nutrition Across the Lifespan (3)
NTR 511 Medical Nutrition in the Care and Prevention of Disease (3)
NTR 524 Chronic Inflammation and Metabolic Syndrome: The Common Pathway for Cardiovascular Disease, Diabetes (3)
NTR 525 Complementary Nutrition (3)
NTR 535 Nutrigenomics (3)

Career opportunities:
Graduates with the health care innovation graduate certificate have opportunities for careers such as:
- clinical nurse specialist
- community health worker

- health educator
- health information technician
- informatics nurse specialist

This program is designed for current practitioners or to supplement another field of study in health-related disciplines. Graduates obtain an edge in a competitive job market with a certification in a growing area of health care. This program may be of interest to:

- chiropractors
- nurse practitioners
- physical therapists
- physician assistants
- physicians

MA/CERT International Affairs and Leadership and Homeland Security (LAIALMA and PPHLSGRCT)

Program description:
The Master of Arts program in international affairs and leadership prepares students for international leadership roles in a dynamic learning environment led by senior international affairs professionals from the public and private sectors.

The program offers a distinct blend of leadership capacity development --- both theory and practice --- as well as substantive training focused on U.S. foreign policy decision-making, national security and international trade, and human rights and other key global issues. Courses are taught by experienced experts, including former U.S. ambassadors and three-star generals, with the goal of readying students to become leaders in the international affairs realm. Students have regular interactions with world-class professors and practitioners who help them learn how to shape the world in a meaningful and positive way.

The program is designed and led by the ASU Leadership, Diplomacy and National Security Lab and offered through the School of Politics and Global Studies.

The graduate certificate in homeland security focuses on homeland security as a field related to organizational security.

Students can study topics related to current international and domestic terrorism issues, global security, intelligence analysis, cybersecurity issues, crime prevention and law enforcement.

MA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

MA
30 credit hours including the required capstone course (IAL 560)

Required Core (9 credit hours)
IAL 501 Principles of Character-Driven Leadership (3)
IAL 502 The Making of U.S. National Security Policy (3)
IAL 503 Applied International Leadership: Case Studies (3)

Electives (18 credit hours)

Culminating Experience (3 credit hours)
IAL 560 Capstone (3)

Certificate
15 credit hours

Required Core (12 credit hours)
CRJ 553 Terrorism and Weapons of Mass Destruction (3)
CRJ 554 Homeland Security (3)
CRJ 557 Seminar in Domestic Terrorism (3)
CRJ 558 Seminar in International Terrorism (3) or CRJ 559 Seminar in Cyber Terrorism (3)

Electives or Research (3 credit hours)

Additional Curriculum Information

Students should see the academic unit for available elective and research coursework.

Students may choose to participate in a study abroad experience in counterterrorism in Israel during the summer term that may be used to fulfill elective coursework. Students who choose this option enroll in CRJ 555 Police and International Terrorism and CRJ 556 Etiology of Martyrdom.

Career opportunities:
Graduates are prepared to succeed in a wide variety of international affairs professions. Opportunities include foreign policy positions at the U.S. State Department, the U.S. Department of Commerce, the U.S. Department of the Treasury, and the U.S. Department of Defense, and leadership positions in international organizations such as the United Nations, the World Bank and the Organization for Security and Co-operation in Europe.

Career opportunities include:

- Capitol Hill staff member
- foreign service officer
- human rights expert (nongovernmental organization, think tank, USG, etc.)
- international development expert (USAID, World Bank, etc.)
- military officer or noncommissioned officer in strategic, special or tactical operations

Graduates of the homeland security graduate certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local), such as the Cybersecurity and Infrastructure Security Agency, U.S. Customs and Border Protection, the U.S. Secret Service and local law enforcement agencies.

MNLM/CERT Nonprofit Leadership and Management and Domestic Violence and Evidence-Based Practice (PPNPSMNS and PPDVEPGRCT)

Program description:
The Master of Nonprofit Leadership and Management program is a two-year program designed for individuals seeking senior leadership and management roles in the nonprofit sector. Students gain a specialized understanding of the unique characteristics of nonprofit organizations and the social sector. They explore both theoretical frameworks and practical applications of leadership and management in nonprofit settings. This program allows students to earn recognition comparable to those with graduate degrees in business administration while specializing their skill set for the public good.

ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024.

The certificate program in domestic violence intervention and victim advocacy provides students with the experience and knowledge to intervene safely and effectively on behalf of survivors of gender-based violence, a vulnerable group that helping professionals are likely to encounter in all areas of practice. Graduates who have learned the dynamics of domestic violence and other forms of gender-based violence are better equipped to assist those suffering its negative physical and mental health consequences.

Evidence-based care is crucial in domestic violence settings. Students in the certificate program engage in service-based and classroom learning to understand the role of evidence-based interventions in promoting survivor safety and client empowerment. Upon completion of the program, certificate holders become verified advocates for victims of domestic violence in the state of Arizona.

MNLM At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

MNLM

33 credit hours including the required capstone course (NLM 620)

Required Core (15 credit hours)
NLM 510 The Nonprofit Sector (3)
NLM 520 Financial and Resource Management (3)
NLM 530 Program Evaluation and Information Management (3)
NLM 540 Strategic Human Resources Management (3)
or NLM 545 Volunteer Resource Management (3)
NLM 550 Philanthropy (3)

Electives (15 credit hours)
NLM 515 Nonprofit Organizational Behavior and Principles of Management (3)
NLM 525 Fundraising and Resource Development (3)
NLM 540 Strategic Human Resources Management (3)
NLM 545 Volunteer Resource Management (3)
NLM 560 Leadership and Ethics in the Nonprofit Sector (3)
NLM 562 Social Entrepreneurship (3)
NLM 565 Grant Writing Nonprofit Organizations (3)
NLM 570 International Non-Governmental Organizations (3)
NLM 572 Community and Social Innovations (3)
NLM 580 Practicum (3)
NLM 585 Social Marketing (3)
NLM 605 Nonprofits, Law and Society (3)
NLM 610 Executive Leadership and Governance (3)

Culminating Experience (3 credit hours)
NLM 620 Capstone: Integrative Seminar (3)

Additional Curriculum Information
Students are required to take 15 credit hours of core coursework and 15 credit hours of related elective coursework. Three credit hours of a capstone course are also required and must be completed in the final semester of the program. The capstone course is integrative of all concepts learned in the program, allowing students to synthesize material from prior coursework. Successful completion of this course is required in place of a thesis or applied project.

Certificate

15 credit hours

Required Core (3 credit hours)
SWG 545 Domestic Violence Prevention and Intervention (3)

Restricted Electives (6 credit hours)
SWG 546 Approaches to Teen Dating Violence Prevention (3)
SWG 618 Advanced Practice in Domestic Violence (3)
SWG 647 The Domestic Violence Movement: An Intersectional Framework (3)
SWG 648 Intimate Partner Violence Risk Assessment (3)

Other Requirement (6 credit hours)
SWG 541 Generalist Practicum I (3) or SWG 641 Advanced Practicum: Direct Practice I (3) or SWG 643 Advanced Practicum: Planning, Social Work Administration and Community Practice I (3)
SWG 542 Generalist Practicum II (3) or SWG 642 Advanced Practicum: Direct Practice II (3) or SWG 644 Advanced Practicum: Planning, Social Work Administration and Community Practice II (3)

Additional Curriculum Information
For restricted electives, students select two courses from the approved course list. Other coursework may be used with the approval of the academic unit.

For the Other Requirement section, students must select one course from SWG 541, SWG 641 or SWG 643 and one course from SWG 542, SWG 642 or SWG 643. Other coursework may be used with approval of the academic unit.

The student's department-specific practicum experience credits may be substituted for those listed in the Other Requirement section with department approval.

All students are required to complete 300 hours (minimum) of domestic violence service through a practicum experience. Students should work with the academic unit in coordinating the practicum experience. Concurrent with the beginning of their practicum experience, students take the Domestic Violence Prevention and Intervention core course (SWG 545) to learn about the foundations for working with domestic violence victims. The coursework and practicum experience maximize experiential learning opportunities.

Career opportunities:

Graduates of this program have built expertise in nonprofit leadership and management. Career opportunities include:

- chief administrative officer
- chief executive officer
- chief financial officer
- foundation officer

Prospective administrators, helping professionals and community activists gain practical knowledge, implement

interventions backed by evidence, and develop the tools and networks to create change for survivors, families and communities.

Career examples include:

- clinician or therapist
- domestic violence or lay legal advocate
- domestic violence support group facilitator
- shelter case manager

MS/CERT Nursing (Nursing Education) and Nurse Education in Academic and Practice Settings (NUNURSEDMS and NUNURSEDCE)

Program description:
The country is experiencing a shortage of nursing faculty. The Master of Science degree program, with a concentration in nursing education, prepares students to advance their career and achieve their goal of becoming a nurse educator in an academic or practice setting. This program prepares students to teach future nurses and nursing leaders. Program highlights include:

- academic and clinical assessment
- curricular design and evaluation
- curriculum and course development and delivery
- educational theory and research
- testing and evaluation, including evaluation methods

Coursework in the MS in nursing with a concentration in nursing education is delivered completely online, providing flexibility for students to balance their education and their career. Additionally, students complete a one-credit hour population health practicum in the location where the student lives.

Courses in this program are led by experienced nursing faculty and designed with active learning strategies. Throughout the program, students learn the key competencies of a prepared nurse at the master's degree level while they gain additional nursing education skills. Students complete direct care clinical hours and a role-focused applied practicum that enables students to work with a preceptor in an area or role best suited to their career goals.

The curriculum meets the competencies outlined by the American Association of Colleges of Nursing Essentials.

This certificate program in nurse education in academic and practice settings prepares registered nurses and other health professionals who have earned a master's degree to teach in academic or practice settings.

Courses include curriculum development, teaching methods, design and delivery of mediated instruction, producing and evaluating educational programs, and a teaching practicum.

MS At a Glance:
College/school: Edson College of Nursing and Health Innovation
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Edson College of Nursing and Health Innovation
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

MS

33 credit hours including the required applied project course (NUR 593), or
39 credit hours including the required applied project course - RN to MS Bridge Program (NUR 593)

Required Core (3 credit hours)
NUR 501 Individual and Innovation Leadership in Health Care (3) or HCI 538 Innovation and the Individual (3)

Bridge Coursework (6 credit hours)
NUR 552 Dynamics of Professional Nursing I (3)
NUR 553 Dynamics of Professional Nursing II (3)

Concentration (12 credit hours)
NUR 670 Curriculum Development in Academic and Practice Settings (3)
NUR 671 Teaching in Academic and Practice Settings (3)
NUR 672 Design and Delivery of Mediated Instruction (3)
NUR 673 Producing and Evaluating Programs for Academic and Practice Settings (3)

Other Requirements (15 credit hours)
DNP 602 Evaluating Research for Practice (3)
NUR 502 Advanced Health Assessment and Health Promotion (2)
NUR 503 Advanced Health Assessment, Pathophysiology and Pharmacotherapeutics for Health Promotion II (3)
NUR 509 Clinical Prevention and Population Health Practicum (1)
NUR 544 Theoretical Foundations for Nursing (3)
NUR 579 Role-focused Practicum: Nurse Educator (3)

Culminating Experience (3 credit hours)
NUR 593 Applied Project (3)

Additional Curriculum Information
Students in the RN to MS in nursing (nursing education) bridge program complete 39 credit hours for this degree. In addition to fulfilling the requirements listed above, these students must complete NUR 552 Dynamics of Professional Nursing I and NUR 553 Dynamics of Professional Nursing II before starting the MS curriculum.

Certificate

15 credit hours

Required Core (15 credit hours)
NUR 670 Curriculum Development in Academic and Practice Settings (3)
NUR 671 Teaching in Academic and Practice Settings (3)
NUR 672 Design and Delivery of Mediated Instruction (3)
NUR 673 Producing and Evaluating Programs for Academic and Practice Settings (3)
NUR 579 Role-Focused Practicum: Nurse Educator (3)
or
NUR 677 Scholarly Citizenship: Teaching Intensive (3)

Additional Curriculum Information
A teaching practicum (comprising 135 clock hours) is required.

As part of the required core, MS and DNP students take NUR 579, and PhD students take NUR 677.

Career opportunities:

The master's degree program in nursing education prepares graduates for a variety of careers in which they can help educate the future nursing workforce. Job titles include:

- charge nurse
- chief nursing officer
- clinical professor
- director of nursing
- faculty member
- lead nurse
- nurse educator
- nursing supervisor

Graduates also are prepared for career advancement.

The nurse educator certificate prepares graduates for a variety of careers, helping to educate the future nursing workforce. Possible careers include:

- academic faculty
- charge nurse
- chief nursing officer
- nurse educator
- nursing supervisor

MS/CERT Organizational Leadership and Project Management (LSORGLMS and LSPMGGRCT)

Program description:
The Master of Science program in organizational leadership offers a theoretically and methodologically rigorous approach to studying and creating use-inspired research needed to impact organizational leadership.

Students explore areas such as organizational dynamics, institutional evolution, strategic change, leading diverse teams, collaborative governance, conflict mediation, critical problem-solving and leadership assessment, and they learn advanced methodological and statistical skills.

The program places special emphasis on learning best practices and other applied aspects of leading organizations. Students tailor their degree to their interests through a vast array of leadership elective courses. In consultation with an advisor, students choose from many different elective courses, such as not-for-profit leadership and intercultural leadership.

Project managers play a pivotal role in shaping an organization's direction by overseeing complex projects from inception to completion. Their expertise helps reduce costs, maximize efficiencies and increase revenue, driving the industry forward.

Students explore multiple project management methodologies, including waterfall, agile and scrum. Each course emphasizes applied learning through case studies that involve professional projects, enabling students to apply their knowledge and develop practical solutions.

Graduates of this program are well-prepared to pursue key industry certifications, including Certified Associate in Project Management, Green Project Management and Project Management Professional Certification. For more information, students should visit the school website.

Students also have the option to pursue this graduate certificate in project management and combine it with another certificate to complete the Master of Advanced Study. This pathway provides a powerful blend of practical skills and strategic insight, preparing students for career growth across diverse industries. This flexible approach not only boosts their marketability and earning potential but also positions them for leadership roles in a dynamic job market, offering a comprehensive skill set that employers highly value.

MS At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe or Online
STEM-OPT extension eligible: No

Degree requirements:

MS

33 credit hours and a thesis, or
33 credit hours including the required applied project course (OGL 593)

Required Core (12 credit hours)
OGL 510 Advanced Theories of Organizational Leadership (3)
OGL 520 Organizational Leadership: Social Psychological Perspectives (3)
OGL 530 Critical Perspectives in Leadership Theory (3)
OGL 540 Evidence-based Inquiry in Organizational Leadership (3)

Required Methods Courses (6 credit hours)
OGL 550 Leading Organizational Change (3) and OGL 570 Analyzing Organizations (3); or
OGL 574 Qualitative Data Analysis in Leadership Research (3) and OGL 575 Quantitative Data Analysis in Leadership Research (3)

Restricted Electives (9 or 12 credit hours)

Culminating Experience (3 or 6 credit hours)
OGL 593 Applied Project (3)
OGL 599 Thesis (6)

Additional Curriculum Information
Students complete either an applied project or thesis for the culminating experience.

For the required methods coursework, students complete OGL 550 and 570 if in the applied project culminating experience option. Students in the thesis option complete OGL 574 and 575.

Students select three or four courses from a restricted elective list depending on the culminating experience selected. Students should see the academic unit for the approved restricted elective list.

Other courses may be used for the methods and elective coursework with approval of the academic unit.

Certificate

15 credit hours

Required Core (15 credit hours)
OGL 520 Organizational Leadership: Social Psychological Perspectives (3)
PMG 501 Project Management Theory (3)
PMG 502 The Thoughtful Project: Aligning Purpose with Approach (3)
PMG 503 Impact Analysis and Sustainability in Project Management (3)
PMG 510 Interactive Learning: Scope, Schedule and Cost Management (1)
PMG 511 Interactive Learning: Risk and Procurement Management (1)
PMG 512 Interactive Learning: Quality, Resource and Communication Management (1)

Career opportunities:

Professionals with skills and expertise in critical thinking, organizational social psychology, teamwork, strategic change and leadership theory are in high demand across global industries. Organizations such as governmental agencies, Fortune 500 companies and those in the nonprofit sectors look for prepared professionals with a wide array of the skills that are optimized throughout this degree program.

Career examples include:

- CEO
- college professor
- human resource manager
- market research analyst
- training and development manager

The graduate certificate in project management equips students with the skills needed for roles as project managers across various sectors, including public, private and nonprofit organizations. Graduates are prepared for a variety of

careers such as:

- director of project management
- portfolio or project manager
- senior project manager
- technical project manager

MS/CERT Psychology and Industrial and Organizational Psychology (ASPGSMS and ASIOPGRCT)

Program description:
The Master of Science degree program in psychology is available in two modalities (campus immersion or online) with different culminating experience options (thesis, applied project or capstone).

The campus immersion option is ideal for students who plan to pursue doctoral work or careers that involve psychological research methods such as marketing research, education research analysis, public policy analysis, research project management or program evaluation. The program is intensive and research-oriented, and it culminates in a thesis or applied project. Students receive training in advanced research methodology and statistical analysis, grant proposal writing, laboratory instrumentation, data collection, and manuscript development. Students gain firsthand exposure to designing and conducting research, analyzing data, and developing presentations and manuscripts. Students are encouraged to present research reports at professional meetings and conferences and to publish as co-authors in faculty-guided research.

The online program option gives students and working professionals an understanding of psychological theory and empirical research findings as they relate to human behavior, cognition, emotion and attitudes. The coursework is designed to help students learn about the various roles of psychologists in society today and discover which they might like to pursue. The online curriculum is focused on applications of knowledge rather than research, and students are not provided hands-on research opportunities. The online program culminates with a capstone course.

Both options offer elective courses in several areas, including abnormal psychology, affective science, behavior analysis, cognitive psychology, developmental psychology, health psychology, legal psychology, psychophysiology and social psychology.

This program is not designed to prepare students for clinical practice. Opportunities to prepare for licensure exams are not available through this degree program.

The graduate certificate program in industrial and organizational psychology trains students to be well-versed in transformational workplace empowerment strategies and interventions that can lead to the optimal well-being and performance of individuals within organizations.

The foundational coursework uses concepts in psychology to emphasize training and development, professional motivation, decision-making, justice and leadership. Students engage in a rigorous curriculum that fosters advanced writing and critical thinking skills to promote competence in understanding theoretical frameworks within psychology, and industrial and organizational psychology research.

MS At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: West Valley or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

MS

36 credit hours and a thesis, or
36 credit hours including the required applied project course (PSY 593), or
36 credit hours including the required capstone course (PSY 553), or
36 credit hours including the required capstone course (PSY 553) - Mandarin Pathway

Required Core (3 credit hours)
PSY 502 Professional Issues in Psychology (3)

Research and Statistics (6 credit hours)
BDS 500 Research Methods (3) or PSY 500 Research Methods (3)
BDS 505 Statistical Methods (3) or PSY 513 Fundamentals in Quantitative Methods (3) or PSY 515 Quantitative Analysis I (3)

Additional Coursework for Campus Immersion Students (21-24 credit hours)
Statistics and research coursework (0-12)*
Foundation (0-15)
Electives (9-18)
*Additional statistics and research coursework selected in consultation with faculty and dependent on area of research interest and approved culminating experience

Additional Coursework for Digital Immersion Students (24 credit hours)
Foundation courses (15 hours)
Electives (9 credit hours)

Culminating Experience (3 or 6 credit hours)
PSY 553 Capstone in General Psychology (3)
PSY 593 Applied Project (6)
PSY 599 Thesis (6)

Additional Curriculum Information
The MS program in psychology is delivered in person as well as online through digital immersion. Students in the online program and the Mandarin pathway will only have the option to complete a capstone course. The thesis and applied project are for in-person program students and are determined in consultation with faculty. The capstone course may be approved for in-person students.

Certificate

15 credit hours

Required Core (15 credit hours)
PSY 508 Choice and Decision Making (3)
PSY 509 Advanced Industrial and Organizational Psychology (3)
PSY 510 Professional Motivation and Leadership (3)
PSY 511 Psychology of Organizational Development (3)
PSY 556 Cultural Intelligence (3)

Career opportunities:

The campus-based MS degree program in psychology is specialized to prepare graduates for admission to doctoral programs in psychology in areas that include clinical or counseling, social, cognitive and developmental specialties. Graduates may pursue professional research careers in education, health care or marketing.

Although some graduates of the online MS degree program have received admission to a doctoral program, the online curriculum is not research-intensive, and most students in the online program are pursuing the MS in psychology to benefit their current or future careers in education, social service, for-profit and nonprofit organizations, or management.

Career examples include:

- community health worker
- health educator

- market research analyst and marketing specialist
- medical and health services manager
- mental health counselor
- psychology teacher, postsecondary
- social and community service manager
- social and human services assistant
- social science research assistant

Graduates leave this program with a broad understanding of industrial and organizational psychology. They may pursue careers in psychology, education, business or government. In addition, the industrial and organizational coursework benefits graduates working in supervisory or management positions in corporate, government or social service professions.

The industrial and organizational psychology certificate can benefit those in positions such as:

- assessment development specialist
- data scientist
- human resource specialist
- people science and strategy manager
- product manager
- psychometric analyst
- service and testing supervisor
- workforce planning manager

MPA/CERT Public Administration and Emergency Management (PPPADTMPA and PPEMEGRCT)

Program description:
ASU ranks No. 5 for best graduate public management and leadership program by U.S. News & World Report, 2024.

The Master of Public Administration program equips students with the skills and knowledge necessary to lead and manage in the public sector. It emphasizes the development of competencies in management, public policy analysis, administrative leadership and the ethical governance of public institutions. The program offers a strong foundation in public service values, organizational behavior, budgeting and program evaluation. With a flexible curriculum, students can tailor their studies to focus on areas such as nonprofit management, urban affairs or policy implementation. ASU's MPA program is known for its interdisciplinary approach and its alignment with the challenges faced by contemporary public administrators, fostering innovation and evidence-based decision-making.

Students may also elect to specialize in one of four approved concentrations:

- emergency management
- nonprofit administration
- public finance
- urban management

This program can be completed full time or part time.

ASU ranks No. 2 for best graduate homeland security and emergency management program by U.S. News & World Report, 2024.

The graduate certificate program in emergency management provides students with the skills and knowledge to manage and assume positions of leadership in government, private, nonprofit and civic roles within the field of emergency management. An orientation on all-hazards and all-threats paired with a focus on community resilience and communication provides students with a generalist perspective, which is critically important for the disaster managers of today and tomorrow.

This certificate program may be of interest to students in disciplines such as public policy, planning, political science, nonprofit management, social work, criminology and other related fields.

MPA At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, ASU at Hainan or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

MPA
42 credit hours including the required capstone course (PAF 509)

Required Core (27 credit hours)
PAF 501 Public Service Research I (3)
PAF 502 Public Service Research II (3)
PAF 503 Public Affairs (3)
PAF 504 Microeconomics of Public Policy I (3)
PAF 505 Public Policy Analysis (3)
PAF 506 Public Budgeting and Finance (3)
PAF 507 Public Human Resource Management (3)
PAF 508 Organization Behavior (3)
PAF 574 Diversity, Ethics and Leading Public Change (3)

Electives or Research (12 credit hours)

Culminating Experience (3 credit hours)
PAF 509 Public Affairs Capstone (3)

Additional Curriculum Information
Students should see the academic unit for a complete list of approved electives. Approved elective credit hours may include courses offered by the school or other academic units in the university.

Certificate
15 credit hours

Required Core (9 credit hours)
PAF 520 Public Management (3)
PAF 552 Integrated Emergency Management (3)
PAF 555 Information Technology in Emergency Management (3)

Electives (6 credit hours)

Additional Curriculum Information
For electives, students should see the academic unit for an approved course list. Other coursework may be used with the approval of the academic unit.

Career opportunities:
Graduates are prepared to pursue a career in a field related to public administration or public policy. This may include opportunities as a manager or policy analyst in local, state or federal agencies; nonprofit organizations; and private organizations that interface with the public sector.

Students who complete this certificate are prepared to pursue a career in a field related to public administration or public policy, particularly in the areas of participatory governance and public engagement. This may include opportunities as either a manager or policy analyst in local, state or federal agencies; nonprofit organizations; and private organizations that interface with the public sector.

MED/CERT Secondary Education (Teacher Certification) and Holocaust and Genocide Studies (TESCERTMED and LAHGSGRCT)

Program description:
The Master of Education program in secondary education with a concentration in teacher certification is for those who already hold a bachelor's degree in any field and want to become licensed to teach grades 6--12. The program is designed to foster strong professional growth and leadership development.

The program of study is flexible, and students can complete it within five semesters with the appropriate internship and student teaching placements. Students can also enroll part time over additional semesters.

Mary Lou Fulton Teachers College faculty members actively engage in the educational research community, bringing new and relevant knowledge into the program. Students engage in their own research through applied project coursework, deepening their knowledge and improving their practice through research, critical evaluation and application of education concepts.

A series of professional experiences assist students in developing a thorough understanding of teaching and learning as they apply knowledge from their coursework in varied school settings.

This program offers two routes leading to Arizona teacher certification:

- In the traditional certification pathway, students complete three professional experiences: two internships and one student teaching.
- The alternative certification pathway provides an different pathway to teacher certification for individuals who are currently employed full time by a school as a teacher of record. To qualify, individuals must secure a full-time teaching position in an approved content area and grade level.
- The coursework is the same in both certification pathways and culminates in an applied project in which students apply what they've learned to address a problem of practice or topic related to education.

Graduates earn an institutional recommendation from ASU that is recognized by the Arizona Department of Education for teacher certification in Secondary Education, 6--12.

The graduate certificate program in Holocaust and genocide studies recognizes the importance of studying the Holocaust and other acts of genocide in order to give students the necessary contextualization to educate others while offering ideas about representation, memorialization and commemoration. The certificate provides graduate students with the theoretical and historiographical grounding for understanding the Holocaust as a defining event and using it as a lens through which to examine other genocides in world history. Students analyze these acts in research seminars and engage in interdisciplinary explorations of genocides and their representations in society, examining oral histories and material culture.

The program also enables students to engage in experiential opportunities at public-facing organizations dedicated to Holocaust and genocide awareness and education.

MED At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

MED

30 credit hours including the required applied project course (SED 593) - Alternative Certification Pathway, or
30 credit hours including the required applied project course (SED 593) - Traditional Certification Pathway

Required Core (11 credit hours)
TEL 502 Exploration of Education: Child/Adolescent Development and Foundations of Special Education (3)
TEL 510 Instructional Design, Planning and Assessment (2)
TEL 517 Creating Equitable Learning Environment: Decision Making and Action (3)
TEL 532 Literacy Across the Disciplines (3)

Concentration (6 credit hours)
SED 557 Internship I (2)
SED 567 Internship II (2)
SED 571 Apprentice Teaching I (2)
SED 574 Apprentice Teaching II (2)
SED 576 Internship III (2)
SED 578 Residency/Student Teaching in Secondary Education (2)

Certificate

18 credit hours

Required Core (3 credit hours)
HST 570 Readings in Holocaust and Genocide Studies (3)

Other Requirements (3 credit hours)
HST 454 History of Genocide (3) or
HST 571 Holocaust: Collaboration and Resistance (3) or
HST 598 Topic: Holocaust, War and German Memory (3)

Electives (12 credit hours)

Additional Curriculum Information
Other Requirements courses can be replaced with advisor approval. Students must see the unit for an approved list of elective topics.

SED 579 Apprentice Teaching III (2)
SED 596 Residency/Student Teaching (2)

SEI Endorsement (3 credit hours)
ELL 515 Structured English Immersion (SEI) Methods (3)

Other Requirements (7 credit hours)
PPE 550 Physical Education for Elementary School (3)
PPE 555 Physical Education for Secondary School and PPE 566 Conceptual Physical Education (1)
SED 510 General Methods and Assessment (4)
SED 511 ELA Methods and Assessment (4)
SED 512 Secondary Mathematics Methods and Assessment (4)
SED 513 Science Teaching Methods for Secondary School (4)
SED 514 Methods of Teaching Secondary Social Studies (4)
TEL 598 Special Topics (4)

Culminating Experience (3 credit hours)
SED 593 Applied Project (3)

Additional Curriculum Information
Students select one of the alternative certification or traditional pathways.

Students should see an advisor for the Other Requirements section.

Alternative pathway students choose six credit hours of apprentice teaching and internship from concentration requirements. At least four credit hours must be apprentice teaching.

Traditional pathway students choose six credit hours of internship and student teaching from Concentration Requirements. At least two credit hours must be internship and at least two credit hours must be student teaching.

If a student plans to switch options mid-program, the student must reach out to the academic unit for appropriate advisement.

Career opportunities:
Graduates of Mary Lou Fulton Teachers College are highly sought-after teachers in public, charter and private education institutions. Graduates of the program gain skills in teaching, conducting research, using technology and collaborating in teams --- all of which prepare them to succeed in educational careers working with learners in grades 6--12.

Graduates are prepared with the training needed for careers in education, research, teaching, government service, public history and a host of other positions in the public, private and nonprofit sectors. They serve as first-rate historians, researchers and consultants, foreign service officers, management professionals, community organizers and public servants.

Other career examples include:

- archivist
- collections manager
- college instructor
- editor
- museum coordinator
- national parks historian and park ranger
- nonprofit director
- teacher

MED/CERT Secondary Education (Teacher Certification) and Teacher Certification (TESCERTMED and TETEACGRCT)

Program description:
The Master of Education program in secondary education with a concentration in teacher certification is for those who already hold a bachelor's degree in any field and want to become licensed to teach grades 6--12. The program is designed to foster strong professional growth and leadership development.

The program of study is flexible, and students can complete it within five semesters with the appropriate internship and student teaching placements. Students can also enroll part time over additional semesters.

Mary Lou Fulton Teachers College faculty members actively engage in the educational research community, bringing new and relevant knowledge into the program. Students engage in their own research through applied project coursework, deepening their knowledge and improving their practice through research, critical evaluation and application of education concepts.

A series of professional experiences assist students in developing a thorough understanding of teaching and learning as they apply knowledge from their coursework in varied school settings.

This program offers two routes leading to Arizona teacher certification:

- In the traditional certification pathway, students complete three professional experiences: two internships and one student teaching.
- The alternative certification pathway provides an different pathway to teacher certification for individuals who are currently employed full time by a school as a teacher of record. To qualify, individuals must secure a full-time teaching position in an approved content area and grade level.

The coursework is the same in both certification pathways and culminates in an applied project in which students apply what they've learned to address a problem of practice or topic related to education.

Graduates earn an institutional recommendation from ASU that is recognized by the Arizona Department of Education for teacher certification in Secondary Education, 6--12.

The graduate certificate in teacher certification is a flexible certification program designed for students who want to obtain teaching licensure in a compressed time frame while working in a classroom or taking the traditional route for certification.

Through online courses, video-based teaching observations and supportive coaching, the certificate qualifies as a pathway to Arizona teacher certification in elementary education, secondary education or special education. Coursework may be completed over the span of three semesters, depending on the start date.

There are two pathways for this program:

- The alternative pathway requires students to be employed as a full-time teacher of record aligned with their certification area (elementary, secondary or special education) before enrolling in the program.
- The traditional pathway allows students to complete an internship and student teaching placement in their certification area (elementary, secondary or special education).

Students can choose to transfer credit hours to a Master of Education program in elementary education, an MEd program in secondary education, or an MEd program in special education within three years of starting the graduate certificate program.

Graduates earn an institutional recommendation for Elementary Education, K--8; Secondary Education, 6--12; or Special Education, K--12 Mild/Moderate Disabilities through the Arizona Department of Education.

To be eligible for an elementary, secondary or special education certification in Arizona, students must:

- pass the appropriate Arizona educator subject knowledge exam and the professional knowledge exam offered through the National Evaluation Series or Arizona Educator Proficiency Assessments
  or
- hold a conferred bachelor's or master's degree with the content area listed in the degree title and receive a passing score on the professional knowledge exam offered through the National Evaluation Series or Arizona Educator Proficiency Assessments

MED At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

MED

30 credit hours including the required applied project course (SED 593) - Alternative Certification Pathway, or
30 credit hours including the required applied project course (SED 593) - Traditional Certification Pathway

Required Core (11 credit hours)
TEL 502 Exploration of Education: Child/Adolescent Development and Foundations of Special Education (3)
TEL 510 Instructional Design, Planning and Assessment (2)
TEL 517 Creating Equitable Learning Environment: Decision Making and Action (3)
TEL 532 Literacy Across the Disciplines (3)

Concentration (6 credit hours)
SED 557 Internship I (2)
SED 567 Internship II (2)
SED 571 Apprentice Teaching I (2)
SED 574 Apprentice Teaching II (2)
SED 576 Internship III (2)
SED 578 Residency/Student Teaching in Secondary Education (2)
SED 579 Apprentice Teaching III (2)
SED 596 Residency/Student Teaching (2)

SEI Endorsement (3 credit hours)
ELL 515 Structured English Immersion (SEI) Methods (3)

Other Requirements (7 credit hours)
PPE 550 Physical Education for Elementary School (3)
PPE 555 Physical Education for Secondary School and PPE 566 Conceptual Physical Education (1)
SED 510 General Methods and Assessment (4)
SED 511 ELA Methods and Assessment (4)
SED 512 Secondary Mathematics Methods and Assessment (4)
SED 513 Science Teaching Methods for Secondary School (4)
SED 514 Methods of Teaching Secondary Social Studies (4)
TEL 598 Special Topics (4)

Culminating Experience (3 credit hours)
SED 593 Applied Project (3)

Additional Curriculum Information
Students select one of the alternative certification or traditional pathways.

Students should see an advisor for the Other Requirements section.

Alternative pathway students choose six credit hours of apprentice teaching and internship from concentration requirements. At least four credit hours must be apprentice teaching.

Certificate

25 credit hours - Secondary Education Track - Physical Education, Alternative Certification, or
25 credit hours - Secondary Education Track - Physical Education, Traditional Certification, or
25 credit hours - Secondary Education Track, Alternative Certification, or
25 credit hours - Secondary Education Track, Traditional Certification, or
28 credit hours - Elementary Education Track, Alternative Certification, or
28 credit hours - Elementary Education Track, Traditional Certification, or
29 credit hours - Special Education Mild/Moderate Track, Alternative Certification, or
29 credit hours - Special Education Mild/Moderate Track, Traditional Certification

Required Core (5 credit hours)
TEL 510 Instructional Design, Planning and Assessment (2)
TEL 517 Creating Equitable Learning Environment: Decision Making and Action (3)

Tracks (13, 16, or 17 credit hours depending on track to certification)
Elementary Education Track (16)
Secondary Education Track, Traditional or Alternative Certification (13)
Secondary Education Track - Physical Education Traditional or Alternative Certification (13)
Special Education Mild/Moderate Track, Traditional or Alternative Certification (17)

SEI Endorsement (3 credits)
ELL 515 Structured English Immersion (SEI) Methods (3)

Other Requirements (4 credit hours)
EED 557 Internship I (2)
EED 571 Apprentice Teaching I (2)
EED 574 Apprentice Teaching II (2)
EED 578 Residency/Student Teaching in Elementary Education (2)
SED 557 Internship I (2)
SED 571 Apprentice Teaching I (2)
SED 574 Apprentice Teaching II (2)
SED 578 Residency/Student Teaching in Secondary Education (2)
SPE 556 Internship I (2)
SPE 571 Apprentice Teaching I (2)
SPE 574 Apprentice Teaching II (2)
SPE 578 Residency/Student Teaching in Special Education (2)

Additional Curriculum Information
The courses for the track and other requirements depend on the student's track and route to certification (traditional or alternative).

Traditional pathway students choose six credit hours of internship and student teaching from Concentration Requirements. At least two credit hours must be internship and at least two credit hours must be student teaching.

If a student plans to switch options mid-program, the student must reach out to the academic unit for appropriate advisement.

If a student is on the alternative path for certification and moves over to a traditional path, they may be able to substitute student teaching for apprentice teaching with program approval.

Career opportunities:
Graduates of Mary Lou Fulton Teachers College are highly sought-after teachers in public, charter and private education institutions. Graduates of the program gain skills in teaching, conducting research, using technology and collaborating in teams --- all of which prepare them to succeed in educational careers working with learners in grades 6--12.

Graduates of Mary Lou Fulton Teachers College are highly sought-after teachers in public, charter and private education institutions. Students gain skills in teaching, using technology and collaborating in teams, all of which prepare them to succeed in a career educating learners in elementary education (grades K--8) or secondary education (grades 6--12).

MSW/CERT Social Work and Criminal Sentencing and Sentencing Advocacy (PPSWDMSW and PPCSAGRCT)

Program description:
ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024.

The first half of the standard program focuses on curriculum and gaining skills that build a foundational knowledge in social work. The second half of the program allows students to build specialized practice knowledge in advanced direct practice; policy, administration and community; and advanced generalist social work practice.

The standard Master of Social Work program can be completed over the course of two or three years.

The MSW program is accredited by the Council on Social Work Education.

ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024 and No. 2 for best graduate criminology and criminal justice programs by U.S. News & World Report, 2023.

The certificate program in criminal sentencing and sentencing advocacy assumes that for any professional to function effectively, they must have a fundamental knowledge of the respective roles that sentencing professionals play during various phases of the criminal justice process.

In keeping with this viewpoint, all students are required to take courses for practice as both a presentence investigator and a sentencing advocate. Those courses are seminars in courts and sentencing, in presentence investigations, and in alternatives to penal sanctions. After taking these required courses, students select an area of specialization to further their expertise as a probation professional, sentencing advocate, mitigation specialist or victim advocate. They take these courses from a range of electives available in the School of Criminology and Criminal Justice and in the School of Social Work.

This interprofessional certificate program also provides participants with content on the relationship between mental disorders and crime, and the way in which differential sentencing frameworks affect the sentencing of offenders suffering from mental disorders.

This program is highly recommended for social workers, forensic psychologists and other criminal justice professionals seeking specialized expertise as a sentencing professional responsible for making sentencing recommendations addressing relevant offender risks and needs, victim impacts, treatment alternatives to incarceration, community safety and other relevant sentencing considerations.

MSW At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, ASU Sync, ASU at Tucson or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions

Location: Online
STEM-OPT extension eligible: No

Degree requirements:

MSW

51 credit hours and a portfolio, or
51 credit hours and a thesis, or
51 credit hours including the required applied project course (SWG 593 or SWG 693), or
51 credit hours including the required capstone course (SWG 621) , or
54 credit hours and a portfolio, or
54 credit hours and a thesis, or
54 credit hours including the required applied project course (SWG 593 or SWG 693), or
54 credit hours including the required capstone course (SWG 621), or
57 credit hours and a portfolio, or
57 credit hours and a thesis, or
57 credit hours including the required applied project course (SWG 593 or SWG 693), or
57 credit hours including the required capstone course (SWG 621), or
60 credit hours and a portfolio (MSW/MPA concurrent degree), or
60 credit hours and a thesis (MSW/MPA concurrent degree), or
60 credit hours including the required applied project course (SWG 593 or SWG 693) - Advanced Generalist Track, or
60 credit hours including the required capstone course (SWG 621) (MSW/MPA concurrent degree)

STANDARD PROGRAM (campus immersion):

Required Core (3 credit hours)
SWG 510 Foundation Practice I (3)

Foundation Coursework (18 to 27 credit hours)
SWG 501 Human Behavior and the Social Environment I (3)
SWG 502 Human Behavior and the Social Environment II (3)
SWG 511 Foundation Practice II (3)
SWG 519 Research Methods in Social Work (3)
SWG 531 Social Policy and Services (3)
SWG 533 Diversity, Oppression and Social Justice in Social Work (3)
SWG 541 Generalist Practicum I (3)
SWG 542 Generalist Practicum II (3)
SWG 585 Macro Social Work Practice (3)

Restricted Electives (21 to 27 credit hours)

Other Requirements (3 credit hours)
SWG 610 Advanced Social Work Practice III (3) or
SWG 619 Practice-Oriented Research (3) or
SWG 623 Program Evaluation (3)

Certificate

15 credit hours

Required Core (9 credit hours)
CRJ 513 Seminar in Courts and Sentencing (3)
SWG 528 Presentence Investigations (3)
SWG 529 Alternatives Penal Sanctions (3)

Electives (6 credit hours)

Additional Curriculum Information
For electives, students should see the academic unit for the approved course list.

Culminating Experience Options (0 to 6 credit hours)
portfolio (0) or
SWG 593 Applied Project (3) or
SWG 599 Thesis (6) or
SWG 621 Integrative Seminar (3) or
SWG 693 Applied Project (3)

ADVANCED GENERALIST TRACK (digital immersion):

Required Core (3 credit hours)
SWG 510 Foundation Practice I (3)

Advanced Generalist Track Coursework (54 credit hours)

Culminating Experience Options (3 credit hours)
SWG 593 Applied Project (3) or
SWG 693 Applied Project (3)

Additional Curriculum Information
Students on the 51, 54 and 57 credit hour paths have an undergraduate Council on Social Work Education-accredited Bachelor of Social Work in social work degree or Bachelor of Arts degree in community advocacy and social policy. Path selection depends on the student's educational background. Students are to consult an academic advisor in the unit.

The 60 credit hour advanced generalist track is the digital immersion option. These students have a bachelor's or master's degree from a regionally accredited institution. Students in the 60 hour path must take foundation year coursework in restricted electives per CSWE accreditation standards.

All credit hour path criteria must be approved by the academic unit prior to selection in the iPOS. A student interested in moving to a concentration should notify the academic advisor prior to submitting their iPOS. The academic unit advises and monitors students to ensure they choose the appropriate coursework.

The number of credit hours required for restricted electives depends on the credit hour path chosen and the culminating experience. Students should see the academic unit for a complete list of approved electives.

The foundation year includes basic courses in direct practice, organizational and community change, social policy, human behavior and research. Foundation coursework is selected in consultation with the academic advisor. Students are required to complete two practicums: a foundation practicum placement (480 hours) and a specialization practicum placement (480 hours) in a different setting.

Other requirement coursework may be substituted with approval of the academic unit.

The program may be completed within four semesters (two years) or six semesters (three years).

Career opportunities:
There are many paths within social work that graduates can pursue. Career examples include:

- adult and juvenile correction social worker
- behavioral health hospital social worker
- community organizer
- gerontology services patient coordinator
- group and individual clinician
- homeless services outreach coordinator or shelter director
- policy analyst
- program director and grant writer
- school social worker
- social services or nonprofit administrator

Social workers, criminal justice professionals and recent graduates of psychology and other social and behavioral sciences programs perform a number of roles in the disposition and sentencing of public offenders. They also provide support for victims of crime during the criminal justice process.

Career examples include:

- mitigation specialist
- presentence investigator
- probation professional
- sentencing advocate
- victim advocate

MSW/CERT Social Work and Domestic Violence and Evidence-Based Practice (PPSWDMSW and PPDVEPGRCT)

Program description:
ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024.

The first half of the standard program focuses on curriculum and gaining skills that build a foundational knowledge in social work. The second half of the program allows students to build specialized practice knowledge in advanced direct practice; policy, administration and community; and advanced generalist social work practice.

The standard Master of Social Work program can be completed over the course of two or three years.

The MSW program is accredited by the Council on Social Work Education.

ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024.

The certificate program in domestic violence intervention and victim advocacy provides students with the experience and knowledge to intervene safely and effectively on behalf of survivors of gender-based violence, a vulnerable group that helping professionals are likely to encounter in all areas of practice. Graduates who have learned the dynamics of domestic violence and other forms of gender-based violence are better equipped to assist those suffering its negative physical and mental health consequences.

Evidence-based care is crucial in domestic violence settings. Students in the certificate program engage in service-based and classroom learning to understand the role of evidence-based interventions in promoting survivor safety and client empowerment. Upon completion of the program, certificate holders become verified advocates for victims of domestic violence in the state of Arizona.

MSW At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, ASU Sync, ASU at Tucson or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online
STEM-OPT extension eligible: No

Degree requirements:

MSW

51 credit hours and a portfolio, or
51 credit hours and a thesis, or
51 credit hours including the required applied project course (SWG 593 or SWG 693), or
51 credit hours including the required capstone course (SWG 621) , or
54 credit hours and a portfolio, or
54 credit hours and a thesis, or
54 credit hours including the required applied project course (SWG 593 or SWG 693), or
54 credit hours including the required capstone course (SWG 621), or
57 credit hours and a portfolio, or
57 credit hours and a thesis, or
57 credit hours including the required applied project course (SWG 593 or SWG 693), or
57 credit hours including the required capstone course (SWG 621), or
60 credit hours and a portfolio (MSW/MPA concurrent degree), or
60 credit hours and a thesis (MSW/MPA concurrent degree), or
60 credit hours including the required applied project course (SWG 593 or SWG 693) - Advanced Generalist Track, or
60 credit hours including the required capstone course (SWG 621) (MSW/MPA concurrent degree)

STANDARD PROGRAM (campus immersion):

Required Core (3 credit hours)
SWG 510 Foundation Practice I (3)

Foundation Coursework (18 to 27 credit hours)
SWG 501 Human Behavior and the Social Environment I (3)
SWG 502 Human Behavior and the Social Environment II (3)
SWG 511 Foundation Practice II (3)
SWG 519 Research Methods in Social Work (3)
SWG 531 Social Policy and Services (3)
SWG 533 Diversity, Oppression and Social Justice in Social Work (3)
SWG 541 Generalist Practicum I (3)
SWG 542 Generalist Practicum II (3)
SWG 585 Macro Social Work Practice (3)

Restricted Electives (21 to 27 credit hours)

Other Requirements (3 credit hours)
SWG 610 Advanced Social Work Practice III (3) or
SWG 619 Practice-Oriented Research (3) or
SWG 623 Program Evaluation (3)

Culminating Experience Options (0 to 6 credit hours)
portfolio (0) or
SWG 593 Applied Project (3) or

Certificate

15 credit hours

Required Core (3 credit hours)
SWG 545 Domestic Violence Prevention and Intervention (3)

Restricted Electives (6 credit hours)
SWG 546 Approaches to Teen Dating Violence Prevention (3)
SWG 618 Advanced Practice in Domestic Violence (3)
SWG 647 The Domestic Violence Movement: An Intersectional Framework (3)
SWG 648 Intimate Partner Violence Risk Assessment (3)

Other Requirement (6 credit hours)
SWG 541 Generalist Practicum I (3) or SWG 641 Advanced Practicum: Direct Practice I (3) or SWG 643 Advanced Practicum: Planning, Social Work Administration and Community Practice I (3)
SWG 542 Generalist Practicum II (3) or SWG 642 Advanced Practicum: Direct Practice II (3) or SWG 644 Advanced Practicum: Planning, Social Work Administration and Community Practice II (3)

Additional Curriculum Information
For restricted electives, students select two courses from the approved course list. Other coursework may be used with the approval of the academic unit.

For the Other Requirement section, students must select one course from SWG 541, SWG 641 or SWG 643 and one course from SWG 542, SWG 642 or SWG 643. Other coursework may be used with approval of the academic unit.

The student's department-specific practicum experience credits may be substituted for those listed in the Other Requirement section with department approval.

All students are required to complete 300 hours (minimum) of domestic violence service through a practicum experience. Students should work with the academic unit in coordinating the practicum experience. Concurrent with the beginning of their practicum experience, students take the Domestic Violence Prevention and Intervention core course (SWG 545) to learn about the foundations for working with domestic violence victims. The coursework and practicum experience maximize experiential learning opportunities.

SWG 599 Thesis (6) or
SWG 621 Integrative Seminar (3) or
SWG 693 Applied Project (3)

ADVANCED GENERALIST TRACK (digital immersion):

Required Core (3 credit hours)
SWG 510 Foundation Practice I (3)

Advanced Generalist Track Coursework (54 credit hours)

Culminating Experience Options (3 credit hours)
SWG 593 Applied Project (3) or
SWG 693 Applied Project (3)

Additional Curriculum Information
Students on the 51, 54 and 57 credit hour paths have an undergraduate Council on Social Work Education-accredited Bachelor of Social Work in social work degree or Bachelor of Arts degree in community advocacy and social policy. Path selection depends on the student's educational background. Students are to consult an academic advisor in the unit.

The 60 credit hour advanced generalist track is the digital immersion option. These students have a bachelor's or master's degree from a regionally accredited institution. Students in the 60 hour path must take foundation year coursework in restricted electives per CSWE accreditation standards.

All credit hour path criteria must be approved by the academic unit prior to selection in the iPOS. A student interested in moving to a concentration should notify the academic advisor prior to submitting their iPOS. The academic unit advises and monitors students to ensure they choose the appropriate coursework.

The number of credit hours required for restricted electives depends on the credit hour path chosen and the culminating experience. Students should see the academic unit for a complete list of approved electives.

The foundation year includes basic courses in direct practice, organizational and community change, social policy, human behavior and research. Foundation coursework is selected in consultation with the academic advisor. Students are required to complete two practicums: a foundation practicum placement (480 hours) and a specialization practicum placement (480 hours) in a different setting.

Other requirement coursework may be substituted with approval of the academic unit.

The program may be completed within four semesters (two years) or six semesters (three years).

Career opportunities:
There are many paths within social work that graduates can pursue. Career examples include:

- adult and juvenile correction social worker
- behavioral health hospital social worker
- community organizer
- gerontology services patient coordinator
- group and individual clinician
- homeless services outreach coordinator or shelter director
- policy analyst
- program director and grant writer
- school social worker
- social services or nonprofit administrator

Prospective administrators, helping professionals and community activists gain practical knowledge, implement interventions backed by evidence, and develop the tools and networks to create change for survivors, families and communities.

Career examples include:

- clinician or therapist
- domestic violence or lay legal advocate
- domestic violence support group facilitator

- shelter case manager

MSW/CERT Social Work and Trauma and Bereavement (PPSWDMSW and HSCTBGRCT)

Program description:
ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024.

The first half of the standard program focuses on curriculum and gaining skills that build a foundational knowledge in social work. The second half of the program allows students to build specialized practice knowledge in advanced direct practice; policy, administration and community; and advanced generalist social work practice.

The standard Master of Social Work program can be completed over the course of two or three years.

The MSW program is accredited by the Council on Social Work Education.

ASU ranks No. 20 for best graduate social work program by U.S. News & World Report, 2024.

There is a growing need in society for health care workers and clinicians to be better prepared to help clients and patients experiencing trauma.

The School of Social Work graduate certificate program in trauma and bereavement provides students with enhanced knowledge about grief responses and the effects of trauma. Students have opportunities to research an often underexplored topic while helping transform the sociopolitical management of grief, traumatic losses and end-of-life issues in contemporary society.

MSW At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, ASU Sync, ASU at Tucson or Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix
STEM-OPT extension eligible: No

Degree requirements:
MSW
51 credit hours and a portfolio, or
51 credit hours and a thesis, or
51 credit hours including the required applied project course (SWG 593 or SWG 693), or
51 credit hours including the required capstone course (SWG 621) , or
54 credit hours and a portfolio, or
54 credit hours and a thesis, or
54 credit hours including the required applied project course (SWG 593 or SWG 693), or
54 credit hours including the required capstone course (SWG 621), or
57 credit hours and a portfolio, or
57 credit hours and a thesis, or
57 credit hours including the required applied project course (SWG 593 or SWG 693), or
57 credit hours including the required capstone course (SWG 621), or
60 credit hours and a portfolio (MSW/MPA concurrent degree), or
60 credit hours and a thesis (MSW/MPA concurrent degree), or
60 credit hours including the required applied project course (SWG 593 or SWG 693) - Advanced Generalist Track, or
60 credit hours including the required capstone course (SWG 621) (MSW/MPA concurrent degree)

STANDARD PROGRAM (campus immersion):

Required Core (3 credit hours)
SWG 510 Foundation Practice I (3)

Foundation Coursework (18 to 27 credit hours)
SWG 501 Human Behavior and the Social Environment I (3)
SWG 502 Human Behavior and the Social Environment II (3)
SWG 511 Foundation Practice II (3)
SWG 519 Research Methods in Social Work (3)
SWG 531 Social Policy and Services (3)
SWG 533 Diversity, Oppression and Social Justice in Social Work (3)
SWG 541 Generalist Practicum I (3)
SWG 542 Generalist Practicum II (3)
SWG 585 Macro Social Work Practice (3)

Restricted Electives (21 to 27 credit hours)

Other Requirements (3 credit hours)
SWG 610 Advanced Social Work Practice III (3) or
SWG 619 Practice-Oriented Research (3) or
SWG 623 Program Evaluation (3)

Culminating Experience Options (0 to 6 credit hours)
portfolio (0) or
SWG 593 Applied Project (3) or
SWG 599 Thesis (6) or
SWG 621 Integrative Seminar (3) or
SWG 693 Applied Project (3)

ADVANCED GENERALIST TRACK (digital immersion):

Required Core (3 credit hours)
SWG 510 Foundation Practice I (3)

Advanced Generalist Track Coursework (54 credit hours)

Culminating Experience Options (3 credit hours)
SWG 593 Applied Project (3) or
SWG 693 Applied Project (3)

Additional Curriculum Information
Students on the 51, 54 and 57 credit hour paths have an undergraduate Council on Social Work Education-accredited Bachelor of Social Work in social work degree or Bachelor of Arts degree in community advocacy and social policy. Path selection depends on the student's educational background. Students are to consult an academic advisor in the unit.

The 60 credit hour advanced generalist track is the digital immersion option. These students have a bachelor's or master's degree from a regionally accredited institution. Students in the 60 hour path must take foundation year coursework in restricted electives per CSWE accreditation standards.

Certificate
15 credit hours

Required Core (6 credit hours)
SWG 576 War and Disaster (3)
SWG 577 Traumatic Death: Theory, Counseling and Practice (3)

Restricted Electives (3 credit hours)
SWG 575 Restorative Spaces and Therapeutic Communities: Ecological Care of Humans, Animals and the Earth (3)
SWG 655 Quality of Life, Mastering Mindfulness (3)
SWG 690 Reading and Conference (3)

Other Requirements (6 credit hours)
SWG 541 Generalist Practicum I (3) and SWG 542 Generalist Practicum II (3) or
SWG 584 Internship (6) or
SWG 641 Advanced Practicum: Direct Practice I (3) and SWG 642 Advanced Practicum: Direct Practice II (3)

Additional Curriculum Information
For restricted electives, students choose one of the three course options listed above for three credit hours.

Students must complete one of the practicums and internship options from the Other Requirements list. Courses are selected in consultation with an advisor. Practicums and internships must be preapproved with the academic unit. If selected, enrollment in SWG 584 Internship is for three credit hours and taken twice.

All credit hour path criteria must be approved by the academic unit prior to selection in the iPOS. A student interested in moving to a concentration should notify the academic advisor prior to submitting their iPOS. The academic unit advises and monitors students to ensure they choose the appropriate coursework.

The number of credit hours required for restricted electives depends on the credit hour path chosen and the culminating experience. Students should see the academic unit for a complete list of approved electives.

The foundation year includes basic courses in direct practice, organizational and community change, social policy, human behavior and research. Foundation coursework is selected in consultation with the academic advisor. Students are required to complete two practicums: a foundation practicum placement (480 hours) and a specialization practicum placement (480 hours) in a different setting.

Other requirement coursework may be substituted with approval of the academic unit.

The program may be completed within four semesters (two years) or six semesters (three years).

Career opportunities:
There are many paths within social work that graduates can pursue. Career examples include:

- adult and juvenile correction social worker
- behavioral health hospital social worker
- community organizer
- gerontology services patient coordinator
- group and individual clinician
- homeless services outreach coordinator or shelter director
- policy analyst
- program director and grant writer
- school social worker
- social services or nonprofit administrator

This graduate certificate program in trauma and bereavement prepares individuals to work in the field of death and dying, as well as with patients experiencing trauma and bereavement, in clinical, organizational and administrative settings.

Career examples include:

- crisis response team member or leader
- hospice or chaplaincy worker
- medical or premed professional
- therapist or counselor

MSUS/CERT Sustainability Solutions and Energy and Sustainability (SUSUSOMSUS and SUERGSGRCT)

Program description:
The Master of Sustainability Solutions program teaches students how to analyze and solve sustainability challenges in organizations and communities. Students learn how to apply sustainability principles and approaches. The focus is on developing solutions in concert with stakeholders.

Students in the MSUS program benefit from both flexibility and guidance in their course selection. They can choose from faculty-curated course lists, which highlight electives aligned with the employment sectors of MSUS alumni --- namely the private, public and nonprofit sectors. For those who are still exploring their options, recommended courses in sustainability analytics are available to help them prepare for careers across all sectors.

A distinguishing element of the program is its applied approach. Students begin the program with a foundation in sustainability frameworks and methods, then they take electives in an area of interest and ultimately use this knowledge to develop solutions to actual sustainability challenges in real time.

Final courses include learning how to manage sustainability projects. In the capstone experience, students team up with a company, a government agency or a nongovernmental organization to develop a practical sustainability solution. Carried out collaboratively in lieu of a thesis, the capstone provides practical experience that positions program graduates for today's competitive, knowledge- and skills-intensive job market.

The global energy system is a complex sociotechnical system. Leaders in sustainable energy must have a transdisciplinary perspective that combines technical, economic, social and policy dimensions of energy systems.

The certificate program in energy and sustainability is designed to train students from diverse educational backgrounds who are in graduate-level, energy-related fields to see beyond the boundaries of traditional methodologies and disciplinary viewpoints, enabling them to integrate technological knowledge with societal insights.

Graduates of the certificate program have a basic understanding of sustainable energy technology and systems, as well as social dimensions, such as markets and policies. They understand energy transitions as a dynamic sociotechnical process; and they are able to perform analyses of energy generation, consumption and costs, and how these metrics can be utilized in policy discussions.

MSUS At a Glance:
College/school: College of Global Futures
Location: Tempe
STEM-OPT extension eligible: Yes

CERT At a Glance:
College/school: College of Global Futures
Location: Tempe
STEM-OPT extension eligible: No

Degree requirements:

MSUS
30 credit hours including the required applied project course (SOS 593)

Required Core (6 credit hours)
SOS 508 Pathways to Sustainability (3) or SOS 510 Perspectives on Sustainability (3)
SOS 509 Leading Sustainability Transitions or SOS 511 Advanced Sustainability Problem Solving (3)

Other Requirements (15 credit hours)
SOS 582 Project Management for Sustainability (3)
competency mastery courses (6)
methods courses (6)

Focus Area Electives (6 credit hours)

Culminating Experience (3 credit hours)
SOS 593 Applied Project (3)

Additional Curriculum Information
MSUS students specialize in a focus area and take six credit hours of elective coursework related to that area with approval by their academic advisor.

For a list of approved courses that may fulfill the methods and competency mastery requirements, students should see the academic unit. No more than six credit hours of 400-level coursework can be included in the plan of study.

The Graduate College policies and procedures for fulfillment of degree requirements must also be met.

Certificate
15 credit hours

Required Core (6 credit hours)
SOS 572 Sustainable Energy Transitions (3)
SOS 574 Data Analytics for Sustainable Energy (3)

Electives (9 credit hours)
technical fundamentals of energy systems elective (3)
policy and governance of energy systems elective (3)
restricted elective (3)

Additional Curriculum Information
Students should contact the academic unit for the most recent approved elective coursework. Other coursework may be used with approval of the academic unit.

Career opportunities:
Professionals who understand how to solve difficult problems and work with and draw from different disciplines are in high demand across sectors and industries. Graduates of the MSUS program have the knowledge base and skill set needed to create sustainability solutions in a variety of sectors including business, education, nonprofit, governmental and

nongovernmental organizations. Graduates are trained to help organizations approach differing values and perspectives in a collaborative way, understand and explore the complexity of systems, plan for various future scenarios and develop strategies for action.

From the School of Sustainability's 2022 alumni employment survey, 94% of master's degree program respondents are either employed or pursuing continuing education. Of those employed, 86% of respondents have jobs directly related to sustainability. Students can learn more about careers in sustainability and where MSUS graduates are now employed by visiting the School of Sustainability alumni employment data website.

Career examples include:

- chief sustainability officer
- environmental specialist
- industrial ecologist
- sustainability analyst
- sustainability consultant
- sustainability specialist

Future energy challenges will be addressed by leaders who understand the complexity and dynamics of global energy systems and can communicate with diverse stakeholders to implement adaptive solutions. Graduates with this certificate are competitive for employment opportunities in academia, industry or government.

Career examples include:

- policy analyst
- project manager
- regulatory affairs specialist
- renewable energy engineer
- strategy consultant

MA/CERT World War II Studies and Holocaust and Genocide Studies (LAWWSMA and LAHGSGRCT)

Program description:
Through advanced interdisciplinary study, students in the Master of Arts program in World War II studies explore the causes and effects of World War II; the global nature of the conflict; the evolution of governance and political systems; and human responses to conflict, violence and genocide. Program coursework also helps students contextualize current events through study of the war's historical, political and cultural legacies.

The graduate certificate program in Holocaust and genocide studies recognizes the importance of studying the Holocaust and other acts of genocide in order to give students the necessary contextualization to educate others while offering ideas about representation, memorialization and commemoration. The certificate provides graduate students with the theoretical and historiographical grounding for understanding the Holocaust as a defining event and using it as a lens through which to examine other genocides in world history. Students analyze these acts in research seminars and engage in interdisciplinary explorations of genocides and their representations in society, examining oral histories and material culture.

The program also enables students to engage in experiential opportunities at public-facing organizations dedicated to Holocaust and genocide awareness and education.

MA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Online
STEM-OPT extension eligible: No

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Online
STEM-OPT extension eligible: No

Degree requirements:

MA

30 credit hours including the required capstone course (WWS 597)

Required Core (12 credit hours)
WWS 561 Decision Points I (3)
WWS 562 Decision Points II (3)
WWS 563 The Lived Experience of World War II (3)
WWS 566 World War II Today (3)

Electives or Research (9 credit hours)

Other Requirements (6 credit hours)
HST 454 History of Genocide (3) or WWS 564 The Global War (3)
WWS 460 World War II (3) or HST 460 World War II (3)

Culminating Experience (3 credit hours)
WWS 597 Capstone (3)

Additional Curriculum Information
Students should refer to the academic unit for the approved electives and research course list.

For the Other Requirements courses, students must take either HST 454 or WWS 564. If a student chooses to take HST 454 to fulfill the requirement, they may take WWS 564 as an elective. Likewise, if a student chooses to take WWS 564 to fulfill a requirement, they may take HST 454 as an elective. Other coursework may be used with approval of the academic unit.

Certificate

18 credit hours

Required Core (3 credit hours)
HST 570 Readings in Holocaust and Genocide Studies (3)

Other Requirements (3 credit hours)
HST 454 History of Genocide (3) or
HST 571 Holocaust: Collaboration and Resistance (3) or
HST 598 Topic: Holocaust, War and German Memory (3)

Electives (12 credit hours)

Additional Curriculum Information
Other Requirements courses can be replaced with advisor approval. Students must see the unit for an approved list of elective topics.

Career opportunities:

Graduates have the fundamental training needed for careers in research, teaching, public history, government service and a host of other positions in the public, private and nonprofit sectors.

Graduates serve as first-rate historians, highly qualified teachers at the elementary and secondary levels and at community colleges, researchers and consultants, archivists, foreign service officers, management professionals, community organizers and public servants.

Other career examples include:

- archivist
- college instructor
- editorial and publishing professional
- museum director and staff
- nonprofit director
- research professional

Graduates are prepared with the training needed for careers in education, research, teaching, government service, public history and a host of other positions in the public, private and nonprofit sectors. They serve as first-rate historians, researchers and consultants, foreign service officers, management professionals, community organizers and public servants.

Other career examples include:

- archivist
- collections manager
- college instructor
- editor

- museum coordinator
- national parks historian and park ranger
- nonprofit director
- teacher

Undergraduate-level combinations

Shared coursework policy

Credit sharing between undergraduate degrees and certificates is permitted. The college of the major has discretionary authority to determine if certificate courses also may apply toward major credit.

BS/CERT Accountancy and Applied Business Data Analytics (BAACCBS and BABDACERT)

Description:
The W. P. Carey School of Accountancy works closely with its professional advisory board to create a learning environment that emulates the professional world through exploration of applied processes and strategies. The Bachelor of Arts program in accountancy prepares students by equipping them with critical thinking, team-building, communication and information technology skills, along with knowledge of accounting theories and procedures.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

Certificate At a Glance
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Accounting is a dynamic field, with diverse career opportunities in the private sector and in government agencies worldwide.

Graduates have the essential academic preparation and competitive edge they need for:

- a position in consulting
- a position in personal financial planning and portfolio analysis
- a professional career in public, corporate and governmental accounting
- operating a business

Graduates are also well-positioned to pursue a graduate degree or attend law school.

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Accountancy, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BAACCBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

ACC 330 Data Analytics in Accounting	C	3
ACC 340 External Reporting I	C	3
ACC 440 External Reporting II	C	3
ACC 444 Integrated Business Processes and Enabling Technologies	C	3
ACC 430 Taxes and Business Decisions OR ACC 450 Principles of Auditing	C	3
Upper Division Accountancy Major Elective (choose two) ACC 350 Internal Reporting	C	6

Requirement	Minimum Grade	Credit Hours
ACC 430 Taxes and Business Decisions		
ACC 450 Principles of Auditing		
ACC 460 Ethics for Professional Accountants		
ACC 494 Topic: ESG Reporting		
CIS 407 Business Database Systems Development		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 232 and ACC 242 are the recommended lower-division ACC courses for Accountancy students.		
ACC 232 Financial Accounting I OR **ACC 231 Uses of Accounting Information I**	C	3
ACC 242 Managerial Accounting I OR **ACC 241 Uses of Accounting Information II**	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3

ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.00 GPA in all courses offered by the W. P. Carey School of Business.

Students must earn a 2.00 GPA in major courses.

Students must complete a minimum of 32 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSE/CERT Aerospace Engineering (Astronautics) and Cross-Sector Leadership (ESAEASBSE and PPCSLDCERT)

Program description:
The Bachelor of Science in Engineering (BSE) in Aerospace Engineering with a concentration in Astronautics prepares students for careers in the design and development of aerospace vehicles and systems.

The curriculum covers key topics such as orbital mechanics, rocket propulsion, gas dynamics, space structures, telecommunications, space environment, and attitude control, along with electives in aeronautics. Students complete a capstone design project integrating multiple disciplines to create a space-going vehicle.

Graduates are expected to demonstrate skills in problem-solving, engineering design, communication, teamwork, ethics, experimentation, data analysis, and lifelong learning.

The program is ABET-accredited under the Aerospace Engineering Program Criteria and qualifies international students on F-1 visas for a 24-month STEM-OPT extension (excluding ASU Online students).

The certificate program in cross-sector leadership provides a comprehensive overview of leading solutions to complex social challenges by integrating the public, private, nonprofit and military sectors.

Students engage in a systems-thinking approach to challenges faced by local and global communities, explore the diverse characteristics and motives of each sector in engaging in cross-sector collaborations, and master processes to formalize such partnerships. Students study values-based leadership and how individual, organizational and sector values can drive a leader's ability to act. Students gain leadership skills, such as leading change within and between organizations across multiple sectors; and they learn to use human-centered design, social entrepreneurship and other approaches when tackling community challenges.

Students end the program with a thesis or applied project that integrates the theories, procedures and concepts learned in the certificate courses with experiences from their internships in each sector.

BSE At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix

Career opportunities:
The majority of students who enter the field of aerospace engineering desire to work on the design and analysis of aerospace vehicles. Most graduates are employed in the aerospace industry or in government positions related to aerospace. Specific careers in aerospace engineering include:

- aeronautical and space systems integration
- configuration development
- material and structural design
- propulsion engineering
- space mission design and analysis
- vehicle and component analysis using computer-aided tools
- vehicle design and performance
- wind tunnel and flight testing

The aerospace engineering program has the following educational objectives:

Through volunteering, entrepreneurial endeavors, community service and their employment, graduates of the aerospace engineering program demonstrate commitment to the Sun Devil ideals of global engagement, social embeddedness, social transformation and sustainability.

Graduates of the aerospace engineering program should attain one or more of the following objectives within a few years of degree completion:

employment in aerospace or other field in a position that capitalizes on the skills and abilities gained through the degree program in aerospace engineering, leading to positions of increasing responsibility and leadership within their organization
admission to a graduate degree program in aerospace engineering or another technical field
admission to a professional degree program, such as law or business, in accordance with the graduate's specific interests and abilities

Students can advance their career options with an undergraduate certificate.

Graduates of the certificate in cross-sector leadership have acquired a beneficial knowledge of cross-sector collaboration, advanced leadership skills, and an understanding of how to use these. These transferrable skills complement students' major program of study and may make them more marketable to employers.

Curriculum - Aerospace Engineering (Astronautics), BSE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Engineering, BSE
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESAEASBSE
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours
Check: Minimum 2.0 Major GPA	C	

Aerospace (Astronautics) Lower Division

FSE 100 Introduction to Engineering OR **SES 100 Introduction to Exploration (QTRS)**	C	2
EEE 202 Circuits I	C	4
EEE 203 Signals and Systems I	C	3
MAE 201 Mechanics of Particles and Rigid Bodies I: Statics	C	3
MAE 202 Mechanics of Particles and Rigid Bodies II: Dynamics	C	3
MAE 213 Mechanics of Materials	C	3
MAE 214 Computer-Aided Engineering I	C	1
MAE 215 Introduction to Programming in MATLAB	C	1

Requirement	Minimum Grade	Credit Hours
MAE 241 Introduction to Thermodynamics	C	3
MAE 242 Introduction to Fluid Mechanics	C	3

Aerospace (Astronautics) Upper Division

AEE 325 Aerospace Structures and Materials	C	3
AEE 360 Aerodynamics	C	3
AEE 361 Aerodynamics Laboratory	C	1
AEE 362 High-Speed Aerodynamics	C	3
AEE 462 Space Vehicle Dynamics and Control	C	3
AEE 465 Rocket Propulsion	C	3
AEE 445 Fundamentals of Spacecraft Design	C	3
AEE 480 Space Systems Design	C	3
EEE 350 Random Signal Analysis	C	3
EEE 455 Communication Systems OR EEE 459 Communication Networks	C	3
MAE 301 Applied Experimental Statistics	C	3
MAE 318 System Dynamics and Control I	C	3
MAE 384 Advanced Mathematical Methods for Engineers (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
Astronautics Technical Electives		
Upper Division Technical Electives	C	3

*Students who do not meet the enrollment requirements for these courses (excluding AEE prefixes) may be allowed to enroll with instructor consent. Courses not listed here require a department petition form. To take any 494 class, please check with your advisor first. A max of 3 credits from MAE 484/499 can be applied toward the TE requirements.

AEE 313 Aircraft Dynamics and Control

AEE 344 Fundamentals of Aircraft Design

AEE 415 Vibration Analysis

AEE 426 Design of Aerospace Structures

AEE 463 Aircraft Propulsion

AEE 471 Computational Fluid Dynamics

AST 321 Stellar and Planetary Astrophysics

AST 322 Introduction to Galactic and Extragalactic Astrophysics

BME 467 Tissue Engineering and Regenerative Medicine

BME 494 Topic: Polymeric Drug Delivery

BME 494 Topic: Wearable Devices for Sport, Health, and Wellness

Requirement	Minimum Grade	Credit Hours
CEE 494 Topic: Airport Design		
CHE 468 Polymer Principles and Processing		
CHE 478 Biomass Energy Conversion Technology		
CHE 494 Topic: Quantum Mechanical Simulations of Chemical Process **or** MSE 494 Topic: Quantum Mech Eng: SW and HW of Quantum Computers		
CHE 494 Topic: Six Sigma Methodology/Engineering Experimentation		
CHM 325 Analytical Chemistry		
EEE 304 Signals and Systems II		
EEE 333 Hardware Design Languages and Programmable Logic		
EEE 334 Circuits II		
EEE 407 Digital Signal Processing		
EEE 473 Electrical Machinery		
EEE 480 Feedback Systems		
EEE 481 Computer-Controlled Systems		
EEE 498 Topic: Foundations Machine Learning: From Theory to Pract		
EGR 317 Humanitarian Engineering Project II		
EGR 433 Transforms and Systems Modeling		
FSE 301 Entrepreneurship and Value Creation		

Requirement	Minimum Grade	Credit Hours
FSE 394 Topic: Engineering in Global Context		
GLG 404 Fundamentals of Planetary Geology		
IEE 300 Economic Analysis for Engineers		
MAE 341 Mechanism Analysis and Design		
MAE 404 Finite Elements in Engineering		
MAE 417 System Dynamics and Control II		
MAE 436 Combustion		
MAE 451 Applied Machine Learning for Mechanical and Aerospace Engineers		
MAE 455 Polymers and Composites		
MAE 460 Applied Computational Fluid Dynamics		
MAE 494 Topic: Advanced Aerodynamics		
MAE 494 Topic: Theories and Techniques of Direct CAD Modeling		
MAE 494 Topic: Energy Efficiency		
MAE 494 Topic: Introduction to Autonomous Vehicle Engineering		
MAE 494 Topic: Design Optimization		
MAE 494 / MSE 494 Topic: Quantum Mech Eng: SW and HW of Quantum Computers		
MAT 300 Mathematical Structures		
MAT 371 Advanced Calculus I		

Requirement	Minimum Grade	Credit Hours
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 425 Numerical Analysis II		
MAT 451 Mathematical Modeling		
MEE 340 Heat Transfer		
MEE 351 Manufacturing Processes		
MEE 434 Internal Combustion Engines		
MEE 340 Heat Transfer		
MEE 440 Renewable Energy: Mechanical Systems		
MEE 441 Wind Energy		
MEE 472 Intermediate Fluid Mechanics		
MEE 482 Intermediate Thermodynamics		
MSE 330 Thermodynamics of Materials		
MSE 494 Topic: Electrochemical Materials Science		
PHY 310 Classical Particles, Fields, and Matter I		
PHY 361 Introductory Modern Physics		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe		
SES 350 Engineering Systems and Experimental Problem Solving (QTRS)		

Requirement	Minimum Grade	Credit Hours
SES 405 Exploration Systems Engineering		
SES 407 Space Works II: Model, Fabricate, Test		
SES 410 Senior Exploration Project I		
SES 494 Topic: Modeling and Analysis of Space Thermal Systems		
TMC 498 Pro-Seminar		
By Approval Only:		
MAE 484 Internship		
MAE 492 Honors Directed Study		
MAE 493 Honors Thesis		
MAE 499 Individualized Instruction		

Aerospace Engineering (Astronautics) GPA

Check: Minimum 2.0 Major GPA

Math and Science Requirements

MAT 242 Elementary Linear Algebra	C	2
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH)	C	3

MAT 275 Modern Differential Equations (MATH)	C	3
CHM 114 General Chemistry for Engineers (SCIT) OR CHM 116 General Chemistry II (SCIT)	C	4
PHY 121 University Physics I: Mechanics (SCIT)	C	3
PHY 122 University Physics Laboratory I (SCIT)	C	1
PHY 131 University Physics II: Electricity and Magnetism (SCIT)	C	3
PHY 132 University Physics Laboratory II (SCIT)	C	1

Interdisciplinary Studies

ARC 434 Great Cities (HUAD) OR OGL 345 Organizational Ethics (HUAD) OR HPS 314 Philosophy of Science (HUAD) **or** PHI 314 Philosophy of Science (HUAD) OR HST 319 History of Aviation (HUAD) OR PHI 330 Theory of Knowledge (HUAD) OR REL 330 Native American Worldviews (HUAD)	C	3
PAF 311 Leadership and Change (SOBE) OR PAF 410 Building Leadership Skills (SOBE) OR POS 301 Empirical Political Inquiry (SOBE) OR STS 304 Science, Technology and Society (SOBE) OR SWU 349 Stress Management Tools II (SOBE) OR SWU 350 Whole Person Health Across the Lifespan (SOBE)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-AEE The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Cross-Sector Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPCSLDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in cross-sector leadership is a requirement for, and is limited to, participants in the Public Service Academy's Next Generation Service Corps, a four-year leadership development track that engages future civilian leaders in the public, private and nonprofit sectors to engage in collaboration and change in the context of social challenges in which they hold interest. Students are required to demonstrate forward academic progress to maintain enrollment in the certificate as well as the Next Generation Service Corps. ROTC students also may pursue the certificate.		
PAF 215 NGSC Community Impact Lab	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 315 Cross-Sector Collaboration (CIVI)	C	3
PAF 415 Social Entrepreneurship	C	3
PAF 394 Topic: NGSC Leadership Instruction **or** **PAF 421 Leadership Capstone**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSE/CERT Aerospace Engineering (Astronautics) and Planetary Science (ESAEASBSE and LAPLSCERT)

Program description:
The Bachelor of Science in Engineering (BSE) in Aerospace Engineering with a concentration in Astronautics prepares students for careers in the design and development of aerospace vehicles and systems.

The curriculum covers key topics such as orbital mechanics, rocket propulsion, gas dynamics, space structures, telecommunications, space environment, and attitude control, along with electives in aeronautics. Students complete a capstone design project integrating multiple disciplines to create a space-going vehicle.

Graduates are expected to demonstrate skills in problem-solving, engineering design, communication, teamwork, ethics, experimentation, data analysis, and lifelong learning.

The program is ABET-accredited under the Aerospace Engineering Program Criteria and qualifies international students on F-1 visas for a 24-month STEM-OPT extension (excluding ASU Online students).

The certificate program in planetary science prepares undergraduate students in topics related to the formation and evolution of planetary bodies and associated remote sensing technologies employed in these studies. The program includes specific training in the origins of planetary systems, tectonics, volcanism, geomorphology and remote mapping of surficial geology using spacecraft and land-based observational data. Additional skills may include understanding of planetary atmospheres, astrobiology, geodynamics and cosmochemistry.

This interdisciplinary program prepares students for technical career paths and helps prepare them to best engage with exciting opportunities at the frontier of planetary exploration.

BSE At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
The majority of students who enter the field of aerospace engineering desire to work on the design and analysis of aerospace vehicles. Most graduates are employed in the aerospace industry or in government positions related to aerospace. Specific careers in aerospace engineering include:

- aeronautical and space systems integration
- configuration development
- material and structural design
- propulsion engineering
- space mission design and analysis
- vehicle and component analysis using computer-aided tools
- vehicle design and performance
- wind tunnel and flight testing

The aerospace engineering program has the following educational objectives:

Through volunteering, entrepreneurial endeavors, community service and their employment, graduates of the aerospace engineering program demonstrate commitment to the Sun Devil ideals of global engagement, social embeddedness, social transformation and sustainability.

Graduates of the aerospace engineering program should attain one or more of the following objectives within a few years of degree completion:

- employment in aerospace or other field in a position that capitalizes on the skills and abilities gained through the degree program in aerospace engineering, leading to positions of increasing responsibility and leadership within

their organization
- admission to a graduate degree program in aerospace engineering or another technical field
- admission to a professional degree program, such as law or business, in accordance with the graduate's specific interests and abilities

The employment prospects for graduates who complete the planetary science certificate are enhanced by the potential for opportunities at the intersection of these fields. Opportunities include these positions:

- community college or university educator teaching earth science or astronomy classes
- docent at a science museum or planetarium
- faculty member or researcher at a university, working on federally funded planetary science research, instruments or missions
- K--12 educator for a program with an earth science or astronomy curriculum
- researcher at an aerospace company contracted to build subsystems, instruments or missions for federally funded planetary science research

In Arizona, such opportunities are offered at institutions that include the public universities, Mesa Community College, the United States Geological Survey, Lowell Observatory and the Planetary Science Institute. Arizona companies that employ people in these fields include World View, Paragon, FreeFall Aerospace, General Dynamics, Qwaltec and KinetX. National companies include Lockheed Martin, Honeywell, Ball, SpaceX, Blue Origin, Virgin Galactic, Intuitive Machines, Firefly Aerospace, Northrop Grumman, Axiom, Planet Labs, Blue Canyon Technologies, Astrobotic and ispace.

Graduates may also find employment in federal labs or as congressional staff.

Curriculum - Aerospace Engineering (Astronautics), BSE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Engineering, BSE
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESAEASBSE
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours
Check: Minimum 2.0 Major GPA	C	

Aerospace (Astronautics) Lower Division

FSE 100 Introduction to Engineering OR **SES 100 Introduction to Exploration (QTRS)**	C	2
EEE 202 Circuits I	C	4
EEE 203 Signals and Systems I	C	3
MAE 201 Mechanics of Particles and Rigid Bodies I: Statics	C	3
MAE 202 Mechanics of Particles and Rigid Bodies II: Dynamics	C	3
MAE 213 Mechanics of Materials	C	3
MAE 214 Computer-Aided Engineering I	C	1
MAE 215 Introduction to Programming in MATLAB	C	1

Requirement	Minimum Grade	Credit Hours
MAE 241 Introduction to Thermodynamics	C	3
MAE 242 Introduction to Fluid Mechanics	C	3

Aerospace (Astronautics) Upper Division

AEE 325 Aerospace Structures and Materials	C	3
AEE 360 Aerodynamics	C	3
AEE 361 Aerodynamics Laboratory	C	1
AEE 362 High-Speed Aerodynamics	C	3
AEE 462 Space Vehicle Dynamics and Control	C	3
AEE 465 Rocket Propulsion	C	3
AEE 445 Fundamentals of Spacecraft Design	C	3
AEE 480 Space Systems Design	C	3
EEE 350 Random Signal Analysis	C	3
EEE 455 Communication Systems OR EEE 459 Communication Networks	C	3
MAE 301 Applied Experimental Statistics	C	3
MAE 318 System Dynamics and Control I	C	3
MAE 384 Advanced Mathematical Methods for Engineers (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
Astronautics Technical Electives		
Upper Division Technical Electives	C	3
*Students who do not meet the enrollment requirements for these courses (excluding AEE prefixes) may be allowed to enroll with instructor consent. Courses not listed here require a department petition form. To take any 494 class, please check with your advisor first. A max of 3 credits from MAE 484/499 can be applied toward the TE requirements.		
AEE 313 Aircraft Dynamics and Control		
AEE 344 Fundamentals of Aircraft Design		
AEE 415 Vibration Analysis		
AEE 426 Design of Aerospace Structures		
AEE 463 Aircraft Propulsion		
AEE 471 Computational Fluid Dynamics		
AST 321 Stellar and Planetary Astrophysics		
AST 322 Introduction to Galactic and Extragalactic Astrophysics		
BME 467 Tissue Engineering and Regenerative Medicine		
BME 494 Topic: Polymeric Drug Delivery		
BME 494 Topic: Wearable Devices for Sport, Health, and Wellness		

Requirement	Minimum Grade	Credit Hours
CEE 494 Topic: Airport Design		
CHE 468 Polymer Principles and Processing		
CHE 478 Biomass Energy Conversion Technology		
CHE 494 Topic: Quantum Mechanical Simulations of Chemical Process or MSE 494 Topic: Quantum Mech Eng: SW and HW of Quantum Computers		
CHE 494 Topic: Six Sigma Methodology/Engineering Experimentation		
CHM 325 Analytical Chemistry		
EEE 304 Signals and Systems II		
EEE 333 Hardware Design Languages and Programmable Logic		
EEE 334 Circuits II		
EEE 407 Digital Signal Processing		
EEE 473 Electrical Machinery		
EEE 480 Feedback Systems		
EEE 481 Computer-Controlled Systems		
EEE 498 Topic: Foundations Machine Learning: From Theory to Pract		
EGR 317 Humanitarian Engineering Project II		
EGR 433 Transforms and Systems Modeling		
FSE 301 Entrepreneurship and Value Creation		

Requirement	Minimum Grade	Credit Hours
FSE 394 Topic: Engineering in Global Context		
GLG 404 Fundamentals of Planetary Geology		
IEE 300 Economic Analysis for Engineers		
MAE 341 Mechanism Analysis and Design		
MAE 404 Finite Elements in Engineering		
MAE 417 System Dynamics and Control II		
MAE 436 Combustion		
MAE 451 Applied Machine Learning for Mechanical and Aerospace Engineers		
MAE 455 Polymers and Composites		
MAE 460 Applied Computational Fluid Dynamics		
MAE 494 Topic: Advanced Aerodynamics		
MAE 494 Topic: Theories and Techniques of Direct CAD Modeling		
MAE 494 Topic: Energy Efficiency		
MAE 494 Topic: Introduction to Autonomous Vehicle Engineering		
MAE 494 Topic: Design Optimization		
MAE 494 / MSE 494 Topic: Quantum Mech Eng: SW and HW of Quantum Computers		
MAT 300 Mathematical Structures		
MAT 371 Advanced Calculus I		

Requirement	Minimum Grade	Credit Hours
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 425 Numerical Analysis II		
MAT 451 Mathematical Modeling		
MEE 340 Heat Transfer		
MEE 351 Manufacturing Processes		
MEE 434 Internal Combustion Engines		
MEE 340 Heat Transfer		
MEE 440 Renewable Energy: Mechanical Systems		
MEE 441 Wind Energy		
MEE 472 Intermediate Fluid Mechanics		
MEE 482 Intermediate Thermodynamics		
MSE 330 Thermodynamics of Materials		
MSE 494 Topic: Electrochemical Materials Science		
PHY 310 Classical Particles, Fields, and Matter I		
PHY 361 Introductory Modern Physics		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe		
SES 350 Engineering Systems and Experimental Problem Solving (QTRS)		

Requirement	Minimum Grade	Credit Hours
SES 405 Exploration Systems Engineering		
SES 407 Space Works II: Model, Fabricate, Test		
SES 410 Senior Exploration Project I		
SES 494 Topic: Modeling and Analysis of Space Thermal Systems		
TMC 498 Pro-Seminar		
By Approval Only:		
MAE 484 Internship		
MAE 492 Honors Directed Study		
MAE 493 Honors Thesis		
MAE 499 Individualized Instruction		

Aerospace Engineering (Astronautics) GPA

Check: Minimum 2.0 Major GPA

Math and Science Requirements

MAT 242 Elementary Linear Algebra	C	2
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH)	C	3

MAT 275 Modern Differential Equations (MATH)	C	3
CHM 114 General Chemistry for Engineers (SCIT) OR CHM 116 General Chemistry II (SCIT)	C	4
PHY 121 University Physics I: Mechanics (SCIT)	C	3
PHY 122 University Physics Laboratory I (SCIT)	C	1
PHY 131 University Physics II: Electricity and Magnetism (SCIT)	C	3
PHY 132 University Physics Laboratory II (SCIT)	C	1

Interdisciplinary Studies

ARC 434 Great Cities (HUAD) OR OGL 345 Organizational Ethics (HUAD) OR HPS 314 Philosophy of Science (HUAD) **or** PHI 314 Philosophy of Science (HUAD) OR HST 319 History of Aviation (HUAD) OR PHI 330 Theory of Knowledge (HUAD) OR REL 330 Native American Worldviews (HUAD)	C	3
PAF 311 Leadership and Change (SOBE) OR PAF 410 Building Leadership Skills (SOBE) OR POS 301 Empirical Political Inquiry (SOBE) OR STS 304 Science, Technology and Society (SOBE) OR SWU 349 Stress Management Tools II (SOBE) OR SWU 350 Whole Person Health Across the Lifespan (SOBE)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-AEE The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Planetary Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAPLSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires a minimum of 18 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. At least six upper-division hours in the certificate must be completed in courses offered by The College of Liberal Arts and Sciences. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		
AST 111 Introduction to Solar Systems Astronomy (SCIT) or GLG 101 Introduction to Geology I (Physical) (SCIT) or SES 100 Introduction to Exploration (QTRS) or SES 106 Habitable Worlds (SCIT) or SES 107 A Solar System Journey (SCIT) or SES 121 Earth, Solar System and Universe (SCIT)	C	3 - 4
GLG 404 Fundamentals of Planetary Geology	C	3
SES 421 Foundations of Planetary Science	C	3
Upper Division Planetary Science Electives	C	6
AST 494 Topic: Exoplanets		
GLG 321 Mineralogy or GLG 424 Petrology		
GLG 362 Geomorphology		
GLG 406 Geology of Mars		

Requirement	Minimum Grade	Credit Hours
GLG 418 Geophysics or GLG 419 Geodynamics		
GLG 420 Volcanology or GLG 422 Planetary Volcanology		
GLG 485 Meteorites and Cosmochemistry		
GLG 490 Topic: Remote Sensing		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe or GLG 460 Astrobiology		
SES 494 Topic: Geology of Venus		
SES 494 Topic: Planetary Interiors		
Planetary Science Electives		
AST 494 Topic: Exoplanets		
GLG 321 Mineralogy or GLG 424 Petrology		
GLG 362 Geomorphology		
GLG 406 Geology of Mars		
GLG 418 Geophysics or GLG 419 Geodynamics		
GLG 420 Volcanology or GLG 422 Planetary Volcanology	C	3
GLG 485 Meteorites and Cosmochemistry		
GLG 490 Topic: Remote Sensing		
SES 294 Topic: Introduction to Space Weather		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe or GLG 460 Astrobiology		
SES 494 Topic: Geology of Venus		
SES 494 Topic: Planetary Interiors		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Anthropology and Evolutionary Medicine (LAASBBS and LAEVMDCERT)

Program description:
This Bachelor of Science program in anthropology provides data collection, analysis and research design training within the scientific approaches to anthropology.

Students learn how to use the scientific method to formulate and test hypotheses and how to gather data through methods such as field surveys, excavation and measurement. They also learn to employ statistics to analyze and extract meaning from data. Through broad anthropological coursework, students learn to ask important questions about the human species and gain the tools to answer them.

This interdisciplinary program offers training in the main areas of anthropology, including archaeology, bioarchaeology, sociocultural anthropology and evolutionary anthropology.

In the evolutionary medicine certificate program, students discover a burgeoning new field that is improving human health and transforming our understanding of disease by merging the fields of evolutionary biology, genetics, medicine, global health and public health.

Students integrate perspectives from across these fields to investigate questions about health and disease in the context of human history. Using their mastery of these new approaches within the biological and social sciences, they address emerging and anticipated public needs, such as reemerging infectious disease, challenges facing vaccination, expanding chronic disease and other growing public health crises.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
The demand in the job market for people with an anthropology background is stimulated by a growing need for researchers and analysts with keen thinking skills who can manage, evaluate and interpret large amounts of data. As the many spheres of human interaction expand globally, people trained in scientific modes of anthropology increasingly are sought for the combination of broad, holistic knowledge and perspective, and technical skills.

Career opportunities include:

- analyzing and proposing policies
- conducting postgraduate academic research
- consulting for large and small private and public organizations
- curating cultural resources
- directing nonprofit organizations
- directing programs in the private or public sector
- forensics
- genetics and other laboratory-based positions
- managing cultural resources in public and private sectors
- modeling infectious diseases
- providing health care as nurses, doctors or public health professionals
- teaching

Graduates of the evolutionary medicine certificate program have gained integrated and individualized skills that are in high demand to address a growing need for innovation in medicine and public health care. Graduates who combine this certificate program with their major program of study are well prepared for roles in a variety of fields, including biology, medicine, law and ethics.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Anthropology, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAASBBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Major Core

ASB 102 Introduction to Cultural Anthropology (GCSI)	C	3
ASB 222 Buried Cities and Lost Tribes (HUAD) OR **ASB 223 Aztecs, Incas and Mayas (HUAD)**	C	3
ASM 104 Bones, Stones, and Human Evolution (SCIT)	C	4

Anthropological Sciences Seminar

ASM 300 Anthropological Sciences Seminar	C	3

Anthropology Electives

Requirement	Minimum Grade	Credit Hours
Upper Division **ASM Elective**	C	12
Upper Division Anthropology Upper Division Electives		
Upper Division AML Elective	C	6
Upper Division ASB Elective		
Upper Division ASM Elective		
Upper Division BCH Elective		
Upper Division BIO Elective		
Upper Division CHM Elective		
Upper Division GPH Elective		
Upper Division NTR Elective		
Upper Division SSH Elective		
Anthropology Elective	C	6
AML Elective		
ASB Elective		
ASM Elective		
SSH Elective		
Upper Division BCH Elective		
Upper Division BIO Elective		
Upper Division CHM Elective		

Requirement	Minimum Grade	Credit Hours
Upper Division GPH Elective		
Upper Division NTR Elective		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

MAT 210 Brief Calculus (MATH) **OR MAT 251 Calculus for Life Sciences (MATH)** **OR MAT 265 Calculus for Engineers I (MATH)** **OR MAT 270 Calculus with Analytic Geometry I (MATH)**	C	3
Upper Division Statistics (choose one)	C	3

ASB 394 Topic: Statistics for Social Scientists

ASM 463 A Practical Guide to Bayesian Data Analysis (QTRS)

ASM 465 Quantification and Analysis for Anthropologists

BIO 415 Statistical Models for Biology (QTRS)

SOC 390 Social Statistics I (QTRS)

STP 420 Introductory Applied Statistics (QTRS)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** AND **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Evolutionary Medicine, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAEVMDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in evolutionary medicine consists of 15 credit hours, at least 12 of which must be upper division. All 15 credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for all courses used toward the certificate.		
Required Courses		
ASM 403 Evolutionary Medicine and Global Health **or** **BIO 403 Evolutionary Medicine and Global Health**	C	3
ASB 408 Advanced Evolutionary Medicine **or** **BIO 408 Advanced Evolutionary Medicine**	C	3
Electives		
Evolutionary Medicine Electives	C	3
ASB 250 / **BIO 250 Introduction to Evolution and Medicine (SOBE)**		
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 246 Human Origins (SOBE)		
ASM 342 / BIO 327 Evolution of Human Behavior		
ASM 345 Disease and Human Evolution		
ASM 394 / BIO 394 Topic: Ecology and Evolution of Infectious Diseases		
ASM 401 Health and Human Biology		
ASM 446 / BIO 446 Principles of Human Genetics		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / BIO 494 Topic: Evolution and Mental Disorders		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / HPS 331 History of Medicine (HUAD)		
BIO 345 Evolution		
BIO 394 / PSY 394 Topic: Introduction to Evolutionary Psychology		
BIO 440 / MBB 440 Functional Genomics		
BIO 462 Endocrine Physiology		
MBB 445 / MIC 445 Techniques in Molecular Biology/Genetics		
MIC 205 Microbiology (SCIT) or MIC 220 Biology of Microorganisms		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		
Upper Division Evolutionary Medicine Electives	C	6
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 342 / **BIO 327 Evolution of Human Behavior**		
ASM 345 Disease and Human Evolution		
ASM 394 / **BIO 394 Topic: Ecology and Evolution of Infectious Diseases**		
ASM 401 Health and Human Biology		
ASM 446 / **BIO 446 Principles of Human Genetics**		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / **BIO 494 Topic: Evolution and Mental Disorders**		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 345 Evolution		
BIO 394 / **PSY 394 Topic: Introduction to Evolutionary Psychology**		
BIO 440 / **MBB 440 Functional Genomics**		
BIO 462 Endocrine Physiology		
MBB 445 / **MIC 445 Techniques in Molecular Biology/Genetics**		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Anthropology and Geographic Information Science (LAASBBA and LAGISCERT)

Program description:
Anthropology is the study of what it means to be human, in the broadest possible terms.

The Bachelor of Arts program in anthropology helps students recognize and solve problems facing the contemporary world through a broad understanding of humanity. Working alongside leading faculty members, students gain experience as apprentices on research projects. Students also have opportunities for hands-on learning through study abroad programs and field schools.

This interdisciplinary program offers training in the main areas of anthropology, including archaeology, bioarchaeology, sociocultural anthropology and evolutionary anthropology.

Students enrolled in this program may not pursue a concurrent Bachelor of Science in anthropology or BA in global health, but they may add a minor in global health to complement the core curriculum. The BA in anthropology is primarily for those whose interests lie in society, culture and archaeology, while the BS is primarily taken by students interested in science and mathematics-based courses.

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates have the knowledge and skills they need to find jobs in fields where understanding complex human behavior is important.

The demand in the job market for people with an anthropology background is stimulated by a growing need for researchers and analysts with keen thinking skills who can manage, evaluate and interpret complex problems and work effectively across cultures and languages. As the many spheres of human interaction expand globally, people trained in anthropology are increasingly sought for their broad, holistic knowledge and perspectives, the hallmarks of anthropology.

Career opportunities include:
- acting as legal advocates for displaced communities like refugees in international cases
- analyzing and proposing policies
- conducting postgraduate academic research or teaching
- consulting for private and public organizations
- curating cultural resources
- health system administration or health care professionals
- directing nonprofit organizations
- directing programs in the private or public sector
- managing culture or heritage resources in private or public sectors
- planning pandemic and other disaster response

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:
- analysis
- computer programming

- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Anthropology, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAASBBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
Major Core		
ASB 102 Introduction to Cultural Anthropology (GCSI)	C	3
ASB 222 Buried Cities and Lost Tribes (HUAD) OR **ASB 223 Aztecs, Incas and Mayas (HUAD)**	C	3
ASM 104 Bones, Stones, and Human Evolution (SCIT)	C	4
Sociocultural Anthropology Course		
Upper Division Sociocultural Anthropology Course (choose one) **ASB 300 Food and Culture (SOBE)** **ASB 302 Ethnographic Field Study (GCSI)**	C	3

Requirement	Minimum Grade	Credit Hours
ASB 305 Poverty and Global Health (CIVI)		
ASB 310 / AFR 300 Precolonial Africa (GCSI)		
ASB 311 Principles of Social Anthropology (GCSI)		
ASB 316 Money and Culture		
ASB 319 The North American Indian		
ASB 322 / TCL 322 Peoples of Latin America (GCSI)		
ASB 325 Peoples of Southeast Asia		
ASB 327 Disaster! (SUST)		
ASB 336 / AFR 336 African Art		
ASB 339 / POS 339 / SBS 339 / SOC 339 Grassroots Social Movements		
ASB 340 / SOC 328 Migration and Culture (GCSI)		
ASB 342 / SBS 342 / SOC 342 Mexico-U.S. Borderlands		
ASB 343 / PUP 343 / SOS 343 / TCL 343 Latinas/os and the Environment		
ASB 344 / SOC 334 Technology and Society (SOBE)		
ASB 345 / JUS 343 / ROM 343 / SLC 343 Culture and Society Transformation (GCSI)		
ASB 346 Marriage and Family Diversity (SOBE)		
ASB 348 / ENG 348 / TCL 348 The Borders of Language (SOBE)		
ASB 350 Anthropology and Art (HUAD)		

Requirement	Minimum Grade	Credit Hours
ASB 353 / SOC 353 Death and Dying in Cross-Cultural Perspective (GCSI)		
ASB 355 Traditional Medicine and Healing (HUAD)		
ASB 356 / GCU 356 / POS 354 / SBS 356 / SOC 356 Central American Studies		
ASB 357 Society, Drugs and Health (GCSI)		
ASB 358 / AFR 358 The Yoruba and the Atlantic World		
ASB 370 / SOS 370 Ethics of Eating (SUST)		
ASB 371 / HST 371 / SLC 371 / SPA 371 / TCL 371 Language Hegemony and Culture		
ASB 374 / POS 374 / SBS 374 / SOC 374 Cultures and Politics of the Internet		
ASB 375 / SOS 375 Humans and the Environment: What's the Connection?		
ASB 376 Global Health Policy		
ASB 378 / TCL 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
ASB 380 Language, Culture and Gender (SOBE)		
ASB 383 / REL 383 Religion and Sports (HUAD)		
ASB 389 / SBS 389 / SOC 389 Ethnographic Field Lab		
ASB 395 Topics in Comparative Culture		
ASB 412 History of Anthropology		

Requirement	Minimum Grade	Credit Hours
ASB 417 Politics and Culture		
ASB 421 / SOC 421 Education and Society (SOBE)		
ASB 442 / SBS 460 Global Cities		
ASB 443 / SSH 403 Cross-Cultural Studies in Global Health (GCSI)		
ASB 447 / POS 447 / SBS 447 Citizenship, Nationalism and Identity (CIVI)		
ASB 452 / SSH 402 Community Partnerships for Global Health (GCSI)		
ASB 455 Practicum for Social Sciences		
ASB 457 Global Mental Health (GCSI)		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		
ASB 463 / SOS 463 / TCL 443 Political Ecology of the Border		
ASB 464 / TCL 444 The Ethnography of Mexico and the Borderlands		
ASB 466 / AFR 466 Peoples and Cultures of Africa		
ASB 494 Topic: Narrative & Science Engagement		
ASB 494 Topic: Ethnic Disparities and Health		
ASB 494 Topic: Ethnography of Schooling in the Borderlands		
ASB 494 Topic: Facing Immigration		

Requirement	Minimum Grade	Credit Hours
ASB 494 Topic: Health: Social and Biocultural Theories		
ASB 494 Topic: Monitoring, Evaluation, and Learning		
ASB 494 Topic: Qualitative Data Analysis		
ASB 494 Topic: Research Design for Global Health		
ASB 494 / BIO 494 Topic: One Health		
ASM 414 Urban, Environmental and Health Challenges (SUST)		

Archaeology Course

Upper Division Archaeology Course (choose one)	C	3
ASB 301 Global History of Health (HUAD)		
ASB 326 Human Impacts on Ancient Environments (SUST)		
ASB 330 Understanding Archaeology (SOBE)		
ASB 333 Frauds, Myths and Mysteries (HUAD)		
ASB 335 Ancient Ruins of the Southwest (SOBE)		
ASB 337 Pyramids and Hieroglyphs: Life in Ancient Mesoamerica (GCSI)		
ASB 338 Archaeology of North America (SOBE)		
ASB 361 Human Cultural Beginnings (SOBE)		
ASB 362 People and Plants		

Requirement	Minimum Grade	Credit Hours
ASB 366 / AFR 366 African Archaeology: Precolonial Urban Culture		
ASB 368 Hunter-Gatherers (SOBE)		
ASB 490 Earliest Cities		
ASM 338 Topic: Bioarchaeology and the Human Skeleton		
ASM 338 Topic: Field Archaeology & Geophysical Testing		
ASM 350 Geoarchaeology		
ASM 365 Doing Archaeology		
ASM 450 Bioarchaeology (GCSI)		
ASM 494 Topic: Archaeoinformatic Methods for Fieldwork		
ASM 494 Topic: Nubian Bioarchaeology		

Physical/Evolutionary Anthropology Course

Upper Division Physical/Evolutionary Anthropology Course (choose one)	C	3
ASB 301 Global History of Health (HUAD)		
ASB 368 Hunter-Gatherers (SOBE)		
ASB 408 / BIO 408 Advanced Evolutionary Medicine		
ASB 448 / BIO 448 Maternal and Child Health		

Requirement	Minimum Grade	Credit Hours
ASB 494 Topic: Applied Epidemiology		
ASB 494 Topic: Reproductive Ecology		
ASM 301 Peopling of the World (SOBE)		
ASM 310 War and Peace: The Evolution of Conflict and Cooperation		
ASM 313 Great Adaptations		
ASM 332 Life and Death in Ancient Egypt		
ASM 338 Topic: Bioarchaeology and the Human Skeleton		
ASM 341 Human Osteology		
ASM 342 / BIO 327 Evolution of Human Behavior		
ASM 344 Fossil Hominins		
ASM 345 Disease and Human Evolution		
ASM 394 Topic: Evolution and Medicine Visiting Speaker Recitation		
ASM 401 Health and Human Biology		
ASM 403 / BIO 403 Evolutionary Medicine and Global Health		
ASM 443 Primatology		
ASM 446 / BIO 446 Principles of Human Genetics		
ASM 450 Bioarchaeology (GCSI)		
ASM 452 Dental Anthropology		

Requirement	Minimum Grade	Credit Hours
ASM 456 Infectious Disease and Human Evolution		
ASM 459 Forensic Anthropology		
ASM 460 Human Growth and Development: An Evolutionary Perspective		
ASM 466 The Evolution of Preindustrial Technology		
ASM 494 Topic: Evolution and Mental Disorders		
ASM 494 Topic: Models in Social Evolution		
ASM 494 Topic: Social Complexity		

Anthropology Electives

Upper Division **ASB Elective** **OR** Upper Division **ASM Elective** **OR** Upper Division **SSH Elective**	C	6

Anthropology Practicum

Upper Division Anthropology Practicum (choose one)	C	3
ASB 302 Ethnographic Field Study (GCSI)		
ASB 373 Applying Anthropology (SOBE)		
ASB 389 / **SBS 389** / **SOC 389 Ethnographic Field Lab**		
ASB 443 / **SSH 403 Cross-Cultural Studies in Global Health (GCSI)**		

Requirement	Minimum Grade	Credit Hours
ASB 452 / SSH 402 Community Partnerships for Global Health (GCSI)		
ASB 455 Practicum for Social Sciences		
ASB 484 Internship		
ASB 494 Topic: Monitoring, Evaluation, and Learning		
ASB 494 Topic: Qualitative Data Analysis		
ASB 494 Topic: Research Design for Global Health		
ASB 499 Individualized Instruction		
ASM 338 Anthropological Field Session		
ASM 341 Human Osteology		
ASM 344 Fossil Hominins		
ASM 365 Doing Archaeology		
ASM 414 Urban, Environmental and Health Challenges (SUST)		
ASM 443 Primatology		
ASM 452 Dental Anthropology		

Statistics

Statistics (choose one)	C	3
ASB 394 Topic: Statistics for Social Scientists		

Requirement	Minimum Grade	Credit Hours
ASM 463 A Practical Guide to Bayesian Data Analysis (QTRS)		
ASM 465 Quantification and Analysis for Anthropologists		
PSY 230 Introduction to Statistics (QTRS)		
SOC 390 Social Statistics I (QTRS)		
STP 226 Elements of Statistics (QTRS)		
STP 231 Statistics for Life Science (QTRS)		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.	C	
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go

to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Anthropology and Veterans, Society and Service (LAASBBA and LAVSSCERT)

Program description:
Anthropology is the study of what it means to be human, in the broadest possible terms.

The Bachelor of Arts program in anthropology helps students recognize and solve problems facing the contemporary world through a broad understanding of humanity. Working alongside leading faculty members, students gain experience as apprentices on research projects. Students also have opportunities for hands-on learning through study abroad programs and field schools.

This interdisciplinary program offers training in the main areas of anthropology, including archaeology, bioarchaeology, sociocultural anthropology and evolutionary anthropology.

Students enrolled in this program may not pursue a concurrent Bachelor of Science in anthropology or BA in global health, but they may add a minor in global health to complement the core curriculum. The BA in anthropology is primarily for those whose interests lie in society, culture and archaeology, while the BS is primarily taken by students interested in science and mathematics-based courses.

Through the certificate program in veterans, society and service, students explore the history, representations, experiences and culture of military service and veterans.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Tempe or Online

Career opportunities:
Graduates have the knowledge and skills they need to find jobs in fields where understanding complex human behavior is important.

The demand in the job market for people with an anthropology background is stimulated by a growing need for researchers and analysts with keen thinking skills who can manage, evaluate and interpret complex problems and work effectively across cultures and languages. As the many spheres of human interaction expand globally, people trained in anthropology are increasingly sought for their broad, holistic knowledge and perspectives, the hallmarks of anthropology.

Career opportunities include:

- acting as legal advocates for displaced communities like refugees in international cases
- analyzing and proposing policies
- conducting postgraduate academic research or teaching
- consulting for private and public organizations
- curating cultural resources
- health system administration or health care professionals
- directing nonprofit organizations
- directing programs in the private or public sector
- managing culture or heritage resources in private or public sectors
- planning pandemic and other disaster response

Students can advance their career options with an undergraduate certificate.

Graduates who have combined the certificate in veterans, society and service with their major program of study may become more marketable to employers.

Graduates often pursue employment as health care social workers, social and community service managers, or community health workers. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Anthropology, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAASBBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
Major Core		
ASB 102 Introduction to Cultural Anthropology (GCSI)	C	3
ASB 222 Buried Cities and Lost Tribes (HUAD) OR **ASB 223 Aztecs, Incas and Mayas (HUAD)**	C	3
ASM 104 Bones, Stones, and Human Evolution (SCIT)	C	4
Sociocultural Anthropology Course		
Upper Division Sociocultural Anthropology Course (choose one) **ASB 300 Food and Culture (SOBE)** **ASB 302 Ethnographic Field Study (GCSI)**	C	3

Requirement	Minimum Grade	Credit Hours
ASB 305 Poverty and Global Health (CIVI)		
ASB 310 / AFR 300 Precolonial Africa (GCSI)		
ASB 311 Principles of Social Anthropology (GCSI)		
ASB 316 Money and Culture		
ASB 319 The North American Indian		
ASB 322 / TCL 322 Peoples of Latin America (GCSI)		
ASB 325 Peoples of Southeast Asia		
ASB 327 Disaster! (SUST)		
ASB 336 / AFR 336 African Art		
ASB 339 / POS 339 / SBS 339 / SOC 339 Grassroots Social Movements		
ASB 340 / SOC 328 Migration and Culture (GCSI)		
ASB 342 / SBS 342 / SOC 342 Mexico-U.S. Borderlands		
ASB 343 / PUP 343 / SOS 343 / TCL 343 Latinas/os and the Environment		
ASB 344 / SOC 334 Technology and Society (SOBE)		
ASB 345 / JUS 343 / ROM 343 / SLC 343 Culture and Society Transformation (GCSI)		
ASB 346 Marriage and Family Diversity (SOBE)		
ASB 348 / ENG 348 / TCL 348 The Borders of Language (SOBE)		
ASB 350 Anthropology and Art (HUAD)		

Requirement	Minimum Grade	Credit Hours
ASB 353 / SOC 353 Death and Dying in Cross-Cultural Perspective (GCSI)		
ASB 355 Traditional Medicine and Healing (HUAD)		
ASB 356 / GCU 356 / POS 354 / SBS 356 / SOC 356 Central American Studies		
ASB 357 Society, Drugs and Health (GCSI)		
ASB 358 / AFR 358 The Yoruba and the Atlantic World		
ASB 370 / SOS 370 Ethics of Eating (SUST)		
ASB 371 / HST 371 / SLC 371 / SPA 371 / TCL 371 Language Hegemony and Culture		
ASB 374 / POS 374 / SBS 374 / SOC 374 Cultures and Politics of the Internet		
ASB 375 / SOS 375 Humans and the Environment: What's the Connection?		
ASB 376 Global Health Policy		
ASB 378 / TCL 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
ASB 380 Language, Culture and Gender (SOBE)		
ASB 383 / REL 383 Religion and Sports (HUAD)		
ASB 389 / SBS 389 / SOC 389 Ethnographic Field Lab		
ASB 395 Topics in Comparative Culture		
ASB 412 History of Anthropology		

Requirement	Minimum Grade	Credit Hours
ASB 417 Politics and Culture		
ASB 421 / SOC 421 Education and Society (SOBE)		
ASB 442 / SBS 460 Global Cities		
ASB 443 / SSH 403 Cross-Cultural Studies in Global Health (GCSI)		
ASB 447 / POS 447 / SBS 447 Citizenship, Nationalism and Identity (CIVI)		
ASB 452 / SSH 402 Community Partnerships for Global Health (GCSI)		
ASB 455 Practicum for Social Sciences		
ASB 457 Global Mental Health (GCSI)		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		
ASB 463 / SOS 463 / TCL 443 Political Ecology of the Border		
ASB 464 / TCL 444 The Ethnography of Mexico and the Borderlands		
ASB 466 / AFR 466 Peoples and Cultures of Africa		
ASB 494 Topic: Narrative & Science Engagement		
ASB 494 Topic: Ethnic Disparities and Health		
ASB 494 Topic: Ethnography of Schooling in the Borderlands		
ASB 494 Topic: Facing Immigration		

Requirement	Minimum Grade	Credit Hours
ASB 494 Topic: Health: Social and Biocultural Theories		
ASB 494 Topic: Monitoring, Evaluation, and Learning		
ASB 494 Topic: Qualitative Data Analysis		
ASB 494 Topic: Research Design for Global Health		
ASB 494 / BIO 494 Topic: One Health		
ASM 414 Urban, Environmental and Health Challenges (SUST)		

Archaeology Course

Upper Division Archaeology Course (choose one)	C	3
ASB 301 Global History of Health (HUAD)		
ASB 326 Human Impacts on Ancient Environments (SUST)		
ASB 330 Understanding Archaeology (SOBE)		
ASB 333 Frauds, Myths and Mysteries (HUAD)		
ASB 335 Ancient Ruins of the Southwest (SOBE)		
ASB 337 Pyramids and Hieroglyphs: Life in Ancient Mesoamerica (GCSI)		
ASB 338 Archaeology of North America (SOBE)		
ASB 361 Human Cultural Beginnings (SOBE)		
ASB 362 People and Plants		

Requirement	Minimum Grade	Credit Hours
ASB 366 / AFR 366 African Archaeology: Precolonial Urban Culture		
ASB 368 Hunter-Gatherers (SOBE)		
ASB 490 Earliest Cities		
ASM 338 Topic: Bioarchaeology and the Human Skeleton		
ASM 338 Topic: Field Archaeology & Geophysical Testing		
ASM 350 Geoarchaeology		
ASM 365 Doing Archaeology		
ASM 450 Bioarchaeology (GCSI)		
ASM 494 Topic: Archaeoinformatic Methods for Fieldwork		
ASM 494 Topic: Nubian Bioarchaeology		

Physical/Evolutionary Anthropology Course

Upper Division Physical/Evolutionary Anthropology Course (choose one)	C	3
ASB 301 Global History of Health (HUAD)		
ASB 368 Hunter-Gatherers (SOBE)		
ASB 408 / BIO 408 Advanced Evolutionary Medicine		
ASB 448 / BIO 448 Maternal and Child Health		

Requirement	Minimum Grade	Credit Hours
ASB 494 Topic: Applied Epidemiology		
ASB 494 Topic: Reproductive Ecology		
ASM 301 Peopling of the World (SOBE)		
ASM 310 War and Peace: The Evolution of Conflict and Cooperation		
ASM 313 Great Adaptations		
ASM 332 Life and Death in Ancient Egypt		
ASM 338 Topic: Bioarchaeology and the Human Skeleton		
ASM 341 Human Osteology		
ASM 342 / BIO 327 Evolution of Human Behavior		
ASM 344 Fossil Hominins		
ASM 345 Disease and Human Evolution		
ASM 394 Topic: Evolution and Medicine Visiting Speaker Recitation		
ASM 401 Health and Human Biology		
ASM 403 / BIO 403 Evolutionary Medicine and Global Health		
ASM 443 Primatology		
ASM 446 / BIO 446 Principles of Human Genetics		
ASM 450 Bioarchaeology (GCSI)		
ASM 452 Dental Anthropology		

Requirement	Minimum Grade	Credit Hours
ASM 456 Infectious Disease and Human Evolution		
ASM 459 Forensic Anthropology		
ASM 460 Human Growth and Development: An Evolutionary Perspective		
ASM 466 The Evolution of Preindustrial Technology		
ASM 494 Topic: Evolution and Mental Disorders		
ASM 494 Topic: Models in Social Evolution		
ASM 494 Topic: Social Complexity		

Anthropology Electives

Upper Division **ASB Elective** **OR** Upper Division **ASM Elective** **OR** Upper Division **SSH Elective**	C	6

Anthropology Practicum

Upper Division Anthropology Practicum (choose one)	C	3
ASB 302 Ethnographic Field Study (GCSI)		
ASB 373 Applying Anthropology (SOBE)		
ASB 389 / **SBS 389** / **SOC 389 Ethnographic Field Lab**		
ASB 443 / **SSH 403 Cross-Cultural Studies in Global Health (GCSI)**		

Requirement	Minimum Grade	Credit Hours
ASB 452 / SSH 402 Community Partnerships for Global Health (GCSI)		
ASB 455 Practicum for Social Sciences		
ASB 484 Internship		
ASB 494 Topic: Monitoring, Evaluation, and Learning		
ASB 494 Topic: Qualitative Data Analysis		
ASB 494 Topic: Research Design for Global Health		
ASB 499 Individualized Instruction		
ASM 338 Anthropological Field Session		
ASM 341 Human Osteology		
ASM 344 Fossil Hominins		
ASM 365 Doing Archaeology		
ASM 414 Urban, Environmental and Health Challenges (SUST)		
ASM 443 Primatology		
ASM 452 Dental Anthropology		

Statistics

Statistics (choose one)	C	3
ASB 394 Topic: Statistics for Social Scientists		

Requirement	Minimum Grade	Credit Hours
ASM 463 A Practical Guide to Bayesian Data Analysis (QTRS)		
ASM 465 Quantification and Analysis for Anthropologists		
PSY 230 Introduction to Statistics (QTRS)		
SOC 390 Social Statistics I (QTRS)		
STP 226 Elements of Statistics (QTRS)		
STP 231 Statistics for Life Science (QTRS)		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.	C	
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go

to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Veterans, Society and Service, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LAVSSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires 18 credit hours, of which at least 12 credit hours must be completed at the upper-division level and nine must be completed at ASU. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Required Courses

MVS 100 Introduction to Military Studies	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals **or** **MVS 301 Experience of America's Modern Wars**	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3

Elective

Upper Division Electives	C	3
AFR 494 Topic: Black Military History		

Requirement	Minimum Grade	Credit Hours
CAP 316 Combat Trauma		
CAP 336 Counseling Military Veterans		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 414 Crisis Communication		
COM 420 Rhetoric and Community Advocacy		
HST 302 Topic: War and Political Thought		
HST 302 Topic: Women, War and Peace		
HST 306 Topic: World War II		
HST 340 American Military History (HUAD)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 372 Modern Middle East (GCSI)		
HST 456 The Vietnam War (HUAD)		
IAP 307 Art and War (GCSI)		
ISS 428 Religion and Global Violence (GCSI)		
ISS 441 Conflict and Conflict Resolution		
ISS 456 Culture, Conflict and War		
JST 346 Israeli Wars in Israeli Movies		
MCO 494 Topic: War and Media		
MVS 376 Writing a Personal History		
MVS 394 Special Topics		
MVS 395 Combat in Film		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		

Requirement	Minimum Grade	Credit Hours
MVS 494 Special Topics		
PAF 302 Public Service Research Methods		
POS 310 American National Government (AMIT)		
POS 316 American Political Institutions (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 346 Problems of Democracy (HUAD)		
POS 350 Comparative Politics (GCSI)		
POS 360 World Politics (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 378 / **REL 378 Religion, War and Peace (CIVI)**		
POS 414 Political History and Leadership		
POS 426 Elements of Public Policy		
POS 467 International Security (GCSI)		
SGS 394 Topic: Gender and Armed Conflict		

Internship

MVS 484 Internship All students must complete an internship and should review their internship options, including virtual, with the CISA internship coordinator. Prerequisite courses may be needed in order to complete the requirements of this certificate.	C	3

Notes

Prerequisite courses may be needed in order to complete the

requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Applied Business and Technology Solutions and Applied Business Data Analytics (BAAPBTSBA and BABDACERT)

Program description:
The Bachelor of Arts program in applied business and technology solutions is designed to meet the needs of workforce learners who wish to complete an undergraduate degree in business. In this degree program, students can quickly access accounting, business analytics, computer information systems, economics, finance, management, marketing, process management and business ethics courses, and directly connect what is taught in the classroom to their working environment. Applied internship courses in the program enable students to put what they are learning into practice, and emphasis areas allow students to further customize the degree to their working environments.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Polytechnic, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 117 - College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
The strong academic foundation in core business functions and customizability of this applied business and technology solutions program enables graduates to explore a variety of different fields.

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Applied Business and Technology Solutions, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BAAPBTSBA
Minimum credit hours: 120
Upper division minimum credit hours: 52.5

Requirement	Minimum Grade	Credit Hours
Specializations: Students will choose two specialization. Each specialization must have a minimum of 12 credits (four courses).		

Career Navigation

WPC 148 First-Year Introduction to Career Development		0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.		0.25
WPC 348 Junior Networking Foundations		0.25
WPC 448 Senior Career Transition Management		0.25

Applied Business Data Analytics Courses

Requirement	Minimum Grade	Credit Hours
CIS 308 Advanced Excel in Business		3
CIS 309 Business Process Management		3
CIS 310 Business Data Visualization		3
CIS 405 Business Intelligence		3

Specialization #1

Specialization Course	C	3

Students choose two specializations.

Communication Specialization (choose four course) - offered at West Valley

COM 100 Introduction to Human Communication (SOBE)

COM 312 Communication, Conflict, and Negotiation (CIVI)

COM 316 Gender and Communication (SOBE)

COM 430 Leadership in Group Communication

ENG 311 Persuasive Writing (CIVI)

Digital Business Specialization (choose four courses) - offered as iCourses

CIS 235 Introduction to Information Systems, Analytics and AI in Business

CIS 300 Web Design and Development

Requirement	Minimum Grade	Credit Hours
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
Inclusive Excellence Specilization (choose four courses) - offered at West Valley		
DST 101 Introduction to Disability Studies (CIVI)		
DST 494 Topic: Disability and Aesthetics		
ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)		
ETH 430 Gender on the Borderlands (HUAD)		
SOC 426 Social Inequalities (CIVI)		
Food and Agribusiness Innovation Specialization (choose four courses - offered at Poly		
AGB 100 Introduction to Agribusiness		
AGB 321 Agribusiness Sales and Marketing		
AGB 333 Agribusiness Finance		
AGB 366 Food System Technology Innovations		
AGB 410 Food Supply Chains		
AGB 414 Food and Agribusiness Policy Issues		
AGB 452 Global Food and Agricultural Trade		
Food Industry Management Specialization (choose four courses) - offered as iCourses		

Requirement	Minimum Grade	Credit Hours
AGB 250 Economics of Resource Allocation: Food and Agriculture		
AGB 370 Food Retailing Strategy Development and Case Competition		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
Global Management Specialization (choose four courses) - offered at West Valley		
Required:		
TGM 101 Principles of Global Management (GCSI)		
Choose three courses:		
TGM 312 Big Data in the Global Economy		
TGM 460 Global Risk Assessment and Management		
TGM 468 States and Markets in a Global Economy (GCSI)		
TGM 478 Cross-Cultural Communication and Negotiation		
Health Care Innovation Specialization (choose four courses) - offered at West Valley and as iCourses		
HCI 311 Health Innovation: Foundational Concepts		

Requirement	Minimum Grade	Credit Hours
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
Human Resource Management Specialization (choose four courses) - offered at Poly		
Required:		
MGT 420 Human Resource Management		
Choose three courses:		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
Human Systems Engineering Specialization (choose four courses) - offered at Poly		
Required:		
HSE 101 Introduction to Human Systems Engineering (SOBE)		
Choose three:		
HSE 323 Perceptual Systems (SOBE)		
HSE 324 Applied Cognitive Science (SOBE)		

Requirement	Minimum Grade	Credit Hours
HSE 325 Human-Computer Interaction		
HSE 422 Human Factors in Sport		
HSE 423 Human Factors in Transportation		
HSE 424 Human Automation Interaction		
HSE 425 Human Factors in Medical Systems		
HSE 426 Training and Expertise		
HSE 427 Designing for Learning		
HSE 428 Judgment and Decision Making		
HSE 429 Product Design and Evaluation		
Leadership Development Specialization (choose four courses) - offered at West Valley		
COM 225 Public Speaking and Presentations (CIVI) **or** **COM 312 Communication, Conflict, and Negotiation (CIVI)** **or** **COM 319 Persuasion and Social Influence (CIVI)** **or** **COM 400 Communication in Professions**		
MGT 310 Collaborative Team Skills		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 411 Leading Organizations		
Medial Studies Specialization (choose four courses) - offered at Poly		
HCD 303 Global Health Care Systems (GCSI)		

Requirement	Minimum Grade	Credit Hours
MED 300 Historical and Contemporary Issues in Health		
MED 320 Applied Medical/Health Care Ethics (HUAD)		
MED 450 Leadership and Professionalism		
Project Management Specialization (choose four courses) - offered as iCourses		
Required:		
PMG 240 Introduction to Project Management		
Choose three courses:		
PMG 321 Project Leadership, Strategy and Scope		
PMG 322 Project Schedule Management		
PMG 324 Resources in Project Management		
PMG 326 Project Procurement Management		
PMG 421 Project Risk Management		
PMG 422 Project Quality Management		
Sales and Marketing Essentials Specialization (choose four courses) - offered as iCourses		
MKT 391 Essentials of Selling		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		

Requirement	Minimum Grade	Credit Hours
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		
Supply Chain Management & Sustainability Specialization (choose four courses) - offered as iCourse		
SCM 200 Society, Supply Chains and You (SUST)		
SCM 385 Business and Sustainability I (SUST)		
SCM 463 Global Supply Chain Management (GCSI)		
SCM 485 Business and Sustainability II		
Technical Communication Specialization (choose four courses) - offered at Poly		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 401 Fundamentals of Technical Communication		
TWC 411 Principles of Visual Communication		
TWC 422 Social Media in the Workplace		
TWC 431 Principles of Technical Editing		
TWC 435 Global Issues in Technical Communication (GCSI)		
Technical Entrepreneurship and Management Specialization (choose four courses) - offered at Poly		
TEM 200 Entrepreneurial Mindset for Technologists		
TEM 301 Applied Social Entrepreneurship II		
TEM 400 Technology Entrepreneurship		

Requirement	Minimum Grade	Credit Hours
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
TMC 498 Pro-Seminar		
Tourism Specialization (choose four courses) - offered as iCourses		
Required:		
TDM 205 Introduction to Travel and Tourism (GCSI)		
Choose three courses:		
TDM 345 Meeting and Convention Planning		
TDM 350 Tourism, Recreation and Sports Marketing		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 475 Entrepreneurial Recreation and Tourism		
TDM 480 Sustainable Tourism		
TDM 483 Sports Tourism		
Interdisciplinary Business Studies Specialization (choose four courses)		
AGB 100 Introduction to Agribusiness		

Requirement	Minimum Grade	Credit Hours
AGB 250 Economics of Resource Allocation: Food and Agriculture		
AGB 321 Agribusiness Sales and Marketing		
AGB 333 Agribusiness Finance		
AGB 366 Food System Technology Innovations		
AGB 370 Food Retailing Strategy Development and Case Competition		
AGB 410 Food Supply Chains		
AGB 414 Food and Agribusiness Policy Issues		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
AGB 452 Global Food and Agricultural Trade		
CIS 235 Introduction to Information Systems, Analytics and AI in Business		
CIS 300 Web Design and Development		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
COM 100 Introduction to Human Communication (SOBE) **or** COM 319 Persuasion and Social Influence (CIVI) **or** COM 400 Communication in Professions		

Requirement	Minimum Grade	Credit Hours
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		
COM 430 Leadership in Group Communication		
DST 101 Introduction to Disability Studies (CIVI)		
DST 494 Topic: Disability and Aesthetics		
ENG 311 Persuasive Writing (CIVI)		
ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)		
ETH 430 Gender on the Borderlands (HUAD)		
HCD 303 Global Health Care Systems (GCSI)		
HCD 330 Health Care Systems in the U.S. (CIVI)		
HCD 420 Population Health Management		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
HSE 101 Introduction to Human Systems Engineering (SOBE)		
HSE 323 Perceptual Systems (SOBE)		
HSE 324 Applied Cognitive Science (SOBE)		

Requirement	Minimum Grade	Credit Hours
HSE 325 Human-Computer Interaction		
HSE 422 Human Factors in Sport		
HSE 423 Human Factors in Transportation		
HSE 424 Human Automation Interaction		
HSE 425 Human Factors in Medical Systems		
HSE 426 Training and Expertise		
HSE 427 Designing for Learning		
HSE 428 Judgment and Decision Making		
HSE 429 Product Design and Evaluation		
MED 300 Historical and Contemporary Issues in Health		
MED 320 Applied Medical/Health Care Ethics (HUAD)		
MED 450 Leadership and Professionalism		
MGT 310 Collaborative Team Skills		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 411 Leading Organizations		
MGT 420 Human Resource Management		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		

Requirement	Minimum Grade	Credit Hours
MKT 391 Essentials of Selling		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		
PMG 320 Project Approaches		
PMG 321 Project Leadership, Strategy and Scope		
PMG 322 Project Schedule Management		
PMG 323 Project Cost Management		
PMG 324 Resources in Project Management		
PMG 326 Project Procurement Management		
PMG 421 Project Risk Management		
PMG 422 Project Quality Management		
SCM 200 Society, Supply Chains and You (SUST)		
SCM 385 Business and Sustainability I (SUST)		
SCM 463 Global Supply Chain Management (GCSI)		
SCM 485 Business and Sustainability II		
SOC 426 Social Inequalities (CIVI)		

Requirement	Minimum Grade	Credit Hours
TDM 205 Introduction to Travel and Tourism (GCSI)		
TDM 345 Meeting and Convention Planning		
TDM 350 Tourism, Recreation and Sports Marketing		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 483 Sports Tourism		
TEM 200 Entrepreneurial Mindset for Technologists		
TEM 301 Applied Social Entrepreneurship II		
TEM 400 Technology Entrepreneurship		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
TGM 101 Principles of Global Management (GCSI)		
TGM 312 Big Data in the Global Economy		
TGM 460 Global Risk Assessment and Management		
TGM 468 States and Markets in a Global Economy (GCSI)		
TGM 478 Cross-Cultural Communication and Negotiation		
TMC 498 Pro-Seminar		

Requirement	Minimum Grade	Credit Hours
TWC 301 Fundamentals of Writing for Digital Media		
TWC 401 Fundamentals of Technical Communication		
TWC 411 Principles of Visual Communication		
TWC 422 Social Media in the Workplace		
TWC 431 Principles of Technical Editing		
TWC 435 Global Issues in Technical Communication (GCSI)		
Upper Division Specialization Course	C	9
Students choose two specializations.		
Communication Specialization (choose four course) - offered at West Valley		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		
COM 430 Leadership in Group Communication		
ENG 311 Persuasive Writing (CIVI)		
Digital Business Specialization (choose four courses) - offered as iCourses		
CIS 300 Web Design and Development		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		

Requirement	Minimum Grade	Credit Hours
Inclusive Excellence Specilization (choose four courses) - offered at West Valley		
DST 494 Topic: Disability and Aesthetics		
ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)		
ETH 430 Gender on the Borderlands (HUAD)		
SOC 426 Social Inequalities (CIVI)		
Food and Agribusiness Innovation Specialization (choose four courses - offered at Poly		
AGB 321 Agribusiness Sales and Marketing		
AGB 333 Agribusiness Finance		
AGB 366 Food System Technology Innovations		
AGB 410 Food Supply Chains		
AGB 414 Food and Agribusiness Policy Issues		
AGB 452 Global Food and Agricultural Trade		
Food Industry Management Specialization (choose four courses) - offered as iCourses		
AGB 370 Food Retailing Strategy Development and Case Competition		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		

Requirement	Minimum Grade	Credit Hours
AGB 445 Food Retailing		
Global Management Specialization (choose four courses) - offered at West Valley		
Required:		
Choose three courses:		
TGM 312 Big Data in the Global Economy		
TGM 460 Global Risk Assessment and Management		
TGM 468 States and Markets in a Global Economy (GCSI)		
TGM 478 Cross-Cultural Communication and Negotiation		
Health Care Innovation Specialization (choose four courses) - offered at West Valley and as iCourses		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
Human Resource Management Specialization (choose four courses) - offered at Poly		
Required:		
MGT 420 Human Resource Management		

Requirement	Minimum Grade	Credit Hours
Choose three courses:		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
Human Systems Engineering Specialization (choose four courses) - offered at Poly		
Required:		
Choose three:		
HSE 323 Perceptual Systems (SOBE)		
HSE 324 Applied Cognitive Science (SOBE)		
HSE 325 Human-Computer Interaction		
HSE 422 Human Factors in Sport		
HSE 423 Human Factors in Transportation		
HSE 424 Human Automation Interaction		
HSE 425 Human Factors in Medical Systems		
HSE 426 Training and Expertise		
HSE 427 Designing for Learning		
HSE 428 Judgment and Decision Making		

Requirement	Minimum Grade	Credit Hours
HSE 429 Product Design and Evaluation		
Leadership Development Specialization (choose four courses) - offered at West Valley		
MGT 310 Collaborative Team Skills		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 411 Leading Organizations		
Medial Studies Specialization (choose four courses) - offered at Poly		
HCD 303 Global Health Care Systems (GCSI)		
MED 300 Historical and Contemporary Issues in Health		
MED 320 Applied Medical/Health Care Ethics (HUAD)		
MED 450 Leadership and Professionalism		
Project Management Specialization (choose four courses) - offered as iCourses		
Required:		
Choose three courses:		
PMG 321 Project Leadership, Strategy and Scope		
PMG 322 Project Schedule Management		
PMG 324 Resources in Project Management		
PMG 326 Project Procurement Management		
PMG 421 Project Risk Management		

Requirement	Minimum Grade	Credit Hours
PMG 422 Project Quality Management		
Sales and Marketing Essentials Specialization (choose four courses) - offered as iCourses		
MKT 391 Essentials of Selling		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		
Supply Chain Management & Sustainability Specialization (choose four courses) - offered as iCourse		
SCM 385 Business and Sustainability I (SUST)		
SCM 463 Global Supply Chain Management (GCSI)		
SCM 485 Business and Sustainability II		
Technical Communication Specialization (choose four courses) - offered at Poly		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 401 Fundamentals of Technical Communication		
TWC 411 Principles of Visual Communication		
TWC 422 Social Media in the Workplace		
TWC 431 Principles of Technical Editing		

Requirement	Minimum Grade	Credit Hours
TWC 435 Global Issues in Technical Communication (GCSI)		
Technical Entrepreneurship and Management Specialization (choose four courses) - offered at Poly		
TEM 301 Applied Social Entrepreneurship II		
TEM 400 Technology Entrepreneurship		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
TMC 498 Pro-Seminar		
Tourism Specialization (choose four courses) - offered as iCourses		
Required:		
Choose three courses:		
TDM 345 Meeting and Convention Planning		
TDM 350 Tourism, Recreation and Sports Marketing		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 475 Entrepreneurial Recreation and Tourism		
TDM 480 Sustainable Tourism		

Requirement	Minimum Grade	Credit Hours
TDM 483 Sports Tourism		
Interdisciplinary Business Studies Specialization (choose four courses)		
AGB 321 Agribusiness Sales and Marketing		
AGB 333 Agribusiness Finance		
AGB 366 Food System Technology Innovations		
AGB 370 Food Retailing Strategy Development and Case Competition		
AGB 410 Food Supply Chains		
AGB 414 Food and Agribusiness Policy Issues		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
AGB 452 Global Food and Agricultural Trade		
CIS 300 Web Design and Development		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		

Requirement	Minimum Grade	Credit Hours
COM 430 Leadership in Group Communication		
DST 494 Topic: Disability and Aesthetics		
ENG 311 Persuasive Writing (CIVI)		
ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)		
ETH 430 Gender on the Borderlands (HUAD)		
HCD 303 Global Health Care Systems (GCSI)		
HCD 330 Health Care Systems in the U.S. (CIVI)		
HCD 420 Population Health Management		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
HSE 323 Perceptual Systems (SOBE)		
HSE 324 Applied Cognitive Science (SOBE)		
HSE 325 Human-Computer Interaction		
HSE 422 Human Factors in Sport		
HSE 423 Human Factors in Transportation		
HSE 424 Human Automation Interaction		
HSE 425 Human Factors in Medical Systems		

Requirement	Minimum Grade	Credit Hours
HSE 426 Training and Expertise		
HSE 427 Designing for Learning		
HSE 428 Judgment and Decision Making		
HSE 429 Product Design and Evaluation		
MED 300 Historical and Contemporary Issues in Health		
MED 320 Applied Medical/Health Care Ethics (HUAD)		
MED 450 Leadership and Professionalism		
MGT 310 Collaborative Team Skills		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 411 Leading Organizations		
MGT 420 Human Resource Management		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MKT 391 Essentials of Selling		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		

Requirement	Minimum Grade	Credit Hours
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		
PMG 320 Project Approaches		
PMG 321 Project Leadership, Strategy and Scope		
PMG 322 Project Schedule Management		
PMG 323 Project Cost Management		
PMG 324 Resources in Project Management		
PMG 326 Project Procurement Management		
PMG 421 Project Risk Management		
PMG 422 Project Quality Management		
SCM 385 Business and Sustainability I (SUST)		
SCM 463 Global Supply Chain Management (GCSI)		
SCM 485 Business and Sustainability II		
SOC 426 Social Inequalities (CIVI)		
TDM 345 Meeting and Convention Planning		
TDM 350 Tourism, Recreation and Sports Marketing		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 483 Sports Tourism		

Requirement	Minimum Grade	Credit Hours
TEM 301 Applied Social Entrepreneurship II		
TEM 400 Technology Entrepreneurship		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
TGM 312 Big Data in the Global Economy		
TGM 460 Global Risk Assessment and Management		
TGM 468 States and Markets in a Global Economy (GCSI)		
TGM 478 Cross-Cultural Communication and Negotiation		
TMC 498 Pro-Seminar		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 401 Fundamentals of Technical Communication		
TWC 411 Principles of Visual Communication		
TWC 422 Social Media in the Workplace		
TWC 431 Principles of Technical Editing		
TWC 435 Global Issues in Technical Communication (GCSI)		

Specialization #2

Requirement	Minimum Grade	Credit Hours
Specialization Course	C	3
Students choose two specializations.		
Communication Specialization (choose four course) - offered at West Valley		
COM 100 Introduction to Human Communication (SOBE)		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		
COM 430 Leadership in Group Communication		
ENG 311 Persuasive Writing (CIVI)		
Digital Business Specialization (choose four courses) - offered as iCourses		
CIS 235 Introduction to Information Systems, Analytics and AI in Business		
CIS 300 Web Design and Development		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
Inclusive Excellence Specilization (choose four courses) - offered at West Valley		
DST 101 Introduction to Disability Studies (CIVI)		
DST 494 Topic: Disability and Aesthetics		

Requirement	Minimum Grade	Credit Hours
ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)		
ETH 430 Gender on the Borderlands (HUAD)		
SOC 426 Social Inequalities (CIVI)		
Food and Agribusiness Innovation Specialization (choose four courses - offered at Poly		
AGB 100 Introduction to Agribusiness		
AGB 321 Agribusiness Sales and Marketing		
AGB 333 Agribusiness Finance		
AGB 366 Food System Technology Innovations		
AGB 410 Food Supply Chains		
AGB 414 Food and Agribusiness Policy Issues		
AGB 452 Global Food and Agricultural Trade		
Food Industry Management Specialization (choose four courses) - offered as iCourses		
AGB 250 Economics of Resource Allocation: Food and Agriculture		
AGB 370 Food Retailing Strategy Development and Case Competition		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		

Requirement	Minimum Grade	Credit Hours
AGB 445 Food Retailing		
Global Management Specialization (choose four courses) - offered at West Valley		
Required:		
TGM 101 Principles of Global Management (GCSI)		
Choose three courses:		
TGM 312 Big Data in the Global Economy		
TGM 460 Global Risk Assessment and Management		
TGM 468 States and Markets in a Global Economy (GCSI)		
TGM 478 Cross-Cultural Communication and Negotiation		
Health Care Innovation Specialization (choose four courses) - offered at West Valley and as iCourses		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
Human Resource Management Specialization (choose four courses) - offered at Poly		
Required:		

Requirement	Minimum Grade	Credit Hours
MGT 420 Human Resource Management		
Choose three courses:		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
Human Systems Engineering Specialization (choose four courses) - offered at Poly		
Required:		
HSE 101 Introduction to Human Systems Engineering (SOBE)		
Choose three:		
HSE 323 Perceptual Systems (SOBE)		
HSE 324 Applied Cognitive Science (SOBE)		
HSE 325 Human-Computer Interaction		
HSE 422 Human Factors in Sport		
HSE 423 Human Factors in Transportation		
HSE 424 Human Automation Interaction		
HSE 425 Human Factors in Medical Systems		
HSE 426 Training and Expertise		

Requirement	Minimum Grade	Credit Hours
HSE 427 Designing for Learning		
HSE 428 Judgment and Decision Making		
HSE 429 Product Design and Evaluation		
Leadership Development Specialization (choose four courses) - offered at West Valley		
COM 225 Public Speaking and Presentations (CIVI) **or** **COM 312 Communication, Conflict, and Negotiation (CIVI)** **or** **COM 319 Persuasion and Social Influence (CIVI)** **or** **COM 400 Communication in Professions**		
MGT 310 Collaborative Team Skills		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 411 Leading Organizations		
Medial Studies Specialization (choose four courses) - offered at Poly		
HCD 303 Global Health Care Systems (GCSI)		
MED 300 Historical and Contemporary Issues in Health		
MED 320 Applied Medical/Health Care Ethics (HUAD)		
MED 450 Leadership and Professionalism		
Project Management Specialization (choose four courses) - offered as iCourses		
Required:		
PMG 240 Introduction to Project Management		

Requirement	Minimum Grade	Credit Hours
Choose three courses:		
PMG 321 Project Leadership, Strategy and Scope		
PMG 322 Project Schedule Management		
PMG 324 Resources in Project Management		
PMG 326 Project Procurement Management		
PMG 421 Project Risk Management		
PMG 422 Project Quality Management		
Sales and Marketing Essentials Specialization (choose four courses) - offered as iCourses		
MKT 391 Essentials of Selling		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		
Supply Chain Management & Sustainability Specialization (choose four courses) - offered as iCourse		
SCM 200 Society, Supply Chains and You (SUST)		
SCM 385 Business and Sustainability I (SUST)		
SCM 463 Global Supply Chain Management (GCSI)		

Requirement	Minimum Grade	Credit Hours
SCM 485 Business and Sustainability II		
Technical Communication Specialization (choose four courses) - offered at Poly		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 401 Fundamentals of Technical Communication		
TWC 411 Principles of Visual Communication		
TWC 422 Social Media in the Workplace		
TWC 431 Principles of Technical Editing		
TWC 435 Global Issues in Technical Communication (GCSI)		
Technical Entrepreneurship and Management Specialization (choose four courses) - offered at Poly		
TEM 200 Entrepreneurial Mindset for Technologists		
TEM 301 Applied Social Entrepreneurship II		
TEM 400 Technology Entrepreneurship		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
TMC 498 Pro-Seminar		
Tourism Specialization (choose four courses) - offered as iCourses		
Required:		

Requirement	Minimum Grade	Credit Hours
TDM 205 Introduction to Travel and Tourism (GCSI)		
Choose three courses:		
TDM 345 Meeting and Convention Planning		
TDM 350 Tourism, Recreation and Sports Marketing		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 475 Entrepreneurial Recreation and Tourism		
TDM 480 Sustainable Tourism		
TDM 483 Sports Tourism		
Interdisciplinary Business Studies Specialization (choose four courses)		
AGB 100 Introduction to Agribusiness		
AGB 250 Economics of Resource Allocation: Food and Agriculture		
AGB 321 Agribusiness Sales and Marketing		
AGB 333 Agribusiness Finance		
AGB 366 Food System Technology Innovations		
AGB 370 Food Retailing Strategy Development and Case Competition		
AGB 410 Food Supply Chains		

Requirement	Minimum Grade	Credit Hours
AGB 414 Food and Agribusiness Policy Issues		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
AGB 452 Global Food and Agricultural Trade		
CIS 235 Introduction to Information Systems, Analytics and AI in Business		
CIS 300 Web Design and Development		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
COM 100 Introduction to Human Communication (SOBE) **or** COM 319 Persuasion and Social Influence (CIVI) **or** COM 400 Communication in Professions		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		
COM 430 Leadership in Group Communication		
DST 101 Introduction to Disability Studies (CIVI)		
DST 494 Topic: Disability and Aesthetics		
ENG 311 Persuasive Writing (CIVI)		

Requirement	Minimum Grade	Credit Hours
ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)		
ETH 430 Gender on the Borderlands (HUAD)		
HCD 303 Global Health Care Systems (GCSI)		
HCD 330 Health Care Systems in the U.S. (CIVI)		
HCD 420 Population Health Management		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
HSE 101 Introduction to Human Systems Engineering (SOBE)		
HSE 323 Perceptual Systems (SOBE)		
HSE 324 Applied Cognitive Science (SOBE)		
HSE 325 Human-Computer Interaction		
HSE 422 Human Factors in Sport		
HSE 423 Human Factors in Transportation		
HSE 424 Human Automation Interaction		
HSE 425 Human Factors in Medical Systems		
HSE 426 Training and Expertise		

Requirement	Minimum Grade	Credit Hours
HSE 427 Designing for Learning		
HSE 428 Judgment and Decision Making		
HSE 429 Product Design and Evaluation		
MED 300 Historical and Contemporary Issues in Health		
MED 320 Applied Medical/Health Care Ethics (HUAD)		
MED 450 Leadership and Professionalism		
MGT 310 Collaborative Team Skills		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 411 Leading Organizations		
MGT 420 Human Resource Management		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MKT 391 Essentials of Selling		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		
MKT 397 Essentials of Global Marketing		

Requirement	Minimum Grade	Credit Hours
MKT 398 Essentials of Sports Business		
PMG 320 Project Approaches		
PMG 321 Project Leadership, Strategy and Scope		
PMG 322 Project Schedule Management		
PMG 323 Project Cost Management		
PMG 324 Resources in Project Management		
PMG 326 Project Procurement Management		
PMG 421 Project Risk Management		
PMG 422 Project Quality Management		
SCM 200 Society, Supply Chains and You (SUST)		
SCM 385 Business and Sustainability I (SUST)		
SCM 463 Global Supply Chain Management (GCSI)		
SCM 485 Business and Sustainability II		
SOC 426 Social Inequalities (CIVI)		
TDM 205 Introduction to Travel and Tourism (GCSI)		
TDM 345 Meeting and Convention Planning		
TDM 350 Tourism, Recreation and Sports Marketing		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		

Requirement	Minimum Grade	Credit Hours
TDM 483 Sports Tourism		
TEM 200 Entrepreneurial Mindset for Technologists		
TEM 301 Applied Social Entrepreneurship II		
TEM 400 Technology Entrepreneurship		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
TGM 101 Principles of Global Management (GCSI)		
TGM 312 Big Data in the Global Economy		
TGM 460 Global Risk Assessment and Management		
TGM 468 States and Markets in a Global Economy (GCSI)		
TGM 478 Cross-Cultural Communication and Negotiation		
TMC 498 Pro-Seminar		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 401 Fundamentals of Technical Communication		
TWC 411 Principles of Visual Communication		
TWC 422 Social Media in the Workplace		
TWC 431 Principles of Technical Editing		

Requirement	Minimum Grade	Credit Hours
TWC 435 Global Issues in Technical Communication (GCSI)		
Upper Division Specialization Course	C	9
Students choose two specializations.		
Communication Specialization (choose four course) - offered at West Valley		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		
COM 430 Leadership in Group Communication		
ENG 311 Persuasive Writing (CIVI)		
Digital Business Specialization (choose four courses) - offered as iCourses		
CIS 300 Web Design and Development		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
Inclusive Excellence Specilization (choose four courses) - offered at West Valley		
DST 494 Topic: Disability and Aesthetics		
ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)		
ETH 430 Gender on the Borderlands (HUAD)		

Requirement	Minimum Grade	Credit Hours
SOC 426 Social Inequalities (CIVI)		
Food and Agribusiness Innovation Specialization (choose four courses - offered at Poly		
AGB 321 Agribusiness Sales and Marketing		
AGB 333 Agribusiness Finance		
AGB 366 Food System Technology Innovations		
AGB 410 Food Supply Chains		
AGB 414 Food and Agribusiness Policy Issues		
AGB 452 Global Food and Agricultural Trade		
Food Industry Management Specialization (choose four courses) - offered as iCourses		
AGB 370 Food Retailing Strategy Development and Case Competition		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
Global Management Specialization (choose four courses) - offered at West Valley		
Required:		
Choose three courses:		
TGM 312 Big Data in the Global Economy		

Requirement	Minimum Grade	Credit Hours
TGM 460 Global Risk Assessment and Management		
TGM 468 States and Markets in a Global Economy (GCSI)		
TGM 478 Cross-Cultural Communication and Negotiation		
Health Care Innovation Specialization (choose four courses) - offered at West Valley and as iCourses		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
Human Resource Management Specialization (choose four courses) - offered at Poly		
Required:		
MGT 420 Human Resource Management		
Choose three courses:		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		

Requirement	Minimum Grade	Credit Hours
Human Systems Engineering Specialization (choose four courses) - offered at Poly		
Required:		
Choose three:		
HSE 323 Perceptual Systems (SOBE)		
HSE 324 Applied Cognitive Science (SOBE)		
HSE 325 Human-Computer Interaction		
HSE 422 Human Factors in Sport		
HSE 423 Human Factors in Transportation		
HSE 424 Human Automation Interaction		
HSE 425 Human Factors in Medical Systems		
HSE 426 Training and Expertise		
HSE 427 Designing for Learning		
HSE 428 Judgment and Decision Making		
HSE 429 Product Design and Evaluation		
Leadership Development Specialization (choose four courses) - offered at West Valley		
MGT 310 Collaborative Team Skills		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 411 Leading Organizations		

Requirement	Minimum Grade	Credit Hours
Medial Studies Specialization (choose four courses) - offered at Poly		
HCD 303 Global Health Care Systems (GCSI)		
MED 300 Historical and Contemporary Issues in Health		
MED 320 Applied Medical/Health Care Ethics (HUAD)		
MED 450 Leadership and Professionalism		
Project Management Specialization (choose four courses) - offered as iCourses		
Required:		
Choose three courses:		
PMG 321 Project Leadership, Strategy and Scope		
PMG 322 Project Schedule Management		
PMG 324 Resources in Project Management		
PMG 326 Project Procurement Management		
PMG 421 Project Risk Management		
PMG 422 Project Quality Management		
Sales and Marketing Essentials Specialization (choose four courses) - offered as iCourses		
MKT 391 Essentials of Selling		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		

Requirement	Minimum Grade	Credit Hours
MKT 396 Essentials of Services Marketing		
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		
Supply Chain Management & Sustainability Specialization (choose four courses) - offered as iCourse		
SCM 385 Business and Sustainability I (SUST)		
SCM 463 Global Supply Chain Management (GCSI)		
SCM 485 Business and Sustainability II		
Technical Communication Specialization (choose four courses) - offered at Poly		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 401 Fundamentals of Technical Communication		
TWC 411 Principles of Visual Communication		
TWC 422 Social Media in the Workplace		
TWC 431 Principles of Technical Editing		
TWC 435 Global Issues in Technical Communication (GCSI)		
Technical Entrepreneurship and Management Specialization (choose four courses) - offered at Poly		
TEM 301 Applied Social Entrepreneurship II		
TEM 400 Technology Entrepreneurship		
TEM 431 Innovation Management		

Requirement	Minimum Grade	Credit Hours
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
TMC 498 Pro-Seminar		
Tourism Specialization (choose four courses) - offered as iCourses		
Required:		
Choose three courses:		
TDM 345 Meeting and Convention Planning		
TDM 350 Tourism, Recreation and Sports Marketing		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 475 Entrepreneurial Recreation and Tourism		
TDM 480 Sustainable Tourism		
TDM 483 Sports Tourism		
Interdisciplinary Business Studies Specialization (choose four courses)		
AGB 321 Agribusiness Sales and Marketing		
AGB 333 Agribusiness Finance		
AGB 366 Food System Technology Innovations		

Requirement	Minimum Grade	Credit Hours
AGB 370 Food Retailing Strategy Development and Case Competition		
AGB 410 Food Supply Chains		
AGB 414 Food and Agribusiness Policy Issues		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
AGB 452 Global Food and Agricultural Trade		
CIS 300 Web Design and Development		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		
COM 430 Leadership in Group Communication		
DST 494 Topic: Disability and Aesthetics		
ENG 311 Persuasive Writing (CIVI)		
ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)		
ETH 430 Gender on the Borderlands (HUAD)		

Requirement	Minimum Grade	Credit Hours
HCD 303 Global Health Care Systems (GCSI)		
HCD 330 Health Care Systems in the U.S. (CIVI)		
HCD 420 Population Health Management		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
HSE 323 Perceptual Systems (SOBE)		
HSE 324 Applied Cognitive Science (SOBE)		
HSE 325 Human-Computer Interaction		
HSE 422 Human Factors in Sport		
HSE 423 Human Factors in Transportation		
HSE 424 Human Automation Interaction		
HSE 425 Human Factors in Medical Systems		
HSE 426 Training and Expertise		
HSE 427 Designing for Learning		
HSE 428 Judgment and Decision Making		
HSE 429 Product Design and Evaluation		
MED 300 Historical and Contemporary Issues in Health		

Requirement	Minimum Grade	Credit Hours
MED 320 Applied Medical/Health Care Ethics (HUAD)		
MED 450 Leadership and Professionalism		
MGT 310 Collaborative Team Skills		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 411 Leading Organizations		
MGT 420 Human Resource Management		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MKT 391 Essentials of Selling		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		
PMG 320 Project Approaches		
PMG 321 Project Leadership, Strategy and Scope		
PMG 322 Project Schedule Management		

Requirement	Minimum Grade	Credit Hours
PMG 323 Project Cost Management		
PMG 324 Resources in Project Management		
PMG 326 Project Procurement Management		
PMG 421 Project Risk Management		
PMG 422 Project Quality Management		
SCM 385 Business and Sustainability I (SUST)		
SCM 463 Global Supply Chain Management (GCSI)		
SCM 485 Business and Sustainability II		
SOC 426 Social Inequalities (CIVI)		
TDM 345 Meeting and Convention Planning		
TDM 350 Tourism, Recreation and Sports Marketing		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 483 Sports Tourism		
TEM 301 Applied Social Entrepreneurship II		
TEM 400 Technology Entrepreneurship		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		

Requirement	Minimum Grade	Credit Hours
TGM 312 Big Data in the Global Economy		
TGM 460 Global Risk Assessment and Management		
TGM 468 States and Markets in a Global Economy (GCSI)		
TGM 478 Cross-Cultural Communication and Negotiation		
TMC 498 Pro-Seminar		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 401 Fundamentals of Technical Communication		
TWC 411 Principles of Visual Communication		
TWC 422 Social Media in the Workplace		
TWC 431 Principles of Technical Editing		
TWC 435 Global Issues in Technical Communication (GCSI)		

Business Capstone

WPC 460 Business Capstone All upper-division Business Foundation classes must be completed before enrolling in WPC 460.	C	1

Business Skills Courses

CIS 105 Computer Applications and Information		3

Technology (QTRS)	
ECN 211 Macroeconomic Principles (SOBE)	3
ECN 212 Microeconomic Principles (SOBE)	3
ECN 221 Business Statistics (QTRS)	3
MAT 117 College Algebra (MATH)	3

Business Foundation Courses

ACC 382 Accounting and Financial Analysis	3
FIN 380 Personal Financial Management	3
MGT 380 Management and Strategy	3
MKT 390 Essentials of Marketing	3
SCM 380 Supply Chain Management Foundations (SUST)	3
AGB 302 International Management and Agribusiness (GCSI) OR **MGT 302 Principles of International Business (GCSI)**	3

Other Business Courses

ENG 302 Business Writing	3
COM 259 Communication in Business and the Professions (CIVI)	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 22 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Applied Computing (Cybersecurity) and Applied Cybersecurity (ASACOCBS and ASACSCERT)

Program description:
The innovative cybersecurity concentration builds on the Bachelor of Science degree program in applied computing.

Students acquire the technical knowledge of how to secure networks and applications, an understanding of cybersecurity governance models and risk management fundamentals, methods of communicating complex risk issues, and solutions for the challenges of implementing cybersecurity controls within various organizational models. Leadership, critical thinking and effective communication are also emphasized.

Students gain experience with authentic cybersecurity organizations, protecting digital assets against compromise or theft.

The cybersecurity concentration prepares students for a continuing and progressive career in cybersecurity.

The applied cybersecurity certificate program enables students to build competencies in security operations, risk assessment, network security, and governmental and regulatory compliance in an interdisciplinary learning setting. Building on core skills that they bring with them from their majors, students practice dealing with cyber-threats and resolving issues from multiple perspectives.

The program is offered through a collaboration between the New College of Interdisciplinary Arts and Sciences, the Ira A. Fulton Schools of Engineering, and the W. P. Carey School of Business.

BS At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: West Valley
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 251 Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: Polytechnic, Tempe, West Valley

Career opportunities:
This is an ideal degree for students interested in careers in cybersecurity. Opportunities are available both in the private sector and within governmental agencies (e.g., the FBI, U.S. Department of Homeland Security, the National Security Agency and the Department of Defense).

Graduates of the applied computing program with a concentration in cybersecurity are well prepared for graduate study as well as entry-level employment with businesses, nonprofits, government agencies and academic institutions. Cybersecurity-focused positions include:

- chief information security officer
- cyber risk analyst
- information security engineer
- network security engineer
- security operations center analyst

This program is an ideal supplement for students interested in careers in cybersecurity in the private sector or within government agencies, such as the FBI, U.S. Department of Homeland Security, the National Security Agency and the U.S. Department of Defense. The certificate in applied cybersecurity provides a solid background for students interested in the following careers:

- chief information security officer
- cyber risk analyst
- information security engineer
- network security engineer
- security operations center analyst

Major Map

2024 - 2025 Catalog Year General Studies Gold

Degree: BS

College/School: New College of Interdisciplinary Arts and Sciences

ASACOCBS

ASU is no longer accepting new students to this program. Students interested in cybersecurity should apply to the Computer Science (Cybersecurity), BA program.

Hide Course List(s)/Track Group(s)

Term 1 0 - 16 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
ACO 101: Introduction to Computer Science (QTRS OR CS)	3	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	
NEW 101: The ASU New College Experience OR IAS 300: Career Strategies and Personal Resilience (L or SB)	1-3		
PSY 101: Introduction to Psychology (SOBE OR SB)	3	C	
Humanities, Arts and Design (HUAD)	3		
Elective	3		
Term hours subtotal:	16-18		

- If a student scores 0-60 on the math placement test, they should complete MAT 117 in place of an elective in Term 1 as the prerequisite to MAT 210 in Term 2.
- ASU 101 or college-specific First-Year Seminar required of all first-year students. NEW 101 satisfies this requirement.
- IAS 300 (three credit hours) is required for all transfer students in New College.
- Select your Career Interest Community and play me3@ASU.
- Activate your Handshake account and build out your profile.

Term 2 16 - 32 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes

!	ACO 102: Object-Oriented Programming (QTRS OR CS)	3	C
!	MAT 210: Brief Calculus (MATH OR MA) OR MAT 251: Calculus for Life Sciences (MATH OR MA)	3	C
	COM 100: Introduction to Human Communication (SOBE OR SB)	3	C
	ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C
	Scientific Thinking in Natural Sciences (SCIT)	4	
!	Complete ENG 101 OR ENG 105 OR ENG 107 course(s).		
	Term hours subtotal:	16	

- Create a first draft resume.
- Join a student club or professional organization.
- Secure a part-time job or volunteer experience.

Term 3 32 - 48 Credit Hours Critical course signified by !

		Hours	Minimum Grade	Notes
!	ACO 201: Data Structures and Algorithms (QTRS OR CS)	3	C	
!	MAT 243: Discrete Mathematical Structures	3	C	
	Global Communities, Societies and Individuals (GCSI)	3		
	Governance and Civic Engagement (CIVI)	3		
	Scientific Thinking in Natural Sciences (SCIT)	4		
!	Complete First-Year Composition requirement.			
	Complete Mathematics (MATH) requirement.			
	Term hours subtotal:	16		

- Develop your research skills.
- Develop your professional skills.
- Interested in pre-professional pathways? Explore our pre-health and pre-law websites.

Term 4 48 - 63 Credit Hours Critical course signified by !

		Hours	Minimum Grade	Notes
!	ACO 240: Introduction to Programming Languages	3	C	
!	STP 226: Elements of Statistics (QTRS OR CS)	3	C	
	Humanities, Arts and Design (HUAD)	3		
	Sustainability (SUST)	3		
	Elective (PHI 103 recommended)	3		
	Term hours subtotal:	15		

- Explore an internship, an IGLE international experience, or ASU study abroad.

Term 5 63 - 78 Credit Hours Necessary course signified by ★

		Hours	Minimum Grade	Notes

⭐	ACO 320: Database Systems	3	C
⭐	ACO 330: Computer Networks	3	C
	Upper Division Global and Civic Engagement Requirement: satisfied through completion of 6 credits of upper-division courses with a Global Communities, Societies and Individuals (GCSI) or Governance and Civic Engagement (CIVI) designation, in addition to the courses used to meet the university General Studies requirements; or completion of 3 credits from an ASU-approved Global Education program. Adjustment to upper-division and elective hours is required if a lower-division Global Education course is used.	3	C
	Complete 2 courses: Elective	6	
	Term hours subtotal:	15	

- Thinking about graduate school? Consider registering for a grad school test prep course and explore accelerated master's degrees.
- Develop your professional online presence.

Term 6 78 - 93 Credit Hours Necessary course signified by ⭐

		Hours	Minimum Grade	Notes
⭐	ACO 350: Systems Programming (QTRS OR CS)	3	C	
	ACO 361: Secure Coding Concepts	3	C	
	ACO 430: Wireless Networks and Security	3	C	
	Diversity Elective	3	C	
	American Institutions (AMIT)	3		
	Term hours subtotal:	15		

- See academic advisor to discuss setting up capstone/experiential learning coursework.
- Use Handshake to research employment opportunities.
- Complete an in person or virtual practice interview.

Term 7 93 - 108 Credit Hours Necessary course signified by ⭐

		Hours	Minimum Grade	Notes

⭐	Upper Division Applied Computing Capstone/Experiential Learning Requirement 1	3	C
	ACO 431: Network Security	3	C
	Upper Division Communication Elective	3	C
	Upper Division Cybersecurity Elective	3	C
	Upper Division Ethics Elective	3	C
	Term hours subtotal:	15	

- Completion of all major MAT/STP coursework (MAT 210, 243, and STP 226) and the ACO Core (101/102/201/240/320/330/350) with a C or better is required prior to enrollment in the experiential learning courses (ACO 484, ACO 494, ACO 499). This is a two-semester requirement.
- Experiential learning courses may not be taken concurrently in the same semester. Only one of ACO 482 or ACO 494 Industry Capstone Projects may apply for three out of the six credit hours.
- All students must take at least three credit hours of ACO 484 or ACO 499, and may choose to take all six credit hours as ACO 484 and/or ACO 499, if they desire. See academic advisor for questions.
- If ACO 394 or ACO 494 is taken to meet the Upper Division Cybersecurity Elective requirement, it must be a security-related topic. See academic advisor prior to enrollment.
- Gather professional references.

Term 8 **108 - 120 Credit Hours Necessary course signified by ⭐**	**Hours**	**Minimum Grade**	**Notes**

⭐	Upper Division Applied Computing Capstone/Experiential Learning Requirement 2	3	C
	Upper Division Cybersecurity Elective	3	C
	Upper Division Global and Civic Engagement Requirement: satisfied through completion of 6 credits of upper-division courses with a Global Communities, Societies and Individuals (GCSI) or Governance and Civic Engagement (CIVI) designation, in addition to the courses used to meet the university General Studies requirements; or completion of 3 credits from an ASU-approved Global Education program. Adjustment to upper-division and elective hours is required if a lower-division Global Education course is used.	3	C
	Upper Division Elective	3-0	
	Term hours subtotal:	12-9	

- Completion of all major MAT/STP coursework (MAT 210, 243, and STP 226) and the ACO Core (101/102/201/240/320/330/350) with a C or better is required prior to enrollment in the experiential learning courses (ACO 484, ACO 494, ACO 499). This is a two-semester requirement.
- Experiential learning courses may not be taken concurrently in the same semester. Only one of ACO 482 or ACO 494 Industry Capstone Projects may apply for three out of the six credit hours.
- All students must take at least three credit hours of ACO 484 or ACO 499, and may choose to take all six credit hours as ACO 484 and/or ACO 499, if they desire. See academic advisor for questions.
- Apply for full-time career opportunities.

Hide Course List(s)/Track Group(s)

Upper Division Cybersecurity Elective	Upper Division Applied Computing Capstone/Experiential Learning Requirement 1	Upper Division Applied Computing Capstone/Experiential Learning Requirement 2
ACO 331: Network Forensics Analysis	ACO 482: Design Thinking for National Security	ACO 484: Internship
ACO 351: Governance, Risk and Compliance	ACO 484: Internship	ACO 494: Applied Projects
ACO 394: Special Topics	ACO 494: Applied Projects	ACO 499: Individualized Instruction
ACO 401: Managing Cyber Risks in Enterprise Business Processes or CIS 401: Managing Cyber Risks in Enterprise Business Processes	ACO 494: Industry Capstone Projects	
ACO 402: Privacy, Ethics and Compliance Issues or CIS 402: Privacy, Ethics and Compliance Issues	ACO 499: Individualized Instruction	
ACO 461: Security Operations		
ACO 494: Special Topics		
FOR 350: Computer Forensics		

Upper Division Communication Elective	Diversity Elective	Upper Division Ethics Elective
COM 316: Gender and Communication (SOBE OR SB & C)	ASB 211: Women in Other Cultures ((HU or SB) & G)	IAS 340: Bioethics (HUAD OR HU)
COM 317: Nonverbal Communication (SOBE OR SB)	COM 263: Elements of Intercultural Communication (GCSI OR SB & C & G)	IAS 406: Moral Dilemmas (L or HU) or PHI 406: Moral Dilemmas (L or HU)
COM 353: Professional Communication	ENG 317: Cross-Cultural Writing ((L or HU) & G)	IAS 407: Environmental Philosophy and Policy (L or HU) or PHI 407: Environmental Philosophy and Policy (L or HU)
COM 371: Language, Culture, and Communication (GCSI OR SB & C & G)	POS 480: Global Justice (GCSI OR G) or SBS 480: Global Justice (GCSI OR G)	IAS 409: Eco-Community Ethics (HU) or PHI 409: Eco-Community Ethics (HU)
COM 415: Risk Communication	PSY 385: Psychology of Gender (SOBE OR SB)	PHI 306: Applied Ethics (CIVI OR HU)
COM 416: Gender and Race in the Media	SBS 301: Cultural Diversity ((L or SB) & C)	PHI 360: Business and Professional Ethics (HUAD OR HU)
COM 457: New Media	WST 220: Gender, Media and Culture (HUAD OR HU & C)	
COM 459: Theory and Methods of Social Media Networks	WST 390: Women, Gender and Religion (GCSI OR HU & G) or REL 390: Women, Gender and Religion (GCSI OR HU & G)	
COM 471: Global Media and Cultural Identity (GCSI OR G)		
COM 477: Sport, Culture, and Discourses		

- **Total Hours:** 120
- **Upper Division Hours:** 45 minimum
- University Undergraduate Graduation Requirements

Notes:

Mathematics Placement Assessment score determines placement in first mathematics course.

General Studies designations listed next to courses on the major map were valid for the 2024 - 2025 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Cybersecurity, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: New College of Interdisciplinary Arts and Sciences

Plan Code: ASACSCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied cybersecurity consists of 15 credit hours of coursework, of which a minimum of 12 hours must be upper division. Students must complete courses from more than one subject to fulfill the certificate requirements. All courses used to satisfy requirements for the certificate must be completed with a grade of "C" (2.00 on a 4.00 scale) or better.		
CSE 365 Information Assurance or IFT 202 Foundations of Information and Computer System Security	C	3
Upper Division Group A - Security Operations and Risk Management **ACO 401 / CIS 401 Managing Cyber Risks in Enterprise Business Processes** **ACO 461 Security Operations** **IFT 381 Information System Security**	C	3
Upper Division Group B - Systems and Network Security **ACO 431 Network Security** **CSE 466 Computer Systems Security** **CSE 468 Computer Network Security** **IFT 458 Middleware Programming and Database Security**	C	3

Requirement	Minimum Grade	Credit Hours
IFT 475 Security Analysis		
or Upper Division Group C - Forensics/Cyber Crime		
ACO 331 Network Forensics Analysis		
CSE 469 Computer and Network Forensics		
FOR 350 Digital Forensics		
IFT 482 Network Forensics		
Upper Division Group D - Policy		
ACO 351 Governance, Risk and Compliance		
ACO 402 / CIS 402 Privacy, Ethics and Compliance Issues	C	3
CSE 467 Data and Information Security		
IFT 483 Security Compliance for Information Technology		
Upper Division Group E - Project		
ACO 484 Internship **or** ACO 499 Individualized Instruction		
CIS 440 Capstone in Information Systems		
CSE 485 Computer Science Capstone Project I **or** CSE 486 Computer Science Capstone Project II	C	3
IFT 401 Information Technology Capstone		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Applied Military and Veterans Studies and Veterans, Society and Service (LSAMVSBA and LAVSSCERT)

Program description:
The Bachelor of Arts program in applied military and veteran studies is an interdisciplinary program that provides students with a comprehensive understanding of the military's role in society, as well as the experience and culture of veterans. The curriculum covers various aspects of military studies, including the historical and societal impacts of conflict and the personal experiences of veterans in media, literature, employment and leadership.

Through the certificate program in veterans, society and service, students explore the history, representations, experiences and culture of military service and veterans.

Students study the veteran community with an interdisciplinary approach that combines history, politics, business, journalism, psychology, law, sociology and the arts through the intersectional lenses of gender, race, ethnicity and national identity. This program trains students to listen to, learn from, serve, research and advocate for veterans and their families.

BA At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Tempe or Online

Career opportunities:
Graduates are ready for roles that support public policy development and political activism, roles in the military, and leadership roles in military- and veteran-serving organizations.

Graduates are well-prepared for employment in:

- federal agencies across the U.S. and worldwide, such as with the Department of Defense and the Bureau of Veterans Affairs
- the government sector in Arizona and other states
- healthcare-related organizations that serve veteran populations
- nonprofit organizations around the U.S. that are dedicated to supporting military-connected individuals and veterans

Students can advance their career options with an undergraduate certificate.

Graduates who have combined the certificate in veterans, society and service with their major program of study may become more marketable to employers.

Graduates often pursue employment as health care social workers, social and community service managers, or community health workers. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Applied Military and Veterans Studies, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: College of Integrative Sciences and Arts
Plan Code: LSAMVSBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Applied Military and Veterans Studies Core		
MVS 100 Introduction to Military Studies	C	3
MVS 200 The Military Culture and American Society	C	3
MVS 201 Interdisciplinary Approaches to Conflict and War	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals	C	3
MVS 301 Experience of America's Modern Wars	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3
MVS 400 Military Theory and Practice	C	3
MVS 401 The Military: Law, Ethics and Culture	C	3
MVS 402 Technology and Warfare	C	3
MVS 403 American Military Leadership	C	3

Requirement	Minimum Grade	Credit Hours
MVS 404 War and Memory	C	3
MVS 484 Internship OR **MVS 499 Individualized Instruction** Students must have all portfolio courses completed prior to enrolling in MVS 484 Internship or MVS 499 Individualized Instruction.	C	3
MVS 485 Military and Veterans Studies Portfolio and Performance Assessment	C	1

Portfolio Courses

Students will complete 15 credit hours in courses selected from the same portfolio track, to be used in creating the student's final project for their culminating experience course in Term 8. Students will choose the portfolio courses in consultation with their academic advisor.

Each portfolio track's course options are listed in the following categories: Leadership in Military and Veterans' Organizations; The Military and Veterans: Historical Perspectives; Principles of Health Care for Military, Veterans, and Their Families; or Public Leadership, Service, and Policy

Counseling and Counseling Psychology for Military and Veteran Communities - Portfolio Courses	C	6
CAP 120 Introduction to Counseling (SOBE)		
CAP 220 Self in a Multicultural Society (SOBE)		
CAP 240 Counseling Skills		
CAP 310 Addictions I: Foundations and Basic Principles		

Requirement	Minimum Grade	Credit Hours
CAP 315 Trauma and Crisis Intervention		
CAP 320 Theories of Counseling and Psychotherapy		
CAP 330 Group Counseling		
CAP 335 Addiction Group Counseling		
CAP 340 Multicultural Counseling Theory and Practice		
CAP 342 Community Outreach, Prevention and Intervention		
FAS 331 Modern Family Relationships (SOBE)		
FAS 370 Family Ethnic and Cultural Diversity (CIVI)		
JUS 305 Principles of Justice Studies (HUAD)		
MVS 484 Internship		
MVS 494 Special Topics		
PSY 315 Personality Theory and Research (SOBE)		
PSY 320 Learning and Motivation		
PSY 366 Psychological Disorders (SOBE)		
PSY 369 Biology of Human Sexuality		
PSY 385 Psychology of Gender (SOBE)		
SWU 250 Stress Management Tools I (SOBE)		
SWU 349 Stress Management Tools II (SOBE)		

OR

Requirement	Minimum Grade	Credit Hours

Principles of Health Care for MIlitary, Veterans, and Their Families - Portfolio Courses

- HCD 302 Health Care Management
- HCD 303 Global Health Care Systems (GCSI)
- HCD 330 Health Care Systems in the U.S. (CIVI)
- HCR 210 Ethics for the Health Care Professional (HUAD)
- HCR 220 Introduction to Health Professions and the U.S. Health Care System (CIVI)
- HCR 221 Foundational Concepts for Health Care Coordination
- HCR 230 Culture and Health (GCSI)
- HCR 231 Fundamentals of Community Health
- HCR 321 Advanced Concepts for Health Care Coordination
- HSC 310 Health Communication
- POP 100 Introduction to Population Health

OR

Public Leadership, Service, and Policy - Portfolio Courses

- COM 225 Public Speaking and Presentations (CIVI)
- CPP 350 Community Works
- CRJ 270 Community Justice (CIVI)
- ENG 216 Persuasive Writing on Public Issues (CIVI)

Requirement	Minimum Grade	Credit Hours
MVS 484 Internship		
NLM 160 Voluntary Action and Community Leadership (CIVI)		
NLM 220 Introduction to Nonprofit Organizations		
NLM 300 Fund Raising and Resource Development		
NLM 310 Volunteer Management (CIVI)		
PAF 112 Public Service and American Democracy (AMIT)		
PAF 200 Public Service and Policy (CIVI)		
PAF 201 Economics and Public Policy (SOBE)		
PAF 300 Public Management and Administration		
PAF 311 Leadership and Change (SOBE)		
PAF 340 Contemporary Policy Challenges		
PAF 410 Building Leadership Skills (SOBE)		
SWU 183 Introductory Ethics: A Social Issues Perspectives (HUAD)		
SWU 250 Stress Management Tools I (SOBE)		
SWU 349 Stress Management Tools II (SOBE)		
SWU 456 Immigrants and Refugees (CIVI)		

OR

Leadership in Military and Veterans' Organizations - Portfolio Courses

Requirement	Minimum Grade	Credit Hours
COM 225 Public Speaking and Presentations (CIVI)		
COM 230 Teamwork and Collaboration (SOBE)		
COM 430 Leadership in Group Communication		
ISS 410 Integrative Leadership Studies		
JMC 419 Strategic Communications Leadership and Ethics		
MVS 484 Internship		
NEW 200 Innovation Challenge, Service Learning and Leadership		
NLM 160 Voluntary Action and Community Leadership (CIVI)		
NLM 235 Leadership and Ethics		
OGL 200 Introduction to Organizational Leadership (CIVI)		
OGL 220 Behavioral Dynamics in Organizations (SOBE)		
OGL 260 Resource Allocation in Organizations (SUST)		
OGL 300 Theory and Practice of Leadership		
OGL 345 Organizational Ethics (HUAD)		
OGL 350 Diversity and Organizations (GCSI)		
OGL 355 Leading Organizational Innovation and Change		
POS 414 Political History and Leadership		

Requirement	Minimum Grade	Credit Hours
SOC 460 Leadership, Research, and Collaboration in Community Change		
WST 485 Women, Gender, and Leadership		
OR		
The Military and Veterans: Historical Perspective - Portfolio Courses		
HST 101 Global History Since 1500 (HUAD)		
HST 406 American Revolution/1763-1789		
HST 408 Civil War and Reconstruction (HUAD)		
HST 456 The Vietnam War (HUAD)		
HST 460 World War II (HUAD)		
JUS 374 The Holocaust, Genocide, and Human Rights		
MVS 484 Internship		
PAF 469 Terrorism Defense		
POS 110 American Government and Politics (AMIT)		
POS 112 Foundations of Democracy (CIVI)		
POS 150 Comparative Government (GCSI)		
POS 160 Global Politics (GCSI)		
POS 300 Contemporary Global Controversies (GCSI)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 368 Ethics and Human Rights (GCSI)		

Requirement	Minimum Grade	Credit Hours
POS 465 International Organization and Law (GCSI)		
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
SGS 303 Global Trends (GCSI)		
SGS 370 Geopolitics (GCSI)		
Upper Division Counseling and Counseling Psychology for Military and Veteran Communities - Portfolio Courses	C	9
CAP 310 Addictions I: Foundations and Basic Principles		
CAP 315 Trauma and Crisis Intervention		
CAP 320 Theories of Counseling and Psychotherapy		
CAP 330 Group Counseling		
CAP 335 Addiction Group Counseling		
CAP 340 Multicultural Counseling Theory and Practice		
CAP 342 Community Outreach, Prevention and Intervention		
FAS 331 Modern Family Relationships (SOBE)		
FAS 370 Family Ethnic and Cultural Diversity (CIVI)		
JUS 305 Principles of Justice Studies (HUAD)		
MVS 484 Internship		
MVS 494 Special Topics		
PSY 315 Personality Theory and Research (SOBE)		

Requirement	Minimum Grade	Credit Hours
PSY 320 Learning and Motivation		
PSY 366 Psychological Disorders (SOBE)		
PSY 369 Biology of Human Sexuality		
PSY 385 Psychology of Gender (SOBE)		
SWU 349 Stress Management Tools II (SOBE)		

OR

Upper Division Principles of Health Care for MIlitary, Veterans, and Their Families - Portfolio Courses

HCD 302 Health Care Management		
HCD 303 Global Health Care Systems (GCSI)		
HCD 330 Health Care Systems in the U.S. (CIVI)		
HCR 321 Advanced Concepts for Health Care Coordination		
HSC 310 Health Communication		

OR

Upper Division Public Leadership, Service, and Policy - Portfolio Courses

CPP 350 Community Works		
MVS 484 Internship		
NLM 300 Fund Raising and Resource Development		
NLM 310 Volunteer Management (CIVI)		

Requirement	Minimum Grade	Credit Hours
PAF 300 Public Management and Administration		
PAF 311 Leadership and Change (SOBE)		
PAF 340 Contemporary Policy Challenges		
PAF 410 Building Leadership Skills (SOBE)		
SWU 349 Stress Management Tools II (SOBE)		
SWU 456 Immigrants and Refugees (CIVI)		

OR

Upper Division Leadership in Military and Veterans' Organizations - Portfolio Courses

COM 430 Leadership in Group Communication		
ISS 410 Integrative Leadership Studies		
JMC 419 Strategic Communications Leadership and Ethics		
MVS 484 Internship		
OGL 300 Theory and Practice of Leadership		
OGL 345 Organizational Ethics (HUAD)		
OGL 350 Diversity and Organizations (GCSI)		
OGL 355 Leading Organizational Innovation and Change		
POS 414 Political History and Leadership		
SOC 460 Leadership, Research, and Collaboration in Community Change		

Requirement	Minimum Grade	Credit Hours
WST 485 Women, Gender, and Leadership		
OR		
Upper Division The Military and Veterans: Historical Perspective - Portfolio Courses		
HST 406 American Revolution/1763-1789		
HST 408 Civil War and Reconstruction (HUAD)		
HST 456 The Vietnam War (HUAD)		
HST 460 World War II (HUAD)		
JUS 374 The Holocaust, Genocide, and Human Rights		
MVS 484 Internship		
PAF 469 Terrorism Defense		
POS 300 Contemporary Global Controversies (GCSI)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 368 Ethics and Human Rights (GCSI)		
POS 465 International Organization and Law (GCSI)		
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
SGS 303 Global Trends (GCSI)		
SGS 370 Geopolitics (GCSI)		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CLS The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Veterans, Society and Service, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LAVSSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires 18 credit hours, of which at least 12 credit hours must be completed at the upper-division level and nine must be completed at ASU. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Required Courses

MVS 100 Introduction to Military Studies	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals **or** **MVS 301 Experience of America's Modern Wars**	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3

Elective

Upper Division Electives	C	3
AFR 494 Topic: Black Military History		

Requirement	Minimum Grade	Credit Hours
CAP 316 Combat Trauma		
CAP 336 Counseling Military Veterans		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 414 Crisis Communication		
COM 420 Rhetoric and Community Advocacy		
HST 302 Topic: War and Political Thought		
HST 302 Topic: Women, War and Peace		
HST 306 Topic: World War II		
HST 340 American Military History (HUAD)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 372 Modern Middle East (GCSI)		
HST 456 The Vietnam War (HUAD)		
IAP 307 Art and War (GCSI)		
ISS 428 Religion and Global Violence (GCSI)		
ISS 441 Conflict and Conflict Resolution		
ISS 456 Culture, Conflict and War		
JST 346 Israeli Wars in Israeli Movies		
MCO 494 Topic: War and Media		
MVS 376 Writing a Personal History		
MVS 394 Special Topics		
MVS 395 Combat in Film		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		

Requirement	Minimum Grade	Credit Hours
MVS 494 Special Topics		
PAF 302 Public Service Research Methods		
POS 310 American National Government (AMIT)		
POS 316 American Political Institutions (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 346 Problems of Democracy (HUAD)		
POS 350 Comparative Politics (GCSI)		
POS 360 World Politics (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 378 / **REL 378 Religion, War and Peace (CIVI)**		
POS 414 Political History and Leadership		
POS 426 Elements of Public Policy		
POS 467 International Security (GCSI)		
SGS 394 Topic: Gender and Armed Conflict		

Internship

MVS 484 Internship All students must complete an internship and should review their internship options, including virtual, with the CISA internship coordinator. Prerequisite courses may be needed in order to complete the requirements of this certificate.	C	3

Notes

Prerequisite courses may be needed in order to complete the

requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BFA/CERT Art (Animation) and Computer Gaming (HIARTANBFA and ESSCICERT)

Program description:
In the Bachelor of Fine Arts program in art with a concentration in animation, students acquire a foundation of skills and knowledge that draws connections between traditional methods and emerging art practices. Animation students develop the ability to think critically and communicate through their art. Students learn a wide variety of approaches to advancing ideas and discourses, including 2D, 3D and stop-motion animation.

The curriculum emphasizes conceptual and material knowledge, interdisciplinary research and professional mentorship. Distinguished faculty provide expertise across an array of distinct areas within the field of contemporary art, including independent animation filmmaking, computer-generated imagery, machine learning, VR and XR. Capstone research courses guide students through the process of developing a portfolio of completed works and provide students with practical experience presenting art in a variety of professional contexts.

In addition to classroom learning, the program is enriched by arts organizations and cultural institutions, which enable students to build their professional network through fellowships, internships and residencies. The program is further augmented by public events supported by the School of Art galleries, the ASU Art Museum, the Ceramics Research Center and Archive, and Pyracantha Press.

The computer gaming certificate program provides students with a game development skill set that they can apply to domain-specific applications in their major. The skill set includes architecture of game engines, art design and computer graphics for gaming, and game software development.

Students learn to apply gaming technology to the rapidly growing video game industry and to fields including business, medicine, geography, biotechnology and education. Examples of projects are:

- building a game that teaches linear algebra by incorporating trigonometric rules into the game design
- creating a game that teaches correct sentence construction to beginning learners of English
- creating a game to help patients with physical therapy
- creating an interactive virtual world for corporate training
- designing a game platform that incorporates geographic information systems
- inventing a surgical simulation to educate medical students

BFA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or any math course that meets the MATH designation.
Math intensity: General

CERT At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe

Career opportunities:
An art degree offers graduates a pathway to creative careers as artists, scholars and educators in the public and private spheres. Artists find employment opportunities as practitioners in the field through commercial galleries, public art commissions, private collectors and cultural institutions. Possible positions include museum or gallery professional, art dealer, art director, private art instructor, studio artist and community-based artist. Venues might include health care settings, nonprofit agencies, and local and national public arts. Other options for graduates include working at arts agencies and public art programs, gaining admission to prestigious graduate programs, and setting up their own art businesses. The skills acquired to produce art also have a wide variety of non-art applications.

Animation graduates work within the realms of film, television, special effects, games and game development, augmented and virtual reality, fine arts, design, illustration, robotics, and scientific and data visualization. In recent years, job opportunities for multimedia artists, animators, and film and video creators have consistently increased nationwide. ASU alumni have pursued diverse career paths as animators, storyboard artists, 3D modelers, concept designers, creative directors, graphic artists, multimedia designers and educators, among others.

Students can advance their career options with an undergraduate certificate. Those who add this computer gaming specialization as a complement to their major program of study may be more marketable to employers in the gaming

Curriculum - Art (Animation), BFA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Fine Arts, BFA
College/School: Herberger Institute for Design and the Arts
Plan Code: HIARTANBFA
Minimum credit hours: 120
Upper division minimum credit hours: 53

Requirement	Minimum Grade	Credit Hours
Lower Division Concentration Requirements		
ART 111 Foundation Drawing	C	3
ART 113 Pictorial Investigations and Color Theory	C	3
ART 115 3D Design	C	3
ART 116 Introduction to Digital Media	C	3
ART 212 Figure Drawing for Animation	C	3
ART 217 Introduction to Computer Animation	C	3
ART 209 2D Digital Animation I	C	3
ART 248 3D Computer Imaging and Animation (QTRS)	C	3
ART 294 Topic: Introduction to Storyboarding OR **ART 312 Illustration**	C	3
Upper Division Concentration Requirements		
ART 309 2D Digital Animation II	C	3

Requirement	Minimum Grade	Credit Hours
ART 348 Animation Motion Studies	C	3
ART 350 Sound Design for Moving Images	C	3
ART 361 Junior Animation Projects I	C	3
ART 362 Junior Animation Projects II	C	3
ART 417 Storyboarding and Narrative Sequencing	C	3
ART 461 Animation Capstone I	C	3
ART 462 Animation Capstone II	C	3
Upper Division Animation Elective	C	15
AME 330 Digital-Physical Systems		
AME 410 Interactive Materials		
AME 436 Animating Virtual Worlds		
AME 444 Media Installations		
ART 312 Illustration		
ART 314 Intermediate Figure Drawing		
ART 317 Advanced Digital Photography		
ART 394 Topic: 3-D Digital Modeling		
ART 394 Topic: 3D Visual Effects		
ART 394 Topic: Graphic Narrative		
ART 394 Topic: Cinematic Animation - Unreal Engine		

Requirement	Minimum Grade	Credit Hours
ART 424 Stop Motion Animation		
ART 439 Studio Inquiry: Practice and Cultural Context		
ART 440 Experimental Video Art		
ART 449 Computer Animation and Video		
ART 494 Topic: Stop Motion Animation II		
ART 494 Topic: Time, Narrative & the Multiple		
ART 494 Topic: Visual Prototyping		
ART 494 Topic: Women/Art/Technology		
CPI 311 Game Engine Development		
CPI 321 Fundamentals of Game Art		
CPI 411 Graphics for Games		
CPI 421 3-D Modeling and Texturing		
FMP 325 Intermediate Visual Effects Compositing		
FMS 351 Emerging Digital Media		
FMS 354 Critical Studies in Animation		
FMS 394 Topic: Writing for Video Games		
FMS 409 Advanced Screenwriting		
FMS 442 Experimental Narrative		
FMS 494 Topic: Contemporary Television and New Media		

Requirement	Minimum Grade	Credit Hours
GIT 312 Computer Animation and Motion Graphics		
GIT 411 Visual Narrative in Motion Graphics		

School of Art Requirements & Electives

Upper Division School of Art Elective

ARA Elective		
ARE Elective		
ARS Elective	C	6
ART Elective		
ATP Elective		

Art History Requirements

ARS 101 Art from Prehistory Through Middle Ages (HUAD)	C	3
ARS 102 Art from Renaissance to Modernism (HUAD)	C	3
ARS 201 Art of Asia (GCSI) OR **ARS 202 Art of Africa, Oceania, and the Americas (GCSI)**	C	3
ARS 445 History of Animation	C	3
Upper Division **ARS Elective**	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ARA 101 ASU: The Art Experience	C	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Computer Gaming, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Ira A. Fulton Schools of Engineering

Plan Code: ESSCICERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Students will complete nine credit hours of core courses (including a final capstone project) and nine credit hours of elective courses. The certificate requires 12 credit hours of upper-division coursework. All courses must be passed with a "C" or better. Students need to allow at least three years to complete the certificate program due to the prerequisite structure.		

Computer Gaming Certificate Requirements

CPI 111 Game Development I (QTRS)	C	3
CPI 211 Game Development II	C	3
CPI 441 Gaming Capstone CPI 441 is only offered in Spring semesters	C	3
Upper Division Elective Courses (choose three)	C	9
CPI 311 Game Engine Development **OR** **SER 332 Introduction to Graphics and Game Development**		
CPI 321 Fundamentals of Game Art		
CPI 394 Topic: Game Design Fundamentals		

Requirement	Minimum Grade	Credit Hours
CPI 411 Graphics for Games OR SER 432 Game Engine Architecture		
CPI 421 3-D Modeling and Texturing		
CPI 462 Design for Learning in Virtual Worlds		
CPI 484 Internship		
FMS 365 Video Games and Narrative		
SER 431 Advanced Graphics		

CPI 411 is only offered in the spring semester. CPI 421 is only offered in the fall semester. CPI 462 and SER 431 are offered infrequently.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

industry.

BA/CERT Art (Art History) and Veterans, Society and Service (FAARTHBA and LAVSSCERT)

Program description:
In the Bachelor of Arts program in art with a concentration in art history, students acquire a foundation in art and material culture that explores art history in aesthetic, economic, social and political contexts. Students learn to critically assess and analyze works of art from many periods and geographies. Their research practice draws connections between a variety of fields, including museum studies, archaeology, anthropology, media and performance studies, gender and ethnic studies, history, literature, philosophy and economics. Students learn about visual art, architecture, archeology, collecting, world film and the art market.

The curriculum emphasizes interdisciplinary research and professional mentorship. Distinguished faculty provide expertise across an array of distinct areas within the field of art history, including ancient, African, Asian, Baroque, contemporary, Latin American, medieval, modern, Native American, Indian, Oceanian, pre-Columbian and Renaissance. Capstone courses guide students through the process of developing advanced research skills and methodologies for writing art history.

In addition to classroom learning, the program is enriched by arts organizations and cultural institutions, which provide students with opportunities to build their professional network through fellowships, internships and residencies. The program is further augmented by public events supported by the School of Art galleries, the ASU Art Museum, the Ceramics Research Center and Archive, and Pyracantha Press.

Through the certificate program in veterans, society and service, students explore the history, representations, experiences and culture of military service and veterans.

Students study the veteran community with an interdisciplinary approach that combines history, politics, business, journalism, psychology, law, sociology and the arts through the intersectional lenses of gender, race, ethnicity and national identity. This program trains students to listen to, learn from, serve, research and advocate for veterans and their families.

BA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Any math course that meets the MATH designation.
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Tempe or Online

Career opportunities:
An arts degree offers students a pathway to creative careers as artists, scholars and educators in the public and private sphere. Artists find employment opportunities as practitioners in the field through commercial galleries, public art commissions, private collectors and cultural institutions. Positions of employment include museum or gallery professional, art dealer, art director, private art instructor, studio artist and community-based artist. Venues might include health care settings, nonprofit agencies, and local and national public arts organizations. Other options for graduates include working at arts agencies and public art programs, gaining admission to prestigious graduate programs, and setting up their own art businesses. The skills acquired to produce art also have a wide variety of non-art applications.

Students can advance their career options with an undergraduate certificate.

Graduates who have combined the certificate in veterans, society and service with their major program of study may become more marketable to employers.

Graduates often pursue employment as health care social workers, social and community service managers, or community health workers. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Art (Art History), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: Herberger Institute for Design and the Arts
Plan Code: FAARTHBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Art History Requirements		
ARS 101 Art from Prehistory Through Middle Ages (HUAD)	C	3
ARS 102 Art from Renaissance to Modernism (HUAD)	C	3
ARS 201 Art of Asia (GCSI) OR **ARS 202 Art of Africa, Oceania, and the Americas (GCSI)** OR **ARS 250 History of Photography (HUAD)**	C	6
ARS 480 Research Methods	C	3
ARS 498 Pro-Seminar	C	3
Upper Division Art History Ancient/Medieval Focus	C	3

On-campus and ASU Online options:

ARS 394 Topic: Art and Myth in Ancient Greece

ARS 394 Topic: Egyptian Art and Culture

ARS 394 Topic: Islamic Art

Requirement	Minimum Grade	Credit Hours
ARS 394 Topic: Medieval Art: Cross-Cultural Perspectives		
ARS 402 Art of Ancient Egypt (GCSI)		
On-campus options:		
ARS 414 Monasteries, Madonnas and Manuscripts		
Upper Division Art History Asian/African/Native Am./Latin Am. Focus	C	3
On-campus and ASU Online options:		
ARS 360 Buddhist Art		
ARS 369 Mexican Art (GCSI)		
ARS 394 Topic: Anime		
ARS 394 Topic: Egyptian Art and Culture		
ARS 394 Topic: Islamic Art		
ARS 394 Topic: Modern and Contemporary Chinese Art		
ARS 402 Art of Ancient Egypt (GCSI)		
ARS 472 Art of China (HUAD)		
ARS 473 Art of Japan (HUAD)		
ARS 494 Topic: Histories of African Art and Visual Culture		
ARS 494 Topic: Modern & Contemporary Latin American Art: A Survey		
ARS 494 Topic: Oceanic Art		

Requirement	Minimum Grade	Credit Hours
ARS 498 Topic: Contemporary Art of Asia		
ARS 498 Topic: Contemporary Art of Southeast Asia		
ARS 498 Topic: Modern & Contemporary Art of India and South Asia		
On-campus options:		
ARS 362 Survey of Aztec, Maya and Inka Art		
ARS 368 Chicana/o Art		
ARS 394 Topic: Culture, Heritage, & Craft in East Asia		
ARS 465 Native Art of North America		
ARS 475 Chinese Painting		
Upper Division Art History Modern Focus	C	3
On-campus and ASU Online options:		
ARS 330 The Portrait		
ARS 331 18th- and 19th-Century European Jewelry Design		
ARS 335 Fashion and Dress in Visual Culture		
ARS 340 Art in America		
ARS 345 Art and Television		
ARS 370 The Art of the Comic		
ARS 394 Topic: 20th Century American & European Jewelry Design		

Requirement	Minimum Grade	Credit Hours
ARS 394 Topic: Anime		
ARS 394 Topic: Modern and Contemporary Chinese Art		
ARS 438 Art of the 20th Century I (HUAD)		
ARS 440 Identity and World Film		
ARS 445 History of Animation		
ARS 485 Women in the Visual Arts		
ARS 494 Topic: Modern & Contemporary Latin American Art: A Survey		
ARS 498 Topic: Art & Technology		
ARS 498 Topic: Contemporary Art of Asia		
ARS 498 Topic: Theories Modern Sculpture		
On-campus options:		
ARS 434 Revolution to Impressionism in 19th-Century Art		
ARS 439 Art of the 20th Century II		
ARS 443 Artists in Film: Artists' Biopics		
ARS 498 Topic: Art and Money		
ARS 498 Topic: Fakes and Forgeries in Art		
ARS 498 Topic: Photographs, Collections, Archives		
ARS 498 Topic: Refugee Modernism(s)		
ARS 498 Topic: Self, Trauma, and Affect in Art		

Requirement	Minimum Grade	Credit Hours
ARS 498 Topic: The Art of the Document		
Upper Division Art History Renaissance/Baroque Focus		
On-campus and ASU Online options:		
ARS 330 The Portrait		
ARS 335 Fashion and Dress in Visual Culture		
ARS 394 Topic: Italian Renaissance Art	C	3
ARS 394 Topic: Spanish America & the Arts		
On-campus options:		
ARS 418 German Renaissance and Reformation Art		
Upper Division **ARS Elective**	C	9
ARS Elective	C	3
School of Art Electives		
ARA Elective		
ARE Elective	C	9
ART Elective		
ATP Elective		

Second Language: Requirement satisfied through the following: * Completion of a language course at the intermediate level (202 or equivalent), not including American Sign Language IV.	C	16

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ARA 101 ASU: The Art Experience **OR HDA 101 ASU and Herberger Institute Experience**	C	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree

requirements in four years.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Veterans, Society and Service, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LAVSSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires 18 credit hours, of which at least 12 credit hours must be completed at the upper-division level and nine must be completed at ASU. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Required Courses

MVS 100 Introduction to Military Studies	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals **or** **MVS 301 Experience of America's Modern Wars**	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3

Elective

Upper Division Electives	C	3
AFR 494 Topic: Black Military History		

Requirement	Minimum Grade	Credit Hours
CAP 316 Combat Trauma		
CAP 336 Counseling Military Veterans		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 414 Crisis Communication		
COM 420 Rhetoric and Community Advocacy		
HST 302 Topic: War and Political Thought		
HST 302 Topic: Women, War and Peace		
HST 306 Topic: World War II		
HST 340 American Military History (HUAD)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 372 Modern Middle East (GCSI)		
HST 456 The Vietnam War (HUAD)		
IAP 307 Art and War (GCSI)		
ISS 428 Religion and Global Violence (GCSI)		
ISS 441 Conflict and Conflict Resolution		
ISS 456 Culture, Conflict and War		
JST 346 Israeli Wars in Israeli Movies		
MCO 494 Topic: War and Media		
MVS 376 Writing a Personal History		
MVS 394 Special Topics		
MVS 395 Combat in Film		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		

Requirement	Minimum Grade	Credit Hours
MVS 494 Special Topics		
PAF 302 Public Service Research Methods		
POS 310 American National Government (AMIT)		
POS 316 American Political Institutions (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 346 Problems of Democracy (HUAD)		
POS 350 Comparative Politics (GCSI)		
POS 360 World Politics (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 378 / **REL 378 Religion, War and Peace (CIVI)**		
POS 414 Political History and Leadership		
POS 426 Elements of Public Policy		
POS 467 International Security (GCSI)		
SGS 394 Topic: Gender and Armed Conflict		

Internship

MVS 484 Internship All students must complete an internship and should review their internship options, including virtual, with the CISA internship coordinator. Prerequisite courses may be needed in order to complete the requirements of this certificate.	C	3

Notes

Prerequisite courses may be needed in order to complete the

requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Art (Art Studies) and Sales and Marketing Essentials (FAARTSTDBA and BASMECERT)

Program description:
The Bachelor of Arts program in art with a concentration in art studies offers students a comprehensive education with a focus on individual creativity. This program features a flexible curriculum that allows students to tailor their studies to their specific artistic aspirations. Through courses in art history and contemporary arts practices, students explore a variety of disciplines, create original works of art, and develop skills that not only support a creative lifestyle but also enhance their academic and professional pursuits. The program is supported by distinguished faculty members with expertise across an array of processes, including animation, drawing, textiles, illustration, printmaking, painting, photography, floral arts and sculpture. Students gain both conceptual and material knowledge, and gain the practical experience of developing a distinctive body of work.

Designed for undergraduate nonbusiness majors, the certificate program in sales and marketing essentials offers a set of courses that cover indispensable marketing knowledge in a wide variety of marketing application domains.

Students are required to enroll in two fundamental courses in marketing and choose three additional courses from a larger set (services marketing, business marketing, global marketing, sports business and advertising) to tailor the certificate to their particular interests.

BA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or MAT 117 College Algebra or MAT 119 Finite Mathematics
Math intensity: General

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe

Career opportunities:
An art degree offers graduates a pathway to creative careers as artists, scholars and educators in the public and private spheres. Artists find employment opportunities as practitioners in the field through commercial galleries, public art commissions, private collectors and cultural institutions. Possible positions include museum or gallery professional, art dealer, art director, private art instructor and community-based artist. Venues might include health care settings, nonprofit agencies, and local and national public arts organizations. Other options for graduates include working at arts agencies and public art programs, and gaining admission to prestigious graduate programs across the nation.

Graduates who have combined the certificate in sales and marketing essentials with their major program of study may become more marketable to employers, and they often decide to pursue employment in sales or marketing.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Art (Art Studies), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: Herberger Institute for Design and the Arts
Plan Code: FAARTSTDBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Art Studies Core		
Art Studies Core		
ART 107 Photography as Experience or **ART 113 Pictorial Investigations and Color Theory**		
ART 108 Digital Literacy for the Arts (QTRS) or **ART 116 Introduction to Digital Media**		
ART 109 Making as Seeing and Thinking or **ART 115 3D Design**	C	12
ART 110 Drawing as Seeing and Thinking (HUAD) or **ART 111 Foundation Drawing**		
ART 114 Expanded Arts Studio		
For the Art Studies Core, ART 107, ART 108, ART 109, ART 110, and ART 116 are available to both on-campus and ASU Online students.		
ARA 195 Art in My World (HUAD)	C	3
OR **ARA 240 Encounters with Contemporary Art**		

Requirement	Minimum Grade	Credit Hours
ARA 195 is available to both on-campus and ASU Online students. ARA 240 is exclusively for on-campus students.		
ARA 396 Professional Practices for Design and the Arts	C	3

Art Studies Electives

Lower Division Art Studies Electives	C	9

On-campus and ASU Online options:

- **ART 206 Digital Photography I**
- **ART 207 Digital Photography II**
- **ART 216 Contemporary Art in Practice: Methods, Making, Meaning**
- **ART 227 Watercolor**
- **ART 256 Art Zines: Self-Publishing, Protest and Change**
- **ART 294 Topic: Basics of Stop Motion**

On-campus options only:

- **ART 203 Photography: Material Studies I**
- **ART 211 Drawing**
- **ART 215 Photography: Digital Compositing**
- **ART 220 Photography: Introduction to Lighting**
- **ART 223 Painting**
- **ART 253 Introduction to Printmaking**

Requirement	Minimum Grade	Credit Hours
ART 257 Wheel Throwing I		
ART 261 Ceramic Survey		
ART 264 Ceramic Handbuilding I		
ART 272 Introduction to Metals and Jewelry		
ART 274 Wood I		
ART 276 Introduction to Textiles		
Upper Division Art Studies Electives	C	18
On-campus and ASU Online options:		
ARA 489 Writing Art and Design Criticism (HUAD)		
ART 302 The Still and Moving Image: Digital Photography and Video		
ART 312 Illustration		
ART 317 Advanced Digital Photography		
ART 319 Photo Editing: Narrative/Non-Narrative		
ART 320 Science and Art of Botanical Design (SCIT)		
ART 394 Topic: Experimental Drawing		
ART 394 Topic: Experimental Photo Processes		
ART 394 Topic: Identity & Representation in Photography		
ART 394 Topic: Monotypes, Collographs & Mixed Media		

Requirement	Minimum Grade	Credit Hours
ART 394 Topic: Spirituality and the Artist		
ART 394 Topic: The Medium of Cut Botanicals		
ART 394 Topic: Portrait Sculpting and Anatomy		
ART 400 The Photobook		
ART 401 Traditional Genres in Digital Photography: Land and Place		
ART 402 Traditional Genres in Digital Photography: Photographing People		
ART 405 Traditional Genres in Digital Photography: The Constructed Image		
ART 406 New Genres in Digital Photography		
ART 412 Advanced Techniques in Digital Photography		
ART 494 Topic: Advanced Moving Image		
ART 494 Topic: Relief		
ART 494 Topic: Text and Photo		
ART 494 Topic: Landscape Painting		
ART 498 Topic: Propaganda and Art		
On-campus options only:		
ARA 311 Art Appreciation and Human Development		
ARA 330 Issues in Expanded Arts		
ARA 460 Gallery Exhibitions		

Requirement	Minimum Grade	Credit Hours
ART 301 Photography: Material Studies II		
ART 303 Portraiture Photography		
ART 311 Intermediate Drawing		
ART 318 Photography: Material Studies III		
ART 323 Intermediate Painting		
ART 327 Intermediate Watercolor		
ART 331 Sculpture II		
ART 333 Foundry Casting Methods		
ART 351 Intaglio		
ART 352 Lithography		
ART 354 Screen Printing		
ART 365 Ceramic Handbuilding II		
ART 368 Slipcasting		
ART 374 Wood II		
ART 376 Weaving and Dyeing		
ART 377 Textile Design		
ART 427 Art on Paper		
ART 432 Neon Sculpture		
ART 439 Studio Inquiry: Practice and Cultural Context		
ART 440 Experimental Video Art		

Requirement	Minimum Grade	Credit Hours
ART 442 Art and Community		
ART 443 Performance Art: Actions, Gestures, Journeys		
ART 444 Short Subject: Documentary Video		
ART 446 On Walking		
ART 467 Art and Ecology		
ART 482 Senior Exhibitions/Portfolio		

Art History Requirements

ARS 101 Art from Prehistory Through Middle Ages (HUAD)	C	3
ARS 102 Art from Renaissance to Modernism (HUAD)	C	3
ARS 201 Art of Asia (GCSI) OR ARS 202 Art of Africa, Oceania, and the Americas (GCSI)	C	3
Upper Division Art Studies ARS Elective	C	3
On-campus and ASU Online options:		
ARS 330 The Portrait		
ARS 335 Fashion and Dress in Visual Culture		
ARS 345 Art and Television		
ARS 360 Buddhist Art		
ARS 369 Mexican Art (GCSI)		

ARS 394 Topic: Art and Myth in Ancient Greece

ARS 394 Topic: Islamic Art

ARS 394 Topic: Modern and Contemporary Chinese Art

ARS 402 Art of Ancient Egypt (GCSI)

ARS 438 Art of the 20th Century I (HUAD)

ARS 440 Identity and World Film

ARS 472 Art of China (HUAD)

ARS 473 Art of Japan (HUAD)

ARS 485 Women in the Visual Arts

ARS 494 Topic: Modern & Contemporary Latin American Art: A Survey

ARS 498 Topic: Art & Technology

ARS 498 Topic: Contemporary Art of Southeast Asia

ARS 498 Topic: Modern & Contemporary Art of India and South Asia

ARS 498 Topic: Theories Modern Sculpture

On-campus options only:

ARS 362 Survey of Aztec, Maya and Inka Art

ARS 403 Art of the Aztec Empire

ARS 434 Revolution to Impressionism in 19th-Century Art

ARS 439 Art of the 20th Century II

ARS 443 Artists in Film: Artists' Biopics

ARS 460 Art Now

ARS 494 Topic: Surrealism

ARS 498 Topic: Art and Money

Related Studies

Upper Division Related Studies C 15

Upper Division AFR Elective

Upper Division AIS Elective

Upper Division AME Elective

Upper Division APA Elective

Upper Division APH Elective

Upper Division ARS Elective

Upper Division ASB Elective

Upper Division DCE Elective

Upper Division FMS Elective

Upper Division GIT Elective

Upper Division GRA Elective

Upper Division HST Elective

Upper Division IAP Elective

Upper Division MUS Elective

Upper Division REL Elective

Upper Division	TCL Elective
Upper Division	THE Elective
Upper Division	WST Elective
Upper Division	Humanities, Arts and Design (HUAD)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ARA 101 ASU: The Art Experience OR **HDA 101 ASU and Herberger Institute Experience**	C	1

First-Year Composition

ENG 101 First-Year Composition AND **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** AND **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Sales and Marketing Essentials, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BASMECERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in sales and marketing essentials requires 15 credit hours with at least 12 upper division credits. To receive the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.		
Required Courses		
MKT 390 Essentials of Marketing	C	3
MKT 391 Essentials of Selling	C	3
Certificate Electives		
Upper Division Sales and Marketing Essentials Certificate Electives	C	9
Select three courses		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		

Requirement	Minimum Grade	Credit Hours
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BFA/CERT Art (Digital Photography) and Homeland Security (HIARTDPBFA and PPHSLCERT)

Program description:
In the Bachelor of Fine Arts program in art with a concentration in digital photography, students acquire a foundation of skills and knowledge that draws connections between traditional methods and emerging art practices. Digital photography students develop the ability to think critically and communicate through their art. Students learn a wide variety of approaches to advancing ideas and discourses, including digital workflow, image sequencing, digital compositing and alternative processes.

The curriculum emphasizes conceptual and material knowledge, interdisciplinary research and professional mentorship. Distinguished faculty provide expertise across an array of distinct areas within the field of contemporary art, including photobooks, video art, portraiture and landscape. Capstone research courses guide students through the process of developing a portfolio of completed works and provide practical experience for presenting art in a variety of professional contexts.

In addition to classroom learning, the program is enriched by arts organizations and cultural institutions, which enable students to build their professional network through fellowships, internships and residencies. The program is further augmented by public events supported by the School of Art galleries, the ASU Art Museum, the Ceramics Research Center and Archive, and Pyracantha Press.

The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security.

Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.

BFA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or any math course that meets the MATH designation.
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
An art degree offers graduates a pathway to creative careers as artists, scholars and educators in the public and private spheres. Artists find employment as practitioners in the field through commercial galleries, public art commissions, private collectors and cultural institutions. Possible positions include museum or gallery professional, art dealer, art director, private art instructor, studio artist and community-based artist. Venues might include health care settings, nonprofit agencies, and local and national public arts. Other options for graduates include working at arts agencies and public art programs, gaining admission to prestigious graduate programs, and setting up their own art businesses. The skills acquired to produce art also have a wide variety of non-art applications.

Graduates of the homeland security certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local), such as the Department of Homeland Security, U.S. Customs and Border Protection, and local- and state-level law enforcement departments. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Art (Digital Photography), BFA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Fine Arts, BFA
College/School: Herberger Institute for Design and the Arts
Plan Code: HIARTDPBFA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Digital Photography Requirements		
ARA 209 Photography Now	C	3
ART 116 Introduction to Digital Media	C	3
ART 206 Digital Photography I	C	3
ART 207 Digital Photography II	C	3
ART 317 Advanced Digital Photography	C	3
ART 387 Digital Photography Capstone Development	C	3
ART 407 Digital Photography Capstone	C	3
Upper Division Photography Elective	C	12
ART 302 The Still and Moving Image: Digital Photography and Video		
ART 319 Photo Editing: Narrative/Non-Narrative		
ART 394 Topic: Art and Activism		
ART 394 Topic: Death and Photography		

Requirement	Minimum Grade	Credit Hours
ART 394 Topic: Experimental Photo Processes		
ART 394 Topic: Identity & Representation in Photography		
ART 394 Topic: Photo Topics: Photography and Sustainability		
ART 394 Topic: Sick Pictures: Photography and Illness		
ART 400 The Photobook		
ART 401 Traditional Genres in Digital Photography: Land and Place		
ART 402 Traditional Genres in Digital Photography: Photographing People		
ART 405 Traditional Genres in Digital Photography: The Constructed Image		
ART 406 New Genres in Digital Photography		
ART 412 Advanced Techniques in Digital Photography		
ART 494 Topic: Art and Censorship		
Upper Division Photography Elective	C	6
ART 302 The Still and Moving Image: Digital Photography and Video		
ART 319 Photo Editing: Narrative/Non-Narrative		
ART 394 Topic: Art and Activism		
ART 394 Topic: Death and Photography		

Requirement	Minimum Grade	Credit Hours
ART 394 Topic: Experimental Photo Processes		
ART 394 Topic: Identity & Representation in Photography		
ART 394 Topic: Photo Topics: Photography and Sustainability		
ART 394 Topic: Sick Pictures: Photography and Illness		
ART 400 The Photobook		
ART 401 Traditional Genres in Digital Photography: Land and Place		
ART 402 Traditional Genres in Digital Photography: Photographing People		
ART 405 Traditional Genres in Digital Photography: The Constructed Image		
ART 406 New Genres in Digital Photography		
ART 412 Advanced Techniques in Digital Photography		
ART 494 Topic: Art and Censorship		
OR Upper Division Photography Research Topics		
ART 394 Topic: Art and Activism		
ART 394 Topic: Death and Photography		
ART 394 Topic: Film to Digital		
ART 394 Topic: Furthering Advanced Techniques		

Requirement	Minimum Grade	Credit Hours
ART 394 Topic: Identity & Representation in Photography		
ART 394 Topic: Photo Topics: Photography and Sustainability		
ART 394 Topic: Sick Pictures: Photography and Illness		
ART 394 Topic: Spirituality and the Artist		
ART 394 Topic: Still Life Expanded		
ART 394 Topic: Traditional & Contemporary Documentary Photography		
ART 494 Topic: Advanced Moving Image		
ART 494 Topic: Photography and Appropriation		
ART 494 Topic: Photography and Gender		
ART 498 Topic: Propaganda and Art		
ART 494 Topic: Text and Photo		

School of Art Requirements or Electives

ARA 396 Professional Practices for Design and the Arts	C	3

Related Area

Upper Division Related Area	C	6
ART 446 On Walking		

ARA 489 Writing Art and Design Criticism (HUAD)

FMS 351 Emerging Digital Media

MCO 307 The Digital Audience

MCO 335 Social Media Foundations

MCO 425 Digital Media Literacy I

MCO 450 Visual Communication (HUAD)

MCO 473 Sex, Love, and Romance in the Mass Media

Art History Requirements

ARS 101 Art from Prehistory Through Middle Ages (HUAD)	C	3
ARS 102 Art from Renaissance to Modernism (HUAD)	C	3
ARS 201 Art of Asia (GCSI) OR ARS 202 Art of Africa, Oceania, and the Americas (GCSI)	C	3
ARS 250 History of Photography (HUAD)	C	3
Upper Division Art History Modern (Digital Photography)	C	3

ARS 330 The Portrait

ARS 340 Art in America

ARS 345 Art and Television

ARS 370 The Art of the Comic

ARS 394 Topic: Anime

ARS 394 Topic: Modern and Contemporary Chinese Art

ARS 438 Art of the 20th Century I (HUAD)

ARS 445 History of Animation

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

HDA 101 ASU and Herberger Institute Experience	C	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree

requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Homeland Security, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPHSLCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security. Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.		

Required Courses

CRJ 412 International Terrorism	C	3
CRJ 417 Cyber Terrorism	C	3
CRJ 419 Domestic Terrorism	C	3

Elective Courses

Upper Division Electives	C	6
CRJ 394 Special Topics		
CRJ 422 Violence in America		
CRJ 455 Police and International Terrorism		

Requirement	Minimum Grade	Credit Hours
CRJ 456 Etiology of Martyrdom		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 464 Organized Crime		
CRJ 494 Special Topics		
PAF 426 Intelligence Analysis and Homeland Security		
PAF 461 Homeland Security		

Only approved homeland security-related topics may be taken from Special Topics courses (CRJ 394 and CRJ 494).

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Bachelor of Science in criminology and criminal justice majors who are also pursuing the Homeland Security certificate may not use CRJ 412, CRJ 417, CRJ 419, CRJ 422, CRJ 455, CRJ 456, CRJ 462, CRJ 463, and CRJ 464 toward both their major and the certificate. These courses will only be used toward the certificate requirements.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Asian Languages (Chinese) and Arts in Education (LACHIBA and HIAEDCERT)

Program description:
The Bachelor of Arts program in Asian languages with a concentration in Chinese emphasizes proficiency in reading, writing and speaking modern Mandarin, as well as in reading classical Chinese.

Students gain an in-depth understanding of the fundamentals of the rich Chinese cultural tradition, centered on primary Chinese texts from the literary, intellectual and religious cultures of Chinese-speaking societies.

Students interested in learning Chinese are encouraged to inquire about the Chinese Flagship Language program. All students with higher levels of linguistic competency may enroll in targeted courses offered as part of the Chinese flagship track.

The certificate program in arts in education is specifically designed for prospective preK--8 educators and recreation specialists who wish to enhance their facilitation practices by developing the skills they need to use the arts throughout their programming and curriculum.

This certificate program does not lead to any official teaching certificate or endorsement through Arizona Department of Education. Instead, it is designed to help educators use the arts in their regular teaching practice.

By weaving together the principles and practices of the arts and other disciplinary curricula, teachers can create rich and engaging environments that enhance student learning, capitalizing on the critical thinking, communication, collaboration and creativity inherent in the arts and arts experiences.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe

Career opportunities:
Knowledge of multiple languages and intercultural competencies enhances any occupation and offers graduates many career opportunities. Language-intensive professions include:

- foreign correspondent
- foreign media professional
- foreign service officer
- international banking and finance professional
- language, literature or culture teacher
- law and immigration professional
- multilingual administrative professional
- translator or interpreter
- travel professional

This program adds richness and depth to a student's program of study and is applicable to multiple careers, including:

- community engagement
- dementia care
- education and teaching
- nursing
- recreation

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Asian Languages (Chinese), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LACHIBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.		
CHI 301 Third-Year Chinese I	C	5
CHI 302 Third-Year Chinese II	C	5
CHI 307 Introduction to Literary Chinese I	C	3
CHI 401 Fourth-Year Chinese I	C	3
CHI 402 Fourth-Year Chinese II	C	3
Upper Division Chinese Electives	C	6
ARS 472 Art of China (HUAD)		
ARS 475 Chinese Painting		
CHI 308 Introduction to Literary Chinese II		

Requirement	Minimum Grade	Credit Hours
CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)		
CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation		
CHI 336 Interpreting China's Classics		
CHI 338 Daode Jing: Way to the West		
CHI 343 Daoism (HUAD)		
CHI 348 Pathways into Chinese Culture		
CHI 380 The Chinese Language		
CHI 394 Topic: How to Become Emperor		
CHI 394 Topic: Labor & the Environment in Chinese Writing		
CHI 401 Fourth-Year Chinese I		
CHI 407 Chinese for Academic and Professional Purposes I		
CHI 408 Chinese for Academic and Professional Purposes II		
CHI 434 Buddhist Poetry (GCSI)		
CHI 470 Modern Chinese Literature and Culture		
CHI 482 History of the Chinese Language		
CHI 494 Special Topics		
HST 384 Modern China: 1700 to the Present		

Requirement	Minimum Grade	Credit Hours
REL 345 Asian Religious Traditions		
Chinese Electives	C	6
ARS 201 Art of Asia (GCSI)		
ARS 472 Art of China (HUAD)		
ARS 475 Chinese Painting		
CHI 120 Introduction to Chinese Culture (HUAD)		
CHI 294 Topic: Chinese Ghost Stories		
CHI 308 Introduction to Literary Chinese II		
CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)		
CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation		
CHI 336 Interpreting China's Classics		
CHI 338 Daode Jing: Way to the West		
CHI 343 Daoism (HUAD)		
CHI 348 Pathways into Chinese Culture		
CHI 380 The Chinese Language		
CHI 394 Topic: How to Become Emperor		
CHI 394 Topic: Labor & the Environment in Chinese Writing		
CHI 401 Fourth-Year Chinese I		

Requirement	Minimum Grade	Credit Hours
CHI 407 Chinese for Academic and Professional Purposes I		
CHI 408 Chinese for Academic and Professional Purposes II		
CHI 434 Buddhist Poetry (GCSI)		
CHI 470 Modern Chinese Literature and Culture		
CHI 482 History of the Chinese Language		
CHI 494 Special Topics		
HST 384 Modern China: 1700 to the Present		
REL 345 Asian Religious Traditions		

School of International Letters and Cultures Requirements

SLC 201 Introduction to Linguistics (SOBE) OR **SLC 202 Exploring Cultures: Words, Images, Stories (HUAD)**	C	3

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Mathematics (MATH) Recommended: **MAT 114**	C	3

Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite. It is recommended that students complete this requirement with Chinese (CHI) courses.	C	20

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences **OR** **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Arts in Education, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Herberger Institute for Design and the Arts

Plan Code: HIAEDCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Core Courses		
Arts in Education Core	C	3
ARA 311 Art Appreciation and Human Development		
ARE 301 Learning Through Artistic Practice: Curiosity and Creativity in the Everyday		
ARE Elective		
DCE 350 Dance in the Classroom: Learning Through Movement		
DCE 354 Creative Approaches to Teaching Dance I		
MUE 310 Music in Early Childhood (HUAD)		
MUE 311 Music in the Lives of Children and Youth (HUAD)		
MUE Elective		
MUS 211 Dance, Music and Meaning (HUAD)		
MUS 212 Music, Meaning and Imagination (HUAD)		
MUS 215 Children, Creativity, Arts (HUAD)		
THP 311 Drama and Education: Performance Methods for Teaching (HUAD)		

Requirement	Minimum Grade	Credit Hours
THP 411 Methods of Teaching Drama		
Upper Division Arts in Education Core		
ARA 311 Art Appreciation and Human Development		
ARE 301 Learning Through Artistic Practice: Curiosity and Creativity in the Everyday		
ARE Elective		
DCE 350 Dance in the Classroom: Learning Through Movement		
DCE 354 Creative Approaches to Teaching Dance I	C	3
MUE 310 Music in Early Childhood (HUAD)		
MUE 311 Music in the Lives of Children and Youth (HUAD)		
MUE Elective		
THP 311 Drama and Education: Performance Methods for Teaching (HUAD)		
THP 411 Methods of Teaching Drama		
Other courses which engage in the teaching or learning of creative disciplines may be petitioned to apply.		

Track Courses

Students select one track below and complete 12 credits from that track.

Track Option 1: Educators/Education Majors - This track is intended for educators or education majors seeking to gain more exposure to creative arts disciplines and/or teaching in the creative arts disciplines.		
Track Option 2: Creatives/Artists - This track is intended for creatives/artists seeking to gain more exposure to teaching and learning in the creative arts disciplines.		

Requirement	Minimum Grade	Credit Hours
Track Option 1: Educators/Education Majors	C	3
AME 111 Introduction to Digital Culture (QTRS)		
ARA 195 Art in My World (HUAD)		
ARA 311 Art Appreciation and Human Development		
ARC 111 Architecture of Architecture I		
ARC 112 Architecture of Architecture II		
ARC 330 World and Western Architecture for Nonmajors		
ARC 432 Architecture History		
ARE 301 Learning Through Artistic Practice: Curiosity and Creativity in the Everyday		
ARE 494 Special Topics		
ARE Elective		
ARS 300 Introduction to Art (HUAD)		
ART 109 Making as Seeing and Thinking		
ART 110 Drawing as Seeing and Thinking (HUAD)		
DCE 100 Introduction to Dance (HUAD)		
DCE 300 Dancing Histories (HUAD)		
DCE 301 Dance Analysis and Theory (HUAD)		
DCE 303 The Body Condition(ed) (SOBE)		
DCE 350 Dance in the Classroom: Learning Through Movement		
DCE 354 Creative Approaches to Teaching Dance I		
DCE 402 Ethnography of Dance Practices (HUAD)		
DCE 404 Dance and Ethics (CIVI)		
DCE 405 Writing the Creating Body (HUAD)		

Requirement	Minimum Grade	Credit Hours
DSC 494 Topic: Basic Model Making Techniques		
DSC 494 Topic: Cold Casting and Mold Making for Modeling		
DSC 494 Topic: Finishes		
EDS 200 Design Literacy and Communication		
EDS 223 Design Thinking		
EDS 301 Sustainable Community Design and Practices (SUST)		
FMP 180 Principles of Production Technology		
FMP 210 Principles of Creative Producing		
FMP 255 Media Authorship (QTRS)		
FMP 300 Short Film Production		
FMP 340 Approaches to International Cinema (GCSI)		
FMP 405 Film and Television: Pioneers, Practices and Innovations		
MUE 310 Music in Early Childhood (HUAD)		
MUE 311 Music in the Lives of Children and Youth (HUAD)		
MUE 494 Special Topics		
MUE Elective		
MUP 442 Instrumental Ensembles		
MUP 443 Choral Ensembles		
MUP 444 Maroon and Gold Concert Band		
MUP 450 Choral Union		
MUP 457 Sol Singers		
MUP 459 Barrett Choir		

Requirement	Minimum Grade	Credit Hours
MUP 489 Ethnomusicology Ensembles		
MUS 210 The Arts Around Us (HUAD)		
MUS 211 Dance, Music and Meaning (HUAD)		
MUS 212 Music, Meaning and Imagination (HUAD)		
MUS 215 Children, Creativity, Arts (HUAD)		
MUS 294 Special Topics		
MUS 340 Music for the Concert Hall, Stage, and Screen (HUAD)		
MUS 347 Jazz in America (HUAD)		
MUS 354 Popular Music		
MUS 355 American Music (HUAD)		
MUS 356 Broadway and the American Musical (HUAD)		
MUS 362 Rap Music and Hip Hop Culture (HUAD)		
MUS 494 Special Topics		
THE 320 History of the Theatre I (GCSI)		
THE 321 History of the Theatre II (HUAD)		
THE 322 Theatre History and Culture (HUAD)		
THE 480 Methods of Teaching Theatre		
THF 101 Acting Introduction		
THF 160 Introduction to Storytelling (HUAD)		
THP 311 Drama and Education: Performance Methods for Teaching (HUAD)		
THP 411 Methods of Teaching Drama		
THP 482 Theatre for Social Change (CIVI)		

Requirement	Minimum Grade	Credit Hours

OR **Track Option 2: Creatives/Artists**

ARA 311 Art Appreciation and Human Development		
ARE 301 Learning Through Artistic Practice: Curiosity and Creativity in the Everyday		
ARE Elective		
DCE 300 Dancing Histories (HUAD)		
DCE 301 Dance Analysis and Theory (HUAD)		
DCE 350 Dance in the Classroom: Learning Through Movement		
DCE 354 Creative Approaches to Teaching Dance I		
DCE 402 Ethnography of Dance Practices (HUAD)		
DCE 405 Writing the Creating Body (HUAD)		
ECD 417 Arts Integration for Young Children		
MUE 310 Music in Early Childhood (HUAD)		
MUE 311 Music in the Lives of Children and Youth (HUAD)		
MUE 319 Digital and Hybrid Lab		
MUE 494 Special Topics		
MUE Elective		
MUS 211 Dance, Music and Meaning (HUAD)		
MUS 212 Music, Meaning and Imagination (HUAD)		
MUS 215 Children, Creativity, Arts (HUAD)		
SPE 222 Orientation to Education of Exceptional Children (CIVI)		
TEL 315 Child and Adolescent Development		
TEL 317 Instructional Thought and Action: Learning		

Requirement	Minimum Grade	Credit Hours
Environment and Management		
THE 322 Theatre History and Culture (HUAD)		
THE 480 Methods of Teaching Theatre		
THP 311 Drama and Education: Performance Methods for Teaching (HUAD)		
THP 411 Methods of Teaching Drama		
THP 482 Theatre for Social Change (CIVI)		
Upper Division Track Option 1: Educators/Education Majors	C	9
ARA 311 Art Appreciation and Human Development		
ARC 330 World and Western Architecture for Nonmajors		
ARC 432 Architecture History		
ARE 301 Learning Through Artistic Practice: Curiosity and Creativity in the Everyday		
ARE 494 Special Topics		
ARE Elective		
ARS 300 Introduction to Art (HUAD)		
DCE 300 Dancing Histories (HUAD)		
DCE 301 Dance Analysis and Theory (HUAD)		
DCE 303 The Body Condition(ed) (SOBE)		
DCE 350 Dance in the Classroom: Learning Through Movement		
DCE 354 Creative Approaches to Teaching Dance I		
DCE 402 Ethnography of Dance Practices (HUAD)		
DCE 404 Dance and Ethics (CIVI)		
DCE 405 Writing the Creating Body (HUAD)		

Requirement	Minimum Grade	Credit Hours
DSC 494 Topic: Basic Model Making Techniques		
DSC 494 Topic: Cold Casting and Mold Making for Modeling		
DSC 494 Topic: Finishes		
EDS 301 Sustainable Community Design and Practices (SUST)		
FMP 300 Short Film Production		
FMP 340 Approaches to International Cinema (GCSI)		
FMP 405 Film and Television: Pioneers, Practices and Innovations		
MUE 310 Music in Early Childhood (HUAD)		
MUE 311 Music in the Lives of Children and Youth (HUAD)		
MUE 494 Special Topics		
MUE Elective		
MUP 442 Instrumental Ensembles		
MUP 443 Choral Ensembles		
MUP 444 Maroon and Gold Concert Band		
MUP 450 Choral Union		
MUP 457 Sol Singers		
MUP 459 Barrett Choir		
MUP 489 Ethnomusicology Ensembles		
MUS 340 Music for the Concert Hall, Stage, and Screen (HUAD)		
MUS 347 Jazz in America (HUAD)		
MUS 354 Popular Music		
MUS 355 American Music (HUAD)		

Requirement	Minimum Grade	Credit Hours
MUS 356 Broadway and the American Musical (HUAD)		
MUS 362 Rap Music and Hip Hop Culture (HUAD)		
MUS 494 Special Topics		
THE 320 History of the Theatre I (GCSI)		
THE 321 History of the Theatre II (HUAD)		
THE 322 Theatre History and Culture (HUAD)		
THE 480 Methods of Teaching Theatre		
THP 311 Drama and Education: Performance Methods for Teaching (HUAD)		
THP 411 Methods of Teaching Drama		
THP 482 Theatre for Social Change (CIVI)		
OR Upper Division Track Option 2: Creatives/Artists		
ARA 311 Art Appreciation and Human Development		
ARE 301 Learning Through Artistic Practice: Curiosity and Creativity in the Everyday		
ARE Elective		
DCE 300 Dancing Histories (HUAD)		
DCE 301 Dance Analysis and Theory (HUAD)		
DCE 350 Dance in the Classroom: Learning Through Movement		
DCE 354 Creative Approaches to Teaching Dance I		
DCE 402 Ethnography of Dance Practices (HUAD)		
DCE 405 Writing the Creating Body (HUAD)		
ECD 417 Arts Integration for Young Children		

Requirement	Minimum Grade	Credit Hours
MUE 310 Music in Early Childhood (HUAD)		
MUE 311 Music in the Lives of Children and Youth (HUAD)		
MUE 319 Digital and Hybrid Lab		
MUE 494 Special Topics		
MUE Elective		
TEL 315 Child and Adolescent Development		
TEL 317 Instructional Thought and Action: Learning Environment and Management		
THE 322 Theatre History and Culture (HUAD)		
THE 480 Methods of Teaching Theatre		
THP 311 Drama and Education: Performance Methods for Teaching (HUAD)		
THP 411 Methods of Teaching Drama		
THP 482 Theatre for Social Change (CIVI)		

Some courses are fewer than three credit hours and may be repeated for credit.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Asian Languages (Japanese) and Brazilian Studies (LAJPNBA and LABZSCERT)

Program description:
Students in the Bachelor of Arts program in Asian languages with a concentration in Japanese study the language, literature and culture of Japan. They gain a respectable measure of competence in reading and writing Japanese, and they acquire oral and aural skills in the language. Students also gain linguistic and cultural competence through the required study of classical Japanese.

The certificate program in Brazilian studies enables students to study important areas and specific issues in Brazilian culture, including popular and urban culture and foundational literature, and gain proficiency in the Portuguese language.

With specialization in either language or culture, the program's language training includes live interactions with native speakers through virtual meetings with Brazilian students or coaches.

All students in the program, regardless of concentration, take coursework on topics such as food and culture, democracy, the African diaspora and environmental issues. Students develop public-facing capstone projects, such as podcast series and opinion pieces, expanding their skill set to include teamwork, organizational skills and public speaking and writing.

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Knowledge of multiple languages and intercultural competencies enhance any occupation and offer graduates many career opportunities. Language-intensive professions include:

- foreign correspondent
- foreign media professional
- foreign service officer
- intelligence officer
- international banking and finance professional
- language, literature or culture teacher
- law and immigration professional
- multilingual administrative professional
- translator or interpreter
- travel professional

Relevant career fields and occupations include:

- advertising, marketing or communications
- airline industry
- film, television or multimedia
- hospitality industry
- intelligence
- international education and study abroad administration
- international law
- lifestyle management
- public relations
- technology industries

Graduates can become more marketable to employers and advance their career options when they have earned an undergraduate certificate that complements their major program of study.

Those who have completed this certificate in Brazilian studies along with their major often decide to pursue employment in education, political analysis, the military, tourism and hospitality, or marketing.

Curriculum - Asian Languages (Japanese), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAJPNBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.		
JPN 301 Third-Year Japanese I	C	3
JPN 302 Third-Year Japanese II	C	3
JPN 333 Japanese Civilization from the Ice Age to Last Thursday	C	3
JPN 401 Reading Modern Japanese Texts (GCSI)	C	3
JPN 414 Introduction to Classical Japanese	C	3
SLC 421 Japanese Literature in Translation	C	3
400-Level Japanese Electives	C	3
JPN 415 Advanced Classical Japanese		
JPN 430 Buddhist Meditation in East Asia		

Requirement	Minimum Grade	Credit Hours
JPN 445 Readings in Modern Japanese Letters and Culture		
JPN 484 Internship		
JPN 485 Japanese Literature and the Art of Translation		
JPN 493 Honors Thesis		
JPN 494 Special Topics		
JPN 499 Individualized Instruction		
Upper Division JPN Restricted Electives	C	6
JPN 309 Japanese Oral Communication I		
JPN 310 Japanese Oral Communication II		
JPN 311 Japanese Composition I		
JPN 354 Zen and Japanese Culture		
JPN 355 Religious Practice of People in Modern Japan (GCSI)		
JPN 394 Special Topics		
JPN 415 Advanced Classical Japanese		
JPN 430 Buddhist Meditation in East Asia		
JPN 445 Readings in Modern Japanese Letters and Culture		
JPN 485 Japanese Literature and the Art of Translation		
JPN 492 Honors Directed Study		

Requirement	Minimum Grade	Credit Hours
JPN 493 Honors Thesis		
JPN 494 Special Topics		

School of International Letters and Cultures Requirements

SLC 201 Introduction to Linguistics (SOBE) OR **SLC 202 Exploring Cultures: Words, Images, Stories (HUAD)**	C	3

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite. It is recommended that students complete this requirement with Japanese (JPN) courses.	C	20

Additional Requirements

Related Area Courses	C	3

ARS 472 Art of China (HUAD)

ARS 473 Art of Japan (HUAD)

ARS 475 Chinese Painting

CHI 120 Introduction to Chinese Culture (HUAD)

CHI 333 China

CHI 336 Interpreting China's Classics

CHI 338 Daode Jing: Way to the West

CHI 343 Daoism (HUAD)

CHI 345 Chinese Film and Civilization

CHI 451 Chinese Cultural History I

CHI 452 Chinese Cultural History II

GCU 326 Geography of Asia

GCU 432 Geography of China

HST 387 Japan

KOR 250 Korean Culture and Society

KOR 321 Modern Korean Literature

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences	1

OR **ASU 101-LA The ASU Experience**		
Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Brazilian Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LABZSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The Brazilian Studies certificate requires 18-20 credit hours of Portuguese language and elective culture content coursework, of which 12 credit hours must be upper-division. A grade of "C" (2.00 on a 4.00 scale) or better is required in all coursework. Students choose one two-course language sequence for a total of 6-8 credit hours of Portuguese language.		
Course substitutions may be permitted for heritage speakers of Portuguese based on their proficiency level as determined by a Portuguese placement test. The language course substitution for advanced speakers of Spanish language can be satisfied by the two-course POR 320 and POR 321 sequence.		

Portuguese Language (6-8 credit hours)

Portuguese Language Courses	C	6 - 8
POR 101 Elementary Portuguese I **AND** **POR 102 Elementary Portuguese II**		
POR 201 Intermediate Portuguese I **AND** **POR 202 Intermediate Portuguese II**		
POR 301 Portuguese for Spanish Speakers I **AND** **POR 302**		

Requirement	Minimum Grade	Credit Hours
Portuguese for Spanish Speakers II		
POR 313 Portuguese Conversation and Culture AND POR 314 Portuguese Composition and Culture		
Choose one two-course sequence for 6-8 credit hours. The upper-division two-course language sequence is 6 credit hours total.		

Upper-Division Electives (12 credit hours)

Upper Division Electives

GCU 323 Geography of Latin America (GCSI)		
GCU 485 / PUP 485 International Field Studies		
POR 313 Portuguese Conversation and Culture		
POR 314 Portuguese Composition and Culture		
POR 394 Special Topics		
POR 460 Brazilian Society Through Music (HUAD)	C	12
POR 472 Transatlantic Encounters: Brazil and Portugal (GCSI)		
POR 484 Internship		
POR 490 Consumer Culture in Latin America		
POR 493 Honors Thesis		
POR 494 Special Topics		
POR 499 Individualized Instruction		

Other courses may be used with approval from the faculty coordinator and academic advisor in the School of International Letters and Cultures.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Note: POR 313 and POR 314 may be applied to either Portuguese Language or to Upper-Division Electives, but may not be applied and counted in both categories for this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Asian Languages (Japanese) and Teaching English to Speakers of Other Languages (TESOL) (LAJPNBA and LATESLCERT)

Program description:
Students in the Bachelor of Arts program in Asian languages with a concentration in Japanese study the language, literature and culture of Japan. They gain a respectable measure of competence in reading and writing Japanese, and they acquire oral and aural skills in the language. Students also gain linguistic and cultural competence through the required study of classical Japanese.

The teaching English to speakers of other languages certificate program consists of key courses that provide students with the practical skills and confidence necessary to teach English as a second or other language anywhere in the world. This certificate can be added to any degree program and includes a supervised internship to gain valuable hands-on experience before graduation.

This certificate does not certify students to teach in Arizona public schools (K--12).

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Knowledge of multiple languages and intercultural competencies enhance any occupation and offer graduates many career opportunities. Language-intensive professions include:

- foreign correspondent
- foreign media professional
- foreign service officer
- intelligence officer
- international banking and finance professional
- language, literature or culture teacher
- law and immigration professional
- multilingual administrative professional
- translator or interpreter
- travel professional

Relevant career fields and occupations include:

- advertising, marketing or communications
- airline industry
- film, television or multimedia
- hospitality industry
- intelligence
- international education and study abroad administration
- international law
- lifestyle management
- public relations
- technology industries

The TESOL certificate is useful for graduates who are interested in careers in this increasingly important field. It also serves as excellent preparation for students who wish to pursue graduate studies in the Master of Teaching English to Speakers of Other Languages program at ASU or in a similar program at another institution.

Students who combine this TESOL certificate with their major program of study may become more marketable to employers.

Students who complete this undergraduate certificate often decide to pursue employment in teaching abroad. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Asian Languages (Japanese), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAJPNBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.		
JPN 301 Third-Year Japanese I	C	3
JPN 302 Third-Year Japanese II	C	3
JPN 333 Japanese Civilization from the Ice Age to Last Thursday	C	3
JPN 401 Reading Modern Japanese Texts (GCSI)	C	3
JPN 414 Introduction to Classical Japanese	C	3
SLC 421 Japanese Literature in Translation	C	3
400-Level Japanese Electives	C	3
JPN 415 Advanced Classical Japanese		
JPN 430 Buddhist Meditation in East Asia		

Requirement	Minimum Grade	Credit Hours
JPN 445 Readings in Modern Japanese Letters and Culture		
JPN 484 Internship		
JPN 485 Japanese Literature and the Art of Translation		
JPN 493 Honors Thesis		
JPN 494 Special Topics		
JPN 499 Individualized Instruction		
Upper Division JPN Restricted Electives	C	6
JPN 309 Japanese Oral Communication I		
JPN 310 Japanese Oral Communication II		
JPN 311 Japanese Composition I		
JPN 354 Zen and Japanese Culture		
JPN 355 Religious Practice of People in Modern Japan (GCSI)		
JPN 394 Special Topics		
JPN 415 Advanced Classical Japanese		
JPN 430 Buddhist Meditation in East Asia		
JPN 445 Readings in Modern Japanese Letters and Culture		
JPN 485 Japanese Literature and the Art of Translation		
JPN 492 Honors Directed Study		

Requirement	Minimum Grade	Credit Hours
JPN 493 Honors Thesis		
JPN 494 Special Topics		

School of International Letters and Cultures Requirements

SLC 201 Introduction to Linguistics (SOBE) OR **SLC 202 Exploring Cultures: Words, Images, Stories (HUAD)**	C	3

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Mathematics (MATH) Recommended: **MAT 114**	C	3

Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite. It is recommended that students complete this requirement with Japanese (JPN) courses.	C	20

Additional Requirements

Related Area Courses	C	3

ARS 472 Art of China (HUAD)

ARS 473 Art of Japan (HUAD)

ARS 475 Chinese Painting

CHI 120 Introduction to Chinese Culture (HUAD)

CHI 333 China

CHI 336 Interpreting China's Classics

CHI 338 Daode Jing: Way to the West

CHI 343 Daoism (HUAD)

CHI 345 Chinese Film and Civilization

CHI 451 Chinese Cultural History I

CHI 452 Chinese Cultural History II

GCU 326 Geography of Asia

GCU 432 Geography of China

HST 387 Japan

KOR 250 Korean Culture and Society

KOR 321 Modern Korean Literature

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences	1

OR **ASU 101-LA The ASU Experience**		
Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Teaching English to Speakers of Other Languages (TESOL), Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LATESLCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate program in teaching English as a second language requires 18 credit hours, of which 12 must be completed at the upper-division level. At least six credit hours must be completed from courses offered by The College of Liberal Arts and Sciences. Each course must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Core

ENG 213 Introduction to the Study of Language (SOBE)	C	3
ENG 484 Topic: TESOL Internship	C	3

Theory/Methods

ENG 404 Studies in Second Language Acquisition ENG 404 is repeatable for credit and must be completed twice.	C	6

Linguistics Electives

Upper Division Group 1	C	3

Requirement	Minimum Grade	Credit Hours
ENG 403 Semantics		
ENG 404 Studies in Second Language Acquisition		
ENG 414 Studies in Linguistics		
Group 2		
ENG 214 English Grammar and Usage		
ENG 312 English in its Social Setting (SOBE)		
ENG 313 Phonology and Morphology	C	3
ENG 314 Modern Grammar		
ENG 413 History of English Language		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Astronomical and Planetary Sciences and Computational Life Sciences (LAASTPLSBS and LACLSICERT)

Program description:
The online Bachelor of Science program in astronomical and planetary sciences provides broad training in the scientific foundations required to understand and communicate the fundamentals of space exploration and ongoing advances in the field.

The degree program includes groundwork in mathematics and physical sciences, topical courses focused on diverse fields within astronomy and planetary science, and exposure to the engineering and computational tools and techniques used to carry out research.

In the computational life sciences certificate program, students discover a burgeoning new field where huge improvements in processing technologies have opened the door to exciting new research techniques and interdisciplinary collaborations.

Students engage with a suite of tools and approaches that enable them to uncover correlations, gain new understanding and help solve scientific problems.

Using their mastery of these new techniques, students examine data generated from a variety of fields, including ecology, botany, evolutionary biology, neuroscience, molecular and cellular biology, and animal behavior. Students investigate topics such as DNA, RNA, protein, imaging, conservation and historical data; and they explore the ethical implications of collecting, storing, analyzing and sharing the results of computational life science data.

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus or higher
Math intensity: Moderate

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates pursue careers in fields that value the quantitative and technical skills taught as part of an astronomy education. These include K--12 STEM teaching positions, science and technology journalism and writing careers, technical careers involving statistical data analysis or computer programming, and technical positions supporting space and research industry and policy.

Career opportunities include:
- analytical lab technician
- astronomer
- data analyst
- instrumentation specialist
- museum director
- planetary scientist
- research scientist
- science teacher
- science writer
- telescope operator

Career settings include:
- aerospace industry organizations
- educational institutions
- federal, state and local government agencies
- manufacturing centers
- museums and planetariums
- NASA facilities

- national laboratories
- National Science Foundation facilities
- Observatories
- space industry organizations

For more information, students can visit the career opportunities page on the School of Earth and Space Exploration website.

Graduates of the computational life sciences certificate program have gained data interpretation skills and experience using new computational approaches and programs. Graduates who have combined this program with their major program of study are in high demand for roles that involve identifying and interpreting data in a variety of fields, including ecology, medicine, botany, evolutionary biology and animal behavior.

Curriculum - Astronomical and Planetary Sciences, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAASTPLSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
AST 111 Introduction to Solar Systems Astronomy (SCIT)	C	4
AST 112 Introduction to Stars, Galaxies, and Cosmology (SCIT)	C	4
AST 301 Physics of Astrophysics	C	3
AST 321 Stellar and Planetary Astrophysics	C	3
AST 322 Introduction to Galactic and Extragalactic Astrophysics	C	3
SES 106 Habitable Worlds (SCIT)	C	4
SES 350 Engineering Systems and Experimental Problem Solving (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
SES 376 Communicating Astronomical and Planetary Sciences I	C	3
SES 377 Communicating Astronomical and Planetary Sciences II	C	3
Astronomical and Planetary Sciences Major Electives	C	9 - 12

- BIO 181 General Biology I (SCIT)
- BIO 182 General Biology II (SCIT)
- BIO 340 General Genetics
- BIO 345 Evolution
- CHM 113 General Chemistry I (SCIT)
- CHM 114 General Chemistry for Engineers (SCIT)
- CHM 116 General Chemistry II (SCIT)
- DAT 300 Mathematical Tools for Data Science
- DAT 301 Exploring Data in R and Python
- GLG 101 Introduction to Geology I (Physical) (SCIT) **AND** GLG 103 Introduction to Geology I: Laboratory (SCIT)
- GLG 108 Water Planet (SCIT)
- MAT 266 Calculus for Engineers II (MATH)
- MAT 267 Calculus for Engineers III (MATH)
- MAT 275 Modern Differential Equations (MATH)

Requirement	Minimum Grade	Credit Hours
MAT 343 Applied Linear Algebra		
MCO 307 The Digital Audience		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
PHI 314 Philosophy of Science (HUAD)		
PHY 201 Mathematical Methods in Physics I (MATH)		
PHY 121 University Physics I: Mechanics (SCIT) **AND** PHY 122 University Physics Laboratory I (SCIT)		
PHY 131 University Physics II: Electricity and Magnetism (SCIT) **AND** PHY 132 University Physics Laboratory II (SCIT)		
PHY 241 University Physics III		
PHY 302 Mathematical Methods in Physics II		
PHY 310 Classical Particles, Fields, and Matter I		
PHY 311 Classical Particles, Fields, and Matter II		
PHY 314 Quantum Physics I		
PHY 315 Quantum Physics II		
PHY 334 Advanced Laboratory I		
PHY 361 Introductory Modern Physics		
PHY 412 Classical Particles, Fields, and Matter III		
PHY 441 Statistical and Thermal Physics		

Requirement	Minimum Grade	Credit Hours
SES 107 A Solar System Journey (SCIT)		
SES 141 Energy In Everyday Life (SCIT)		
SES 225 Global Biogeochemical Cycles		
SES 421 Foundations of Planetary Science		
STP 226 Elements of Statistics (QTRS)		
TWC 401 Fundamentals of Technical Communication		
TWC 446 Technical and Scientific Reports		
Upper Division Astronomical and Planetary Sciences Major Electives	C	6 - 7
BIO 340 General Genetics		
BIO 345 Evolution		
DAT 300 Mathematical Tools for Data Science		
DAT 301 Exploring Data in R and Python		
MAT 343 Applied Linear Algebra		
MCO 307 The Digital Audience		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
PHI 314 Philosophy of Science (HUAD)		
PHY 302 Mathematical Methods in Physics II		
PHY 310 Classical Particles, Fields, and Matter I		

Requirement	Minimum Grade	Credit Hours
PHY 311 Classical Particles, Fields, and Matter II		
PHY 314 Quantum Physics I		
PHY 315 Quantum Physics II		
PHY 334 Advanced Laboratory I		
PHY 361 Introductory Modern Physics		
PHY 412 Classical Particles, Fields, and Matter III		
PHY 441 Statistical and Thermal Physics		
SES 421 Foundations of Planetary Science		
TWC 401 Fundamentals of Technical Communication		
TWC 446 Technical and Scientific Reports		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

MAT 210 Brief Calculus (MATH) **OR MAT 265 Calculus for Engineers I (MATH)** Additional math prerequisites may be needed.	C	3
PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)	C	4
PHY 112 General Physics (SCIT) AND PHY 114 General Physics Laboratory (SCIT)	C	4

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Computational Life Sciences, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LACLSICERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in computational life sciences requires a minimum of 15 credit hours, of which at least 12 credit hours must be upper division. The core consists of one computing course and one ethics course. A minimum of nine credit hours in elective courses complete the certificate. The computing course not used toward the core requirements may be used toward the elective credit hours. A grade of "C" (2.00 on a 4.00 scale) or higher is required for all courses used toward the certificate.		

Required Courses

Upper Division Ethics or History Course

BIO 312 / **PHI 320 Bioethics (HUAD)**		
BIO 316 / **HPS 330 History of Biology: Conflicts and Controversies (HUAD)**	C	3
BIO 317 / **HPS 323 History of Science II (HUAD)**		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 416 / **HPS 410 Biomedical Research Ethics (CIVI)**		

Requirement	Minimum Grade	Credit Hours
Upper Division Computational Course		
BIO 439 Computing for Research	C	3
BIO 440 / MBB 440 Functional Genomics		

Electives

Upper Division Electives List	C	9
BIO 355 / MAT 355 / MBB 355 Introduction to Computational Molecular Biology		
BIO 411 Quantitative Methods in Conservation and Ecology		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 439 Computing for Research		
BIO 440 / MBB 440 Functional Genomics		
BIO 479 Data Analysis and Visualization in R		
BIO 494 Topic: Computational Genomic Analysis		
BIO 494 Topic: Data Analysis in Neuroscience		
BIO 498 Topic: Programming for biologists		
BME 494 Topic: Systems Biology of Disease		
BMI 311 Biomedical Artificial Intelligence		
BMI 312 Health Data Mining		
BMI 330 Topics in Translational Bioinformatics		
DAT 301 Exploring Data in R and Python		
GIS 469 Multivariate Statistics for Social Sciences		
GIS 471 Spatial Statistics for Geography and Planning		
MAT 353 Mathematics and Cancer		

Requirement	Minimum Grade	Credit Hours
MAT 451 Mathematical Modeling		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Astronomical and Planetary Sciences and Mathematical Concepts of Engineering (LAASTPLSBS and LAMACECERT)

Program description:
The online Bachelor of Science program in astronomical and planetary sciences provides broad training in the scientific foundations required to understand and communicate the fundamentals of space exploration and ongoing advances in the field.

The degree program includes groundwork in mathematics and physical sciences, topical courses focused on diverse fields within astronomy and planetary science, and exposure to the engineering and computational tools and techniques used to carry out research.

The certificate program in mathematical concepts of engineering is designed for students who seek a strong foundation in mathematics to support their interests in engineering. Combining a core foundation in the quantitative and analytical skills found in mathematics with related skills in engineering, the program provides students with a solid mathematical background well-suited for multiple career paths.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus or higher
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates pursue careers in fields that value the quantitative and technical skills taught as part of an astronomy education. These include K--12 STEM teaching positions, science and technology journalism and writing careers, technical careers involving statistical data analysis or computer programming, and technical positions supporting space and research industry and policy.

Career opportunities include:
- analytical lab technician
- astronomer
- data analyst
- instrumentation specialist
- museum director
- planetary scientist
- research scientist
- science teacher
- science writer
- telescope operator

Career settings include:
- aerospace industry organizations
- educational institutions
- federal, state and local government agencies
- manufacturing centers
- museums and planetariums
- NASA facilities
- national laboratories
- National Science Foundation facilities
- observatories
- space industry organizations

For more information, students can visit the career opportunities page on the School of Earth and Space Exploration website.

The certificate program in mathematical concepts of engineering complements many major programs of study. Graduates with this enhanced math background can become more marketable to employers.

Curriculum - Astronomical and Planetary Sciences, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAASTPLSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
AST 111 Introduction to Solar Systems Astronomy (SCIT)	C	4
AST 112 Introduction to Stars, Galaxies, and Cosmology (SCIT)	C	4
AST 301 Physics of Astrophysics	C	3
AST 321 Stellar and Planetary Astrophysics	C	3
AST 322 Introduction to Galactic and Extragalactic Astrophysics	C	3
SES 106 Habitable Worlds (SCIT)	C	4
SES 350 Engineering Systems and Experimental Problem Solving (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
SES 376 Communicating Astronomical and Planetary Sciences I	C	3
SES 377 Communicating Astronomical and Planetary Sciences II	C	3
Astronomical and Planetary Sciences Major Electives	C	9 - 12
BIO 181 General Biology I (SCIT)		
BIO 182 General Biology II (SCIT)		
BIO 340 General Genetics		
BIO 345 Evolution		
CHM 113 General Chemistry I (SCIT)		
CHM 114 General Chemistry for Engineers (SCIT)		
CHM 116 General Chemistry II (SCIT)		
DAT 300 Mathematical Tools for Data Science		
DAT 301 Exploring Data in R and Python		
GLG 101 Introduction to Geology I (Physical) (SCIT) **AND** GLG 103 Introduction to Geology I: Laboratory (SCIT)		
GLG 108 Water Planet (SCIT)		
MAT 266 Calculus for Engineers II (MATH)		
MAT 267 Calculus for Engineers III (MATH)		
MAT 275 Modern Differential Equations (MATH)		

Requirement	Minimum Grade	Credit Hours
MAT 343 Applied Linear Algebra		
MCO 307 The Digital Audience		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
PHI 314 Philosophy of Science (HUAD)		
PHY 201 Mathematical Methods in Physics I (MATH)		
PHY 121 University Physics I: Mechanics (SCIT) **AND** PHY 122 University Physics Laboratory I (SCIT)		
PHY 131 University Physics II: Electricity and Magnetism (SCIT) **AND** PHY 132 University Physics Laboratory II (SCIT)		
PHY 241 University Physics III		
PHY 302 Mathematical Methods in Physics II		
PHY 310 Classical Particles, Fields, and Matter I		
PHY 311 Classical Particles, Fields, and Matter II		
PHY 314 Quantum Physics I		
PHY 315 Quantum Physics II		
PHY 334 Advanced Laboratory I		
PHY 361 Introductory Modern Physics		
PHY 412 Classical Particles, Fields, and Matter III		
PHY 441 Statistical and Thermal Physics		

Requirement	Minimum Grade	Credit Hours
SES 107 A Solar System Journey (SCIT)		
SES 141 Energy In Everyday Life (SCIT)		
SES 225 Global Biogeochemical Cycles		
SES 421 Foundations of Planetary Science		
STP 226 Elements of Statistics (QTRS)		
TWC 401 Fundamentals of Technical Communication		
TWC 446 Technical and Scientific Reports		
Upper Division Astronomical and Planetary Sciences Major Electives	C	6 - 7
BIO 340 General Genetics		
BIO 345 Evolution		
DAT 300 Mathematical Tools for Data Science		
DAT 301 Exploring Data in R and Python		
MAT 343 Applied Linear Algebra		
MCO 307 The Digital Audience		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
PHI 314 Philosophy of Science (HUAD)		
PHY 302 Mathematical Methods in Physics II		
PHY 310 Classical Particles, Fields, and Matter I		

Requirement	Minimum Grade	Credit Hours
PHY 311 Classical Particles, Fields, and Matter II		
PHY 314 Quantum Physics I		
PHY 315 Quantum Physics II		
PHY 334 Advanced Laboratory I		
PHY 361 Introductory Modern Physics		
PHY 412 Classical Particles, Fields, and Matter III		
PHY 441 Statistical and Thermal Physics		
SES 421 Foundations of Planetary Science		
TWC 401 Fundamentals of Technical Communication		
TWC 446 Technical and Scientific Reports		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

MAT 210 Brief Calculus (MATH) **OR MAT 265 Calculus for Engineers I (MATH)** Additional math prerequisites may be needed.	C	3
PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)	C	4
PHY 112 General Physics (SCIT) AND PHY 114 General Physics Laboratory (SCIT)	C	4

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Mathematical Concepts of Engineering, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAMACECERT

Minimum credit hours: 21

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The mathematical concepts of engineering certificate requires a minimum of 21 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		

Required Courses

IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 266 Calculus for Engineers II (MATH) **or** **MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3
MAT 267 Calculus for Engineers III (MATH) **or** **MAT 272 Calculus with Analytic Geometry III (MATH)**	C	3
MAT 275 Modern Differential Equations (MATH) **or** **MAT 274 Elementary Differential Equations (MATH)**	C	3
MAT 343 Applied Linear Algebra **or** **MAT 342 Linear Algebra**	C	3

Requirement	Minimum Grade	Credit Hours
MAT 343 and STP 420 must be completed with courses offered by the School of Mathematical and Statistical Sciences.		
STP 420 Introductory Applied Statistics (QTRS)	C	3

Elective (choose one)

Upper Division Mathematical Concepts of Engineering Electives

DAT 301 Exploring Data in R and Python	C	3
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 470 Stochastic Operations Research		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Biological Sciences (Biology and Society) and Evolutionary Medicine (LABSCSBS and LAEVMDCERT)

Program description:
In the Bachelor of Science program in biological sciences with a concentration in biology and society, students explore the social, philosophical, historical, ethical and policy dimensions of science, technology and medicine.

They investigate the motivation behind research, learn to ask probing questions about how and why biological problems are studied in the present and have been studied in the past, and examine how these factors interact with policy decisions.

In this highly individualized program, students can engage in independent study and research projects. They gain hands-on experience with distinguished faculty in bioscience ethics, history and philosophy of science, science communication, science education and science policy.

In the evolutionary medicine certificate program, students discover a burgeoning new field that is improving human health and transforming our understanding of disease by merging the fields of evolutionary biology, genetics, medicine, global health and public health.

Students integrate perspectives from across these fields to investigate questions about health and disease in the context of human history. Using their mastery of these new approaches within the biological and social sciences, they address emerging and anticipated public needs, such as reemerging infectious disease, challenges facing vaccination, expanding chronic disease and other growing public health crises.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates of the biology and society concentration within the biological sciences major have an individualized and skill-based foundation in life sciences and complex human issues. This foundation enables them to pursue advanced research and graduate study in biology, ethics, education, and history and philosophy of science.

The program also prepares graduates with the historical, philosophical, political and ethical perspectives they need for direct entry into their choice of career in many fields, including medicine, law, public health, public policy and academia.

Graduates of the evolutionary medicine certificate program have gained integrated and individualized skills that are in high demand to address a growing need for innovation in medicine and public health care. Graduates who combine this certificate program with their major program of study are well prepared for roles in a variety of fields, including biology, medicine, law and ethics.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Biological Sciences (Biology and Society), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABSCSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Core Requirements

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 340 General Genetics	C	4
BIO 345 Evolution	C	3

Concentration Requirements

BIO 311 Biology and Society	C	3
OR **HPS 340 Biology and Society**		

Requirement	Minimum Grade	Credit Hours
BIO 311 or HPS 340 will fulfill the upper division Science and Society Elective.		
Students must take one course from each category below.		
Upper Division Bioethics Course		
BIO 312 Bioethics (HUAD) **BIO 416 / HPS 410 Biomedical Research Ethics (CIVI)**	C	3
Upper Division History of Science Course		
BIO 316 / HPS 330 History of Biology: Conflicts and Controversies (HUAD) **BIO 317 / HPS 323 History of Science II (HUAD)** **BIO 318 / HPS 331 History of Medicine (HUAD)** **HPS 322 History of Science I**	C	3
Upper Division Philosophy of Science Course		
BIO 452 / HPS 452 Philosophy of Biology and Medicine **HPS 314 / PHI 314 Philosophy of Science (HUAD)**	C	3
Upper Division Science in Global Society Course		
BIO 302 Cancer--Mother of All Diseases **BIO 304 / ENV 302 Plants and Civilization** **MIC 314 / SSH 314 HIV/AIDS: Science, Behavior, and Society**	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division Environmental Ethics, Conservation and Society Course		
BIO 322 Conservation of Biodiversity (SUST)	C	3
BIO 324 Environmental Ethics (SUST)		
BIO 412 Conservation in Practice		

Major Biological Sciences Electives

Upper Division Major Biological Sciences Electives		
BCH 361 Advanced Principles of Biochemistry	C	12
Upper Division BIO Elective		
Upper Division HPS Elective		
Upper Division MBB Elective		
Upper Division MIC Elective		

484 and 495 courses are limited to 3 hours in this area

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division

and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3

Additional Requirements

CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH)	C	3
STP 231 Statistics for Life Science (QTRS)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition**	C	6

OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Evolutionary Medicine, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAEVMDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in evolutionary medicine consists of 15 credit hours, at least 12 of which must be upper division. All 15 credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for all courses used toward the certificate.		
Required Courses		
ASM 403 Evolutionary Medicine and Global Health or **BIO 403 Evolutionary Medicine and Global Health**	C	3
ASB 408 Advanced Evolutionary Medicine or **BIO 408 Advanced Evolutionary Medicine**	C	3
Electives		
Evolutionary Medicine Electives	C	3
ASB 250 / **BIO 250 Introduction to Evolution and Medicine (SOBE)**		
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 246 Human Origins (SOBE)		
ASM 342 / BIO 327 Evolution of Human Behavior		
ASM 345 Disease and Human Evolution		
ASM 394 / BIO 394 Topic: Ecology and Evolution of Infectious Diseases		
ASM 401 Health and Human Biology		
ASM 446 / BIO 446 Principles of Human Genetics		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / BIO 494 Topic: Evolution and Mental Disorders		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / HPS 331 History of Medicine (HUAD)		
BIO 345 Evolution		
BIO 394 / PSY 394 Topic: Introduction to Evolutionary Psychology		
BIO 440 / MBB 440 Functional Genomics		
BIO 462 Endocrine Physiology		
MBB 445 / MIC 445 Techniques in Molecular Biology/Genetics		
MIC 205 Microbiology (SCIT) or MIC 220 Biology of Microorganisms		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		
Upper Division Evolutionary Medicine Electives	C	6
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 342 / **BIO 327 Evolution of Human Behavior**		
ASM 345 Disease and Human Evolution		
ASM 394 / **BIO 394 Topic: Ecology and Evolution of Infectious Diseases**		
ASM 401 Health and Human Biology		
ASM 446 / **BIO 446 Principles of Human Genetics**		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / **BIO 494 Topic: Evolution and Mental Disorders**		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 345 Evolution		
BIO 394 / **PSY 394 Topic: Introduction to Evolutionary Psychology**		
BIO 440 / **MBB 440 Functional Genomics**		
BIO 462 Endocrine Physiology		
MBB 445 / **MIC 445 Techniques in Molecular Biology/Genetics**		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Biological Sciences (Biomedical Sciences) and Evolutionary Medicine (LABSCMBS and LAEVMDCERT)

Program description:
The Bachelor of Science program in biological sciences with a concentration in biomedical sciences is tailored for students who wish to pursue careers in medicine, other health professions or biomedical research.

Curriculum aligns with the broad scientific competencies recommended for premedical students. Students are well prepared for the MCAT and medical school admission, and well versed in the core concepts, competencies and critical intellectual skills necessary for success in medical school or conducting biomedical research.

In addition to completing coursework, students gain hands-on experience with distinguished faculty and have opportunities to engage in independent research projects or internships to jump-start their professional career.

In the evolutionary medicine certificate program, students discover a burgeoning new field that is improving human health and transforming our understanding of disease by merging the fields of evolutionary biology, genetics, medicine, global health and public health.

Students integrate perspectives from across these fields to investigate questions about health and disease in the context of human history. Using their mastery of these new approaches within the biological and social sciences, they address emerging and anticipated public needs, such as reemerging infectious disease, challenges facing vaccination, expanding chronic disease and other growing public health crises.

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates of the program have attained mastery of the competencies and completed prerequisites valued by graduate programs in medical, dental and optometry fields as well as programs that prepare students to become physician assistants or physical therapists.

Graduates have an understanding of the process of science; knowledge of foundational concepts in biological sciences, chemistry, physics and statistics; and the ability to understand and apply core biomedical concepts. They are prepared for direct entry into biology research careers in a vast number of areas, including genetics, genomics, evolution, physiology and immunology.

Graduates of the evolutionary medicine certificate program have gained integrated and individualized skills that are in high demand to address a growing need for innovation in medicine and public health care. Graduates who combine this certificate program with their major program of study are well prepared for roles in a variety of fields, including biology, medicine, law and ethics.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Biological Sciences (Biomedical Sciences), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABSCMBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Core Requirements

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 340 General Genetics OR **MBB 347 Molecular Genetics: From Genes to Proteins** On-campus students are encouraged to take MBB 347	C	4
BIO 345 Evolution	C	3

Requirement	Minimum Grade	Credit Hours
Required Concentration Courses		
BIO 312 Bioethics (HUAD) OR **BIO 416 Biomedical Research Ethics (CIVI)** **or** **HPS 410 Biomedical Research Ethics (CIVI)** BIO 312, BIO 416, or HPS 410 will fulfill the upper division Science and Society Elective.	C	3
BIO 353 Cell Biology	C	3
BIO 360 Animal Physiology	C	3
Concentration Elective Courses		
BIO 351 Developmental Biology OR **BIO 420 Immunology: Molecular and Cellular Foundations** OR **BIO 440 Functional Genomics** OR **BIO 462 Endocrine Physiology** OR **BIO 467 Neurobiology**	C	6
Must take one course from each category below. At least one course must be a laboratory course.		
Upper Division Biomedical Research Course **BIO 342 General Genetics Laboratory** **BIO 343** / **MBB 343 Genetic Engineering and Society** **BIO 352 Laboratory in Vertebrate Developmental Anatomy** **BIO 354 Cell Biology Laboratory**	C	3

Requirement	Minimum Grade	Credit Hours
BIO 355 / MAT 355 / MBB 355 Introduction to Computational Molecular Biology		
BIO 357 Cell and Molecular Biology Laboratory		
BIO 361 Animal Physiology Laboratory		
BIO 370 Vertebrate Zoology		
BIO 390 Medical/Dental Field Placement or BIO 484 / MIC 484 Internship		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 435 Research Techniques in Animal Behavior		
BIO 439 Computing for Research		
BIO 451 Cell Biotechnology: Cell Culture, Immunocytochemistry and Bioimaging		
BIO 475 Advanced Human Anatomy		
BIO 492 / MBB 492 / MIC 492 Honors Directed Study		
BIO 495 / MBB 495 / MIC 495 Undergraduate Research		
BMI 465 Comparative Genomics		
MBB 446 / MIC 446 Techniques in Molecular Biology/Genetics Lab		
MIC 421 Experimental Immunology		
Upper Division Medicine in Society Courses	C	3
Some upper-division Medicine in Society courses require lower-division prerequisites, which may be taken to fulfill		

Requirement	Minimum Grade	Credit Hours
general elective credit hours.		
ASB 301 / SSH 301 Global History of Health (HUAD)		
ASB 443 / SSH 403 Cross-Cultural Studies in Global Health (GCSI)		
ASB 452 / SSH 402 Community Partnerships for Global Health (GCSI)		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		
ASM 345 Disease and Human Evolution		
ASM 401 Health and Human Biology		
ASM 403 / BIO 403 Evolutionary Medicine and Global Health		
ASM 414 Urban, Environmental and Health Challenges (SUST)		
BIO 302 Cancer--Mother of All Diseases		
BIO 382 Spanish for Biomedical Sciences		
BIO 394 Topic: Healing Traditions of Latino-America		
BIO 408 Advanced Evolutionary Medicine		
BIO 494 Topic: Introduction To Clinical Healthcare		
BIO 318 / HPS 331 History of Medicine (HUAD)		
MIC 314 / SSH 314 HIV/AIDS: Science, Behavior, and Society		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3

Additional Requirements

BCH 361 Advanced Principles of Biochemistry AND BCH 367 Elementary Biochemistry Laboratory	C	4
CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
CHM 231 Elementary Organic Chemistry (SCIT) AND CHM 235 Elementary Organic Chemistry Laboratory (SCIT) ASU Online students complete all experiments for the CHM 235 organic chemistry lab at the ASU Tempe Campus during a one-week session in summer. Lab reports are completed in later weeks during the same summer term. Pre-health students may need CHM 233 & CHM 237 and CHM 234 & 238, not CHM 231 and CHM 235. See academic advisor for more information.	C	4

MAT 251 Calculus for Life Sciences (MATH)	C	3
PHY 101 Introduction to Physics (SCIT) Pre-health students may need PHY 111 & 113 and PHY 112 & 114, not PHY 101. See academic advisor for more information.	C	4
STP 231 Statistics for Life Science (QTRS)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** AND **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

In-Person Labs Required

In order to complete the requirements of this program, some laboratory courses are completed in-person at the Tempe Campus. These laboratory courses are offered during summer. This may impact your financial aid. Financial aid is available to those who apply and qualify, and students may receive funds to help cover costs for each semester of enrollment. The amount of financial aid that a student is eligible for varies depending on prior education experience and other individual factors. Learn more about summer financial aid at https://tuition.asu.edu.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Evolutionary Medicine, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAEVMDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in evolutionary medicine consists of 15 credit hours, at least 12 of which must be upper division. All 15 credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for all courses used toward the certificate.		
Required Courses		
ASM 403 Evolutionary Medicine and Global Health or **BIO 403 Evolutionary Medicine and Global Health**	C	3
ASB 408 Advanced Evolutionary Medicine or **BIO 408 Advanced Evolutionary Medicine**	C	3
Electives		
Evolutionary Medicine Electives	C	3
ASB 250 / **BIO 250 Introduction to Evolution and Medicine (SOBE)**		
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 246 Human Origins (SOBE)		
ASM 342 / BIO 327 Evolution of Human Behavior		
ASM 345 Disease and Human Evolution		
ASM 394 / BIO 394 Topic: Ecology and Evolution of Infectious Diseases		
ASM 401 Health and Human Biology		
ASM 446 / BIO 446 Principles of Human Genetics		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / BIO 494 Topic: Evolution and Mental Disorders		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / HPS 331 History of Medicine (HUAD)		
BIO 345 Evolution		
BIO 394 / PSY 394 Topic: Introduction to Evolutionary Psychology		
BIO 440 / MBB 440 Functional Genomics		
BIO 462 Endocrine Physiology		
MBB 445 / MIC 445 Techniques in Molecular Biology/Genetics		
MIC 205 Microbiology (SCIT) or MIC 220 Biology of Microorganisms		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		
Upper Division Evolutionary Medicine Electives	C	6
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 342 / **BIO 327 Evolution of Human Behavior**		
ASM 345 Disease and Human Evolution		
ASM 394 / **BIO 394 Topic: Ecology and Evolution of Infectious Diseases**		
ASM 401 Health and Human Biology		
ASM 446 / **BIO 446 Principles of Human Genetics**		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / **BIO 494 Topic: Evolution and Mental Disorders**		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 345 Evolution		
BIO 394 / **PSY 394 Topic: Introduction to Evolutionary Psychology**		
BIO 440 / **MBB 440 Functional Genomics**		
BIO 462 Endocrine Physiology		
MBB 445 / **MIC 445 Techniques in Molecular Biology/Genetics**		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Biological Sciences (Conservation Biology and Ecology) and Environmental Education (LABSCCBS and TEEVEDCERT)

Program description:
In the Bachelor of Science program in biological sciences with a concentration in conservation biology and ecology, students discover how to conserve biological diversity and restore degraded ecosystems, and they examine the ways that organisms interact with each other and their physical environment.

Arizona State University is committed to a more sustainable world and sharing knowledge of conservation biology and ecology. Students gain hands-on experience with distinguished conservation biologists to investigate the impact of humans on Earth's biodiversity, prevent the extinction of species, promote the sustainable use of biological resources, and reestablish desired conditions in a variety of ecosystems.

The certificate program in environmental education is for students in all majors and for nontraditional educators. The program is designed to establish standards for professional excellence in environmental education, as outlined by the North American Association for Environmental Education.

Environmental education is taught in traditional classrooms and in community-serving organizations such as nature centers, museums, parks and zoos. The program's required coursework increases the environmental literacy of future educators, fosters community leadership strategies, and provides students with opportunities to practice environmental education teaching methods.

Students who complete the certificate program are eligible to apply for the state-level environmental education certification recognized by the North American Association for Environmental Education.

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, West Valley or Online

Career opportunities:
Graduates of the conservation biology and ecology concentration within the biological sciences major have an individualized and skill-based foundation that enables them to pursue advanced research and graduate study in biological sciences, environmental law and economics, physiology, ecology and conservation.

Graduates are prepared through training in specific skills they need for direct entry into their choice of career in a wide variety of fields and positions, including education, environmental resources, animal and plant physiology and identification, behavior ecology, population biology, conservation of endangered species, and restoration of degraded ecosystems.

Graduates who combine the certificate in environmental education with their major program of study may become more marketable to employers. They often decide to pursue employment in educational settings such as nonprofit organizations, nature centers, museums, parks and zoos.

The environmental education certificate does not lead to teacher certification.

Curriculum - Biological Sciences (Conservation Biology and Ecology), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABSCCBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Major Core Requirements

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 340 General Genetics	C	4
BIO 345 Evolution	C	3

Major Concentration Courses

BIO 320 Fundamentals of Ecology	C	3

Requirement	Minimum Grade	Credit Hours
BIO 322 Conservation of Biodiversity (SUST) BIO 322 will fulfill the upper division Science and Society Elective.	C	3
Upper Division Advanced Ecology Course **BIO 331 Animal Behavior** **BIO 421** / **SOS 421 Landscape Ecology** **BIO 422 Ecosystem Ecology** **BIO 423 Population and Community Ecology** **BIO 425 Marine Conservation Ecology** **SOS 326 Sustainable Ecosystems**	C	3
Upper Division Advanced Ecology, Biodiversity, Field, or Research Course **ABS 376 Wildlife Ecology** **ABS 380 Restoration and Wildlife Plants** **ABS 470 Life History of Mammals** **ABS 476 Large Mammal Habitat Ecology** **ABS 481 Riparian and Wetland Restoration** **ASM 443 Primatology** **BIO 303 Plant Diversity and Evolution** **BIO 313 The Flora of Arizona** **BIO 325 Oceanography**	C	3 - 4

Requirement	Minimum Grade	Credit Hours
BIO 331 Animal Behavior		
BIO 370 Vertebrate Zoology		
BIO 385 Comparative Invertebrate Zoology		
BIO 386 General Entomology		
BIO 405 Sonoran Desert Field Botany		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 419 Physiological Plant Ecology		
BIO 421 Landscape Ecology		
BIO 430 / GPH 422 Plant Geography		
BIO 436 Sociobiology and Behavioral Ecology		
BIO 461 Comparative Animal Physiology		
BIO 492 Honors Directed Study		
BIO 495 Undergraduate Research		
SOS 424 Dynamic Modeling in Social and Ecological Systems		
Upper Division Advanced Human Dimensions of Conservation and Ecology Course	C	3 - 4
BIO 304 / ENV 302 Plants and Civilization		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
BIO 412 Conservation in Practice		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Society and Natural Resource Management		
JUS 444 / FIS 444 Environment and Justice		
PRM 370 Public Lands Management		
PRM 380 Wilderness and Parks in America (SUST)		
SOS 349 / REL 349 / JST 349 Nature, Sustainability and Religion (SUST)		
SOS 310 Equity, Justice and Sustainability (HUAD)		
SOS 321 Policy and Governance in Sustainable Systems		
SOS 325 The Economics of Sustainability		
Upper Division Conservation Biology and Ecology Field Methods Course	C	3 - 4
BIO 386 General Entomology		
BIO 405 Sonoran Desert Field Botany		
BIO 407 Novel Ecosystems		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 472 Mammalogy		
BIO 484 Internship		
BIO 494 Topic: Discovering Biodiversity		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Lichenology		
Upper Division Human Dimensions of Conservation and Ecology Course		
BIO 304 / ENV 302 Plants and Civilization		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
BIO 363 From Cells to Society: Understanding Complexity		
BIO 412 Conservation in Practice		
JUS 444 / FIS 444 Environment and Justice	C	3
SOS 310 Equity, Justice and Sustainability (HUAD)		
SOS 321 Policy and Governance in Sustainable Systems		
SOS 325 The Economics of Sustainability		
SOS 349 / REL 349 / JST 349 Nature, Sustainability and Religion (SUST)		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-

society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3

Additional Requirements

CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH)	C	3
STP 231 Statistics for Life Science (QTRS)	C	3
Physical Science Requirement	C	3

CHM 231 Elementary Organic Chemistry (SCIT) AND CHM 235 Elementary Organic Chemistry Laboratory (SCIT)

GIS 205 Geographic Information Science I (QTRS)

GIS 211 Geographic Information Science II (QTRS)

GLG 101 Introduction to Geology I (Physical) (SCIT) AND GLG 103 Introduction to Geology I: Laboratory (SCIT)

GLG 327 Earth's Critical Zone

GPH 111 Introduction to Physical Geography (SCIT)

PHY 101 Introduction to Physics (SCIT) or PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)

Pre-health students may need PHY 111 &113 and PHY 112 & 114, not PHY 101. Please see advisor for more details.

Quantitative and Spatial Analysis Course		
BIO 411 Quantitative Methods in Conservation and Ecology	C	3
BIO 415 Statistical Models for Biology (QTRS)		
GIS 311 Geographic Information Science III (QTRS)		
GIS 470 Advanced Statistics for Geography and Planning (QTRS)		
GIS 471 Spatial Statistics for Geography and Planning		
GIS 494 Topic: GIS for Climate Change Science		
GIS 494 Topic: GIS Methods for Non-Majors		
SOS 212 Systems, Dynamics and Sustainability (QTRS)		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Environmental Education, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Mary Lou Fulton College for Teaching & Learning In

Plan Code: TEEVEDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires a minimum of 15 credit hours, 12 of which must be upper division. A "C" or better is required in all coursework.		

Required Courses

Required Core Courses

SCN 208 Nature and Society: An Introduction to Environmental Studies (SCIT)		
SCN 301 Ecology and Natural History of the Sonoran Desert (SCIT)		
SCN 302 Environmental Education: A Global Perspective (GCSI)	C	3
SCN 307 Biomimicry: Nature's Sustainable Solutions (SUST)		
SCN 308 Urban Sustainability and Environmental Education (SUST)		
SCN 310 Race to Save Biodiversity		

Upper Division Required Core Courses

	C	6

Requirement	Minimum Grade	Credit Hours
SCN 301 Ecology and Natural History of the Sonoran Desert (SCIT)		
SCN 302 Environmental Education: A Global Perspective (GCSI)		
SCN 307 Biomimicry: Nature's Sustainable Solutions (SUST)		
SCN 308 Urban Sustainability and Environmental Education (SUST)		
SCN 310 Race to Save Biodiversity		

Elective Courses

Upper Division Elective Courses

SCN 303 Environmental Education Internship		
SCN 304 Sonoran Desert Flora		
SCN 305 Tropical Ecology and Sustainability	C	6
SCN 309 Environmental Education Project		
SCN 311 Nature Mindfully		

Any course not taken to satisfy the core requirements may be used to satisfy electives.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Biological Sciences (Conservation Biology and Ecology) and Geographic Information Science (certificate) (LABSCCBS and LAGISCERT)

Program description:
In the Bachelor of Science program in biological sciences with a concentration in conservation biology and ecology, students discover how to conserve biological diversity and restore degraded ecosystems, and they examine the ways that organisms interact with each other and their physical environment.

Arizona State University is committed to a more sustainable world and sharing knowledge of conservation biology and ecology. Students gain hands-on experience with distinguished conservation biologists to investigate the impact of humans on Earth's biodiversity, prevent the extinction of species, promote the sustainable use of biological resources, and reestablish desired conditions in a variety of ecosystems.

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates of the conservation biology and ecology concentration within the biological sciences major have an individualized and skill-based foundation that enables them to pursue advanced research and graduate study in biological sciences, environmental law and economics, physiology, ecology and conservation.

Graduates are prepared through training in specific skills they need for direct entry into their choice of career in a wide variety of fields and positions, including education, environmental resources, animal and plant physiology and identification, behavior ecology, population biology, conservation of endangered species, and restoration of degraded ecosystems.

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Biological Sciences (Conservation Biology and Ecology), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABSCCBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Major Core Requirements

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 340 General Genetics	C	4
BIO 345 Evolution	C	3

Major Concentration Courses

BIO 320 Fundamentals of Ecology	C	3

Requirement	Minimum Grade	Credit Hours
BIO 322 Conservation of Biodiversity (SUST) BIO 322 will fulfill the upper division Science and Society Elective.	C	3
Upper Division Advanced Ecology Course **BIO 331 Animal Behavior** **BIO 421** / **SOS 421 Landscape Ecology** **BIO 422 Ecosystem Ecology** **BIO 423 Population and Community Ecology** **BIO 425 Marine Conservation Ecology** **SOS 326 Sustainable Ecosystems**	C	3
Upper Division Advanced Ecology, Biodiversity, Field, or Research Course **ABS 376 Wildlife Ecology** **ABS 380 Restoration and Wildlife Plants** **ABS 470 Life History of Mammals** **ABS 476 Large Mammal Habitat Ecology** **ABS 481 Riparian and Wetland Restoration** **ASM 443 Primatology** **BIO 303 Plant Diversity and Evolution** **BIO 313 The Flora of Arizona** **BIO 325 Oceanography**	C	3 - 4

Requirement	Minimum Grade	Credit Hours
BIO 331 Animal Behavior		
BIO 370 Vertebrate Zoology		
BIO 385 Comparative Invertebrate Zoology		
BIO 386 General Entomology		
BIO 405 Sonoran Desert Field Botany		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 419 Physiological Plant Ecology		
BIO 421 Landscape Ecology		
BIO 430 / GPH 422 Plant Geography		
BIO 436 Sociobiology and Behavioral Ecology		
BIO 461 Comparative Animal Physiology		
BIO 492 Honors Directed Study		
BIO 495 Undergraduate Research		
SOS 424 Dynamic Modeling in Social and Ecological Systems		
Upper Division Advanced Human Dimensions of Conservation and Ecology Course	C	3 - 4
BIO 304 / ENV 302 Plants and Civilization		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
BIO 412 Conservation in Practice		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Society and Natural Resource Management		
JUS 444 / FIS 444 Environment and Justice		
PRM 370 Public Lands Management		
PRM 380 Wilderness and Parks in America (SUST)		
SOS 349 / REL 349 / JST 349 Nature, Sustainability and Religion (SUST)		
SOS 310 Equity, Justice and Sustainability (HUAD)		
SOS 321 Policy and Governance in Sustainable Systems		
SOS 325 The Economics of Sustainability		
Upper Division Conservation Biology and Ecology Field Methods Course	C	3 - 4
BIO 386 General Entomology		
BIO 405 Sonoran Desert Field Botany		
BIO 407 Novel Ecosystems		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 472 Mammalogy		
BIO 484 Internship		
BIO 494 Topic: Discovering Biodiversity		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Lichenology		
Upper Division Human Dimensions of Conservation and Ecology Course		
BIO 304 / ENV 302 Plants and Civilization		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
BIO 363 From Cells to Society: Understanding Complexity		
BIO 412 Conservation in Practice		
JUS 444 / FIS 444 Environment and Justice	C	3
SOS 310 Equity, Justice and Sustainability (HUAD)		
SOS 321 Policy and Governance in Sustainable Systems		
SOS 325 The Economics of Sustainability		
SOS 349 / REL 349 / JST 349 Nature, Sustainability and Religion (SUST)		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-

society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3

Additional Requirements

CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH)	C	3
STP 231 Statistics for Life Science (QTRS)	C	3
Physical Science Requirement	C	3

CHM 231 Elementary Organic Chemistry (SCIT) AND CHM 235 Elementary Organic Chemistry Laboratory (SCIT)

GIS 205 Geographic Information Science I (QTRS)

GIS 211 Geographic Information Science II (QTRS)

GLG 101 Introduction to Geology I (Physical) (SCIT) AND GLG 103 Introduction to Geology I: Laboratory (SCIT)

GLG 327 Earth's Critical Zone

GPH 111 Introduction to Physical Geography (SCIT)

PHY 101 Introduction to Physics (SCIT) or PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)

Pre-health students may need PHY 111 &113 and PHY 112 & 114, not PHY 101. Please see advisor for more details.

Quantitative and Spatial Analysis Course		
BIO 411 Quantitative Methods in Conservation and Ecology	C	3
BIO 415 Statistical Models for Biology (QTRS)		
GIS 311 Geographic Information Science III (QTRS)		
GIS 470 Advanced Statistics for Geography and Planning (QTRS)		
GIS 471 Spatial Statistics for Geography and Planning		
GIS 494 Topic: GIS for Climate Change Science		
GIS 494 Topic: GIS Methods for Non-Majors		
SOS 212 Systems, Dynamics and Sustainability (QTRS)		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Biological Sciences (Conservation Biology and Ecology) and Mathematical Concepts of Engineering (LABSCCBS and LAMACECERT)

Program description:
In the Bachelor of Science program in biological sciences with a concentration in conservation biology and ecology, students discover how to conserve biological diversity and restore degraded ecosystems, and they examine the ways that organisms interact with each other and their physical environment.

Arizona State University is committed to a more sustainable world and sharing knowledge of conservation biology and ecology. Students gain hands-on experience with distinguished conservation biologists to investigate the impact of humans on Earth's biodiversity, prevent the extinction of species, promote the sustainable use of biological resources, and reestablish desired conditions in a variety of ecosystems.

The certificate program in mathematical concepts of engineering is designed for students who seek a strong foundation in mathematics to support their interests in engineering. Combining a core foundation in the quantitative and analytical skills found in mathematics with related skills in engineering, the program provides students with a solid mathematical background well-suited for multiple career paths.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates of the conservation biology and ecology concentration within the biological sciences major have an individualized and skill-based foundation that enables them to pursue advanced research and graduate study in biological sciences, environmental law and economics, physiology, ecology and conservation.

Graduates are prepared through training in specific skills they need for direct entry into their choice of career in a wide variety of fields and positions, including education, environmental resources, animal and plant physiology and identification, behavior ecology, population biology, conservation of endangered species, and restoration of degraded ecosystems.

The certificate program in mathematical concepts of engineering complements many major programs of study. Graduates with this enhanced math background can become more marketable to employers.

Curriculum - Biological Sciences (Conservation Biology and Ecology), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABSCCBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Major Core Requirements

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 340 General Genetics	C	4
BIO 345 Evolution	C	3

Major Concentration Courses

BIO 320 Fundamentals of Ecology	C	3

Requirement	Minimum Grade	Credit Hours
BIO 322 Conservation of Biodiversity (SUST) BIO 322 will fulfill the upper division Science and Society Elective.	C	3
Upper Division Advanced Ecology Course **BIO 331 Animal Behavior** **BIO 421** / **SOS 421 Landscape Ecology** **BIO 422 Ecosystem Ecology** **BIO 423 Population and Community Ecology** **BIO 425 Marine Conservation Ecology** **SOS 326 Sustainable Ecosystems**	C	3
Upper Division Advanced Ecology, Biodiversity, Field, or Research Course **ABS 376 Wildlife Ecology** **ABS 380 Restoration and Wildlife Plants** **ABS 470 Life History of Mammals** **ABS 476 Large Mammal Habitat Ecology** **ABS 481 Riparian and Wetland Restoration** **ASM 443 Primatology** **BIO 303 Plant Diversity and Evolution** **BIO 313 The Flora of Arizona** **BIO 325 Oceanography**	C	3 - 4

Requirement	Minimum Grade	Credit Hours
BIO 331 Animal Behavior		
BIO 370 Vertebrate Zoology		
BIO 385 Comparative Invertebrate Zoology		
BIO 386 General Entomology		
BIO 405 Sonoran Desert Field Botany		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 419 Physiological Plant Ecology		
BIO 421 Landscape Ecology		
BIO 430 / GPH 422 Plant Geography		
BIO 436 Sociobiology and Behavioral Ecology		
BIO 461 Comparative Animal Physiology		
BIO 492 Honors Directed Study		
BIO 495 Undergraduate Research		
SOS 424 Dynamic Modeling in Social and Ecological Systems		
Upper Division Advanced Human Dimensions of Conservation and Ecology Course	C	3 - 4
BIO 304 / ENV 302 Plants and Civilization		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
BIO 412 Conservation in Practice		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Society and Natural Resource Management		
JUS 444 / FIS 444 Environment and Justice		
PRM 370 Public Lands Management		
PRM 380 Wilderness and Parks in America (SUST)		
SOS 349 / REL 349 / JST 349 Nature, Sustainability and Religion (SUST)		
SOS 310 Equity, Justice and Sustainability (HUAD)		
SOS 321 Policy and Governance in Sustainable Systems		
SOS 325 The Economics of Sustainability		
Upper Division Conservation Biology and Ecology Field Methods Course	C	3 - 4
BIO 386 General Entomology		
BIO 405 Sonoran Desert Field Botany		
BIO 407 Novel Ecosystems		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 472 Mammalogy		
BIO 484 Internship		
BIO 494 Topic: Discovering Biodiversity		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Lichenology		
Upper Division Human Dimensions of Conservation and Ecology Course		
BIO 304 / ENV 302 Plants and Civilization		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
BIO 363 From Cells to Society: Understanding Complexity		
BIO 412 Conservation in Practice		
JUS 444 / FIS 444 Environment and Justice	C	3
SOS 310 Equity, Justice and Sustainability (HUAD)		
SOS 321 Policy and Governance in Sustainable Systems		
SOS 325 The Economics of Sustainability		
SOS 349 / REL 349 / JST 349 Nature, Sustainability and Religion (SUST)		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-

society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3

Additional Requirements

CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH)	C	3
STP 231 Statistics for Life Science (QTRS)	C	3
Physical Science Requirement	C	3

CHM 231 Elementary Organic Chemistry (SCIT) AND CHM 235 Elementary Organic Chemistry Laboratory (SCIT)

GIS 205 Geographic Information Science I (QTRS)

GIS 211 Geographic Information Science II (QTRS)

GLG 101 Introduction to Geology I (Physical) (SCIT) AND GLG 103 Introduction to Geology I: Laboratory (SCIT)

GLG 327 Earth's Critical Zone

GPH 111 Introduction to Physical Geography (SCIT)

PHY 101 Introduction to Physics (SCIT) or PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)

Pre-health students may need PHY 111 &113 and PHY 112 & 114, not PHY 101. Please see advisor for more details.

Quantitative and Spatial Analysis Course		
BIO 411 Quantitative Methods in Conservation and Ecology	C	3
BIO 415 Statistical Models for Biology (QTRS)		
GIS 311 Geographic Information Science III (QTRS)		
GIS 470 Advanced Statistics for Geography and Planning (QTRS)		
GIS 471 Spatial Statistics for Geography and Planning		
GIS 494 Topic: GIS for Climate Change Science		
GIS 494 Topic: GIS Methods for Non-Majors		
SOS 212 Systems, Dynamics and Sustainability (QTRS)		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Mathematical Concepts of Engineering, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAMACECERT

Minimum credit hours: 21

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The mathematical concepts of engineering certificate requires a minimum of 21 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		

Required Courses

IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 266 Calculus for Engineers II (MATH) **or** **MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3
MAT 267 Calculus for Engineers III (MATH) **or** **MAT 272 Calculus with Analytic Geometry III (MATH)**	C	3
MAT 275 Modern Differential Equations (MATH) **or** **MAT 274 Elementary Differential Equations (MATH)**	C	3
MAT 343 Applied Linear Algebra **or** **MAT 342 Linear Algebra**	C	3

Requirement	Minimum Grade	Credit Hours
MAT 343 and STP 420 must be completed with courses offered by the School of Mathematical and Statistical Sciences.		
STP 420 Introductory Applied Statistics (QTRS)	C	3

Elective (choose one)

Upper Division Mathematical Concepts of Engineering Electives

DAT 301 Exploring Data in R and Python	C	3
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 470 Stochastic Operations Research		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Biological Sciences (Conservation Biology and Ecology) and Planetary Science (LABSCCBS and LAPLSCERT)

Program description:
In the Bachelor of Science program in biological sciences with a concentration in conservation biology and ecology, students discover how to conserve biological diversity and restore degraded ecosystems, and they examine the ways that organisms interact with each other and their physical environment.

Arizona State University is committed to a more sustainable world and sharing knowledge of conservation biology and ecology. Students gain hands-on experience with distinguished conservation biologists to investigate the impact of humans on Earth's biodiversity, prevent the extinction of species, promote the sustainable use of biological resources, and reestablish desired conditions in a variety of ecosystems.

The certificate program in planetary science prepares undergraduate students in topics related to the formation and evolution of planetary bodies and associated remote sensing technologies employed in these studies. The program includes specific training in the origins of planetary systems, tectonics, volcanism, geomorphology and remote mapping of surficial geology using spacecraft and land-based observational data. Additional skills may include understanding of planetary atmospheres, astrobiology, geodynamics and cosmochemistry.

This interdisciplinary program prepares students for technical career paths and helps prepare them to best engage with exciting opportunities at the frontier of planetary exploration.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates of the conservation biology and ecology concentration within the biological sciences major have an individualized and skill-based foundation that enables them to pursue advanced research and graduate study in biological sciences, environmental law and economics, physiology, ecology and conservation.

Graduates are prepared through training in specific skills they need for direct entry into their choice of career in a wide variety of fields and positions, including education, environmental resources, animal and plant physiology and identification, behavior ecology, population biology, conservation of endangered species, and restoration of degraded ecosystems.

The employment prospects for graduates who complete the planetary science certificate are enhanced by the potential for opportunities at the intersection of these fields. Opportunities include these positions:

- community college or university educator teaching earth science or astronomy classes
- docent at a science museum or planetarium
- faculty member or researcher at a university, working on federally funded planetary science research, instruments or missions
- K--12 educator for a program with an earth science or astronomy curriculum
- researcher at an aerospace company contracted to build subsystems, instruments or missions for federally funded planetary science research

In Arizona, such opportunities are offered at institutions that include the public universities, Mesa Community College, the United States Geological Survey, Lowell Observatory and the Planetary Science Institute. Arizona companies that employ people in these fields include World View, Paragon, FreeFall Aerospace, General Dynamics, Qwaltec and KinetX. National companies include Lockheed Martin, Honeywell, Ball, SpaceX, Blue Origin, Virgin Galactic, Intuitive Machines, Firefly Aerospace, Northrop Grumman, Axiom, Planet Labs, Blue Canyon Technologies, Astrobotic and ispace.

Graduates may also find employment in federal labs or as congressional staff.

Curriculum - Biological Sciences (Conservation Biology and Ecology), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABSCCBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Major Core Requirements

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 340 General Genetics	C	4
BIO 345 Evolution	C	3

Major Concentration Courses

BIO 320 Fundamentals of Ecology	C	3

Requirement	Minimum Grade	Credit Hours
BIO 322 Conservation of Biodiversity (SUST) BIO 322 will fulfill the upper division Science and Society Elective.	C	3
Upper Division Advanced Ecology Course **BIO 331 Animal Behavior** **BIO 421** / **SOS 421 Landscape Ecology** **BIO 422 Ecosystem Ecology** **BIO 423 Population and Community Ecology** **BIO 425 Marine Conservation Ecology** **SOS 326 Sustainable Ecosystems**	C	3
Upper Division Advanced Ecology, Biodiversity, Field, or Research Course **ABS 376 Wildlife Ecology** **ABS 380 Restoration and Wildlife Plants** **ABS 470 Life History of Mammals** **ABS 476 Large Mammal Habitat Ecology** **ABS 481 Riparian and Wetland Restoration** **ASM 443 Primatology** **BIO 303 Plant Diversity and Evolution** **BIO 313 The Flora of Arizona** **BIO 325 Oceanography**	C	3 - 4

Requirement	Minimum Grade	Credit Hours
BIO 331 Animal Behavior		
BIO 370 Vertebrate Zoology		
BIO 385 Comparative Invertebrate Zoology		
BIO 386 General Entomology		
BIO 405 Sonoran Desert Field Botany		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 419 Physiological Plant Ecology		
BIO 421 Landscape Ecology		
BIO 430 / GPH 422 Plant Geography		
BIO 436 Sociobiology and Behavioral Ecology		
BIO 461 Comparative Animal Physiology		
BIO 492 Honors Directed Study		
BIO 495 Undergraduate Research		
SOS 424 Dynamic Modeling in Social and Ecological Systems		
Upper Division Advanced Human Dimensions of Conservation and Ecology Course	C	3 - 4
BIO 304 / ENV 302 Plants and Civilization		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
BIO 412 Conservation in Practice		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Society and Natural Resource Management		
JUS 444 / FIS 444 Environment and Justice		
PRM 370 Public Lands Management		
PRM 380 Wilderness and Parks in America (SUST)		
SOS 349 / REL 349 / JST 349 Nature, Sustainability and Religion (SUST)		
SOS 310 Equity, Justice and Sustainability (HUAD)		
SOS 321 Policy and Governance in Sustainable Systems		
SOS 325 The Economics of Sustainability		
Upper Division Conservation Biology and Ecology Field Methods Course	C	3 - 4
BIO 386 General Entomology		
BIO 405 Sonoran Desert Field Botany		
BIO 407 Novel Ecosystems		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 472 Mammalogy		
BIO 484 Internship		
BIO 494 Topic: Discovering Biodiversity		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Lichenology		
Upper Division Human Dimensions of Conservation and Ecology Course		
BIO 304 / ENV 302 Plants and Civilization		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
BIO 363 From Cells to Society: Understanding Complexity		
BIO 412 Conservation in Practice		
JUS 444 / FIS 444 Environment and Justice	C	3
SOS 310 Equity, Justice and Sustainability (HUAD)		
SOS 321 Policy and Governance in Sustainable Systems		
SOS 325 The Economics of Sustainability		
SOS 349 / REL 349 / JST 349 Nature, Sustainability and Religion (SUST)		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-

society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3

Additional Requirements

CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH)	C	3
STP 231 Statistics for Life Science (QTRS)	C	3
Physical Science Requirement	C	3

CHM 231 Elementary Organic Chemistry (SCIT) AND CHM 235 Elementary Organic Chemistry Laboratory (SCIT)

GIS 205 Geographic Information Science I (QTRS)

GIS 211 Geographic Information Science II (QTRS)

GLG 101 Introduction to Geology I (Physical) (SCIT) AND GLG 103 Introduction to Geology I: Laboratory (SCIT)

GLG 327 Earth's Critical Zone

GPH 111 Introduction to Physical Geography (SCIT)

PHY 101 Introduction to Physics (SCIT) or PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)

Pre-health students may need PHY 111 &113 and PHY 112 & 114, not PHY 101. Please see advisor for more details.

Quantitative and Spatial Analysis Course		
BIO 411 Quantitative Methods in Conservation and Ecology	C	3
BIO 415 Statistical Models for Biology (QTRS)		
GIS 311 Geographic Information Science III (QTRS)		
GIS 470 Advanced Statistics for Geography and Planning (QTRS)		
GIS 471 Spatial Statistics for Geography and Planning		
GIS 494 Topic: GIS for Climate Change Science		
GIS 494 Topic: GIS Methods for Non-Majors		
SOS 212 Systems, Dynamics and Sustainability (QTRS)		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Planetary Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAPLSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires a minimum of 18 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. At least six upper-division hours in the certificate must be completed in courses offered by The College of Liberal Arts and Sciences. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		
AST 111 Introduction to Solar Systems Astronomy (SCIT) or GLG 101 Introduction to Geology I (Physical) (SCIT) or SES 100 Introduction to Exploration (QTRS) or SES 106 Habitable Worlds (SCIT) or SES 107 A Solar System Journey (SCIT) or SES 121 Earth, Solar System and Universe (SCIT)	C	3 - 4
GLG 404 Fundamentals of Planetary Geology	C	3
SES 421 Foundations of Planetary Science	C	3
Upper Division Planetary Science Electives	C	6
AST 494 Topic: Exoplanets		
GLG 321 Mineralogy or GLG 424 Petrology		
GLG 362 Geomorphology		
GLG 406 Geology of Mars		

Requirement	Minimum Grade	Credit Hours
GLG 418 Geophysics or GLG 419 Geodynamics		
GLG 420 Volcanology or GLG 422 Planetary Volcanology		
GLG 485 Meteorites and Cosmochemistry		
GLG 490 Topic: Remote Sensing		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe or GLG 460 Astrobiology		
SES 494 Topic: Geology of Venus		
SES 494 Topic: Planetary Interiors		
Planetary Science Electives		
AST 494 Topic: Exoplanets		
GLG 321 Mineralogy or GLG 424 Petrology		
GLG 362 Geomorphology		
GLG 406 Geology of Mars		
GLG 418 Geophysics or GLG 419 Geodynamics		
GLG 420 Volcanology or GLG 422 Planetary Volcanology	C	3
GLG 485 Meteorites and Cosmochemistry		
GLG 490 Topic: Remote Sensing		
SES 294 Topic: Introduction to Space Weather		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe or GLG 460 Astrobiology		
SES 494 Topic: Geology of Venus		
SES 494 Topic: Planetary Interiors		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Biological Sciences (Genetics, Cell and Developmental Biology) and Computational Life Sciences (LABSCGBS and LACLSICERT)

Program description:
In the Bachelor of Science program in biological sciences with a concentration in genetics, cell and developmental biology, students gain an understanding of the intricacies of life. They investigate:

- developmental changes that organisms undergo throughout life
- DNA sequence and gene expression
- how genes and the environment interact
- the machinery of life enclosed within the boundaries of cells
- the relationship between cell life and diseases

Students gain hands-on experience by working with distinguished faculty and have opportunities to engage in independent research projects and internships.

In the computational life sciences certificate program, students discover a burgeoning new field where huge improvements in processing technologies have opened the door to exciting new research techniques and interdisciplinary collaborations.

Students engage with a suite of tools and approaches that enable them to uncover correlations, gain new understanding and help solve scientific problems.

Using their mastery of these new techniques, students examine data generated from a variety of fields, including ecology, botany, evolutionary biology, neuroscience, molecular and cellular biology, and animal behavior. Students investigate topics such as DNA, RNA, protein, imaging, conservation and historical data; and they explore the ethical implications of collecting, storing, analyzing and sharing the results of computational life science data.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates of the genetics, cell and developmental biology concentration within the biological sciences program have acquired critical thinking skills and completed fundamental coursework that enable them to pursue advanced research and graduate study in biological sciences, health sciences, law, and other graduate-level and professional programs, including dentistry, medicine, pharmacy and veterinary medicine.

The BS degree program also prepares graduates with skills that can be applied to many scientific problems and to the challenges of daily life, and provides the strong foundation they need for direct entry into their choice of career in a variety of fields, including research, bioinformatics, medicine and health care, forensics and veterinary care.

Graduates of the computational life sciences certificate program have gained data interpretation skills and experience using new computational approaches and programs. Graduates who have combined this program with their major program of study are in high demand for roles that involve identifying and interpreting data in a variety of fields, including ecology, medicine, botany, evolutionary biology and animal behavior.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Biological Sciences (Genetics, Cell and Developmental Biology), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABSCGBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Major Core Requirements

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 340 General Genetics OR **MBB 347 Molecular Genetics: From Genes to Proteins** On-campus students are encouraged to take MBB 347	C	4
BIO 345 Evolution	C	3

Requirement	Minimum Grade	Credit Hours
Major Concentration Courses		
BCH 361 Advanced Principles of Biochemistry	C	3
BIO 351 Developmental Biology	C	3
BIO 353 Cell Biology	C	3
Additional Major Concentration Courses		
BIO 308 Plant Physiology OR BIO 360 Animal Physiology OR BIO 420 Immunology: Molecular and Cellular Foundations or MIC 420 Immunology: Molecular and Cellular Foundations OR BIO 440 Functional Genomics or MBB 440 Functional Genomics	C	6
Major Laboratory/Research Course	C	1 - 4
BCH 367 Elementary Biochemistry Laboratory		
BIO 308 Plant Physiology		
BIO 342 General Genetics Laboratory		
BIO 352 Laboratory in Vertebrate Developmental Anatomy		
BIO 354 Cell Biology Laboratory		
BIO 357 Cell and Molecular Biology Laboratory		
BIO 361 Animal Physiology Laboratory		

Requirement	Minimum Grade	Credit Hours
BIO 390 Medical/Dental Field Placement or BIO 484 / MIC 484 Internship		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 439 Computing for Research		
BIO 451 Cell Biotechnology: Cell Culture, Immunocytochemistry and Bioimaging		
BIO 475 Advanced Human Anatomy		
BIO 492 / MBB 492 / MIC 492 Honors Directed Study		
MBB 343 / BIO 343 Genetic Engineering and Society		
MBB 350 Applied Genetics		
MIC 220 Biology of Microorganisms AND MIC 206 Microbiology Laboratory (SCIT)		
MIC 302 Advanced Bacteriology Laboratory		
MIC 421 Experimental Immunology		
Upper Division Major Laboratory/Research Course	C	1 - 4
BCH 367 Elementary Biochemistry Laboratory		
BIO 308 Plant Physiology		
BIO 342 General Genetics Laboratory		
BIO 352 Laboratory in Vertebrate Developmental Anatomy		
BIO 354 Cell Biology Laboratory		

Requirement	Minimum Grade	Credit Hours
BIO 357 Cell and Molecular Biology Laboratory		
BIO 361 Animal Physiology Laboratory		
BIO 390 Medical/Dental Field Placement or **BIO 484 / MIC 484 Internship**		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 439 Computing for Research		
BIO 451 Cell Biotechnology: Cell Culture, Immunocytochemistry and Bioimaging		
BIO 475 Advanced Human Anatomy		
BIO 492 / MBB 492 / MIC 492 Honors Directed Study		
MBB 343 / BIO 343 Genetic Engineering and Society		
MBB 350 Applied Genetics		
MIC 302 Advanced Bacteriology Laboratory		
MIC 421 Experimental Immunology		
Upper Division Major Electives		
BCH 367 Elementary Biochemistry Laboratory		
Upper Division BIO Elective	C	5
Upper Division HPS Elective		
Upper Division MBB Elective		
Upper Division MIC Elective		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
CHM 231 Elementary Organic Chemistry (SCIT) **AND** **CHM 235 Elementary Organic Chemistry Laboratory (SCIT)** ASU Online students complete all experiments for the CHM 235 organic chemistry lab at the ASU Tempe Campus during a one-week session in summer. Lab reports are completed in later weeks during the same summer term. Pre-health students may need CHM 233 & 237 and CHM 234 & 238, not CHM 231 & 235. Please see advisor for more details.	C	4
MAT 251 Calculus for Life Sciences (MATH)	C	3

PHY 101 Introduction to Physics (SCIT) Pre-health students may need PHY 111 & PHY 113 and PHY 112 & 114, not PHY 101. Please see advisor for more details.	C	4
STP 231 Statistics for Life Science (QTRS)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

In-Person Labs Required

In order to complete the requirements of this program, some laboratory courses are completed in-person at the Tempe Campus. These laboratory courses are offered during summer. This may impact your financial aid. Financial aid is available to those who apply and qualify, and students may receive funds to help cover costs for each semester of enrollment. The amount of financial aid that a student is eligible for varies depending on prior education experience and other individual factors. Learn more about summer financial aid at https://tuition.asu.edu.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Computational Life Sciences, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LACLSICERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in computational life sciences requires a minimum of 15 credit hours, of which at least 12 credit hours must be upper division. The core consists of one computing course and one ethics course. A minimum of nine credit hours in elective courses complete the certificate. The computing course not used toward the core requirements may be used toward the elective credit hours. A grade of "C" (2.00 on a 4.00 scale) or higher is required for all courses used toward the certificate.		

Required Courses

Upper Division Ethics or History Course

BIO 312 / **PHI 320 Bioethics (HUAD)**		
BIO 316 / **HPS 330 History of Biology: Conflicts and Controversies (HUAD)**	C	3
BIO 317 / **HPS 323 History of Science II (HUAD)**		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 416 / **HPS 410 Biomedical Research Ethics (CIVI)**		

Requirement	Minimum Grade	Credit Hours
Upper Division Computational Course		
BIO 439 Computing for Research	C	3
BIO 440 / MBB 440 Functional Genomics		

Electives

Upper Division Electives List	C	9
BIO 355 / MAT 355 / MBB 355 Introduction to Computational Molecular Biology		
BIO 411 Quantitative Methods in Conservation and Ecology		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 439 Computing for Research		
BIO 440 / MBB 440 Functional Genomics		
BIO 479 Data Analysis and Visualization in R		
BIO 494 Topic: Computational Genomic Analysis		
BIO 494 Topic: Data Analysis in Neuroscience		
BIO 498 Topic: Programming for biologists		
BME 494 Topic: Systems Biology of Disease		
BMI 311 Biomedical Artificial Intelligence		
BMI 312 Health Data Mining		
BMI 330 Topics in Translational Bioinformatics		
DAT 301 Exploring Data in R and Python		
GIS 469 Multivariate Statistics for Social Sciences		
GIS 471 Spatial Statistics for Geography and Planning		
MAT 353 Mathematics and Cancer		

Requirement	Minimum Grade	Credit Hours
MAT 451 Mathematical Modeling		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Biological Sciences (Genetics, Cell and Developmental Biology) and Evolutionary Medicine (LABSCGBS and LAEVMDCERT)

Program description:
In the Bachelor of Science program in biological sciences with a concentration in genetics, cell and developmental biology, students gain an understanding of the intricacies of life. They investigate:

- developmental changes that organisms undergo throughout life
- DNA sequence and gene expression
- how genes and the environment interact
- the machinery of life enclosed within the boundaries of cells
- the relationship between cell life and diseases

Students gain hands-on experience by working with distinguished faculty and have opportunities to engage in independent research projects and internships.

In the evolutionary medicine certificate program, students discover a burgeoning new field that is improving human health and transforming our understanding of disease by merging the fields of evolutionary biology, genetics, medicine, global health and public health.

Students integrate perspectives from across these fields to investigate questions about health and disease in the context of human history. Using their mastery of these new approaches within the biological and social sciences, they address emerging and anticipated public needs, such as reemerging infectious disease, challenges facing vaccination, expanding chronic disease and other growing public health crises.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates of the genetics, cell and developmental biology concentration within the biological sciences program have acquired critical thinking skills and completed fundamental coursework that enable them to pursue advanced research and graduate study in biological sciences, health sciences, law, and other graduate-level and professional programs, including dentistry, medicine, pharmacy and veterinary medicine.

The BS degree program also prepares graduates with skills that can be applied to many scientific problems and to the challenges of daily life, and provides the strong foundation they need for direct entry into their choice of career in a variety of fields, including research, bioinformatics, medicine and health care, forensics and veterinary care.

Graduates of the evolutionary medicine certificate program have gained integrated and individualized skills that are in high demand to address a growing need for innovation in medicine and public health care. Graduates who combine this certificate program with their major program of study are well prepared for roles in a variety of fields, including biology, medicine, law and ethics.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Biological Sciences (Genetics, Cell and Developmental Biology), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABSCGBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Major Core Requirements

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 340 General Genetics OR **MBB 347 Molecular Genetics: From Genes to Proteins** On-campus students are encouraged to take MBB 347	C	4
BIO 345 Evolution	C	3

Requirement	Minimum Grade	Credit Hours
Major Concentration Courses		
BCH 361 Advanced Principles of Biochemistry	C	3
BIO 351 Developmental Biology	C	3
BIO 353 Cell Biology	C	3
Additional Major Concentration Courses		
BIO 308 Plant Physiology OR BIO 360 Animal Physiology OR BIO 420 Immunology: Molecular and Cellular Foundations or MIC 420 Immunology: Molecular and Cellular Foundations OR BIO 440 Functional Genomics or MBB 440 Functional Genomics	C	6
Major Laboratory/Research Course	C	1 - 4
BCH 367 Elementary Biochemistry Laboratory		
BIO 308 Plant Physiology		
BIO 342 General Genetics Laboratory		
BIO 352 Laboratory in Vertebrate Developmental Anatomy		
BIO 354 Cell Biology Laboratory		
BIO 357 Cell and Molecular Biology Laboratory		
BIO 361 Animal Physiology Laboratory		

Requirement	Minimum Grade	Credit Hours
BIO 390 Medical/Dental Field Placement or BIO 484 / MIC 484 Internship		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 439 Computing for Research		
BIO 451 Cell Biotechnology: Cell Culture, Immunocytochemistry and Bioimaging		
BIO 475 Advanced Human Anatomy		
BIO 492 / MBB 492 / MIC 492 Honors Directed Study		
MBB 343 / BIO 343 Genetic Engineering and Society		
MBB 350 Applied Genetics		
MIC 220 Biology of Microorganisms AND MIC 206 Microbiology Laboratory (SCIT)		
MIC 302 Advanced Bacteriology Laboratory		
MIC 421 Experimental Immunology		
Upper Division Major Laboratory/Research Course	C	1 - 4
BCH 367 Elementary Biochemistry Laboratory		
BIO 308 Plant Physiology		
BIO 342 General Genetics Laboratory		
BIO 352 Laboratory in Vertebrate Developmental Anatomy		
BIO 354 Cell Biology Laboratory		

Requirement	Minimum Grade	Credit Hours
BIO 357 Cell and Molecular Biology Laboratory		
BIO 361 Animal Physiology Laboratory		
BIO 390 Medical/Dental Field Placement or **BIO 484 / MIC 484 Internship**		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 439 Computing for Research		
BIO 451 Cell Biotechnology: Cell Culture, Immunocytochemistry and Bioimaging		
BIO 475 Advanced Human Anatomy		
BIO 492 / MBB 492 / MIC 492 Honors Directed Study		
MBB 343 / BIO 343 Genetic Engineering and Society		
MBB 350 Applied Genetics		
MIC 302 Advanced Bacteriology Laboratory		
MIC 421 Experimental Immunology		
Upper Division Major Electives		
BCH 367 Elementary Biochemistry Laboratory		
Upper Division BIO Elective	C	5
Upper Division HPS Elective		
Upper Division MBB Elective		
Upper Division MIC Elective		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
CHM 231 Elementary Organic Chemistry (SCIT) **AND** **CHM 235 Elementary Organic Chemistry Laboratory (SCIT)** ASU Online students complete all experiments for the CHM 235 organic chemistry lab at the ASU Tempe Campus during a one-week session in summer. Lab reports are completed in later weeks during the same summer term. Pre-health students may need CHM 233 & 237 and CHM 234 & 238, not CHM 231 & 235. Please see advisor for more details.	C	4
MAT 251 Calculus for Life Sciences (MATH)	C	3

PHY 101 Introduction to Physics (SCIT) Pre-health students may need PHY 111 & PHY 113 and PHY 112 & 114, not PHY 101. Please see advisor for more details.	C	4
STP 231 Statistics for Life Science (QTRS)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

In-Person Labs Required

In order to complete the requirements of this program, some laboratory courses are completed in-person at the Tempe Campus. These laboratory courses are offered during summer. This may impact your financial aid. Financial aid is available to those who apply and qualify, and students may receive funds to help cover costs for each semester of enrollment. The amount of financial aid that a student is eligible for varies depending on prior education experience and other individual factors. Learn more about summer financial aid at https://tuition.asu.edu.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Evolutionary Medicine, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAEVMDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in evolutionary medicine consists of 15 credit hours, at least 12 of which must be upper division. All 15 credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for all courses used toward the certificate.		
Required Courses		
ASM 403 Evolutionary Medicine and Global Health or **BIO 403 Evolutionary Medicine and Global Health**	C	3
ASB 408 Advanced Evolutionary Medicine or **BIO 408 Advanced Evolutionary Medicine**	C	3
Electives		
Evolutionary Medicine Electives	C	3
ASB 250 / **BIO 250 Introduction to Evolution and Medicine (SOBE)**		
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 246 Human Origins (SOBE)		
ASM 342 / BIO 327 Evolution of Human Behavior		
ASM 345 Disease and Human Evolution		
ASM 394 / BIO 394 Topic: Ecology and Evolution of Infectious Diseases		
ASM 401 Health and Human Biology		
ASM 446 / BIO 446 Principles of Human Genetics		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / BIO 494 Topic: Evolution and Mental Disorders		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / HPS 331 History of Medicine (HUAD)		
BIO 345 Evolution		
BIO 394 / PSY 394 Topic: Introduction to Evolutionary Psychology		
BIO 440 / MBB 440 Functional Genomics		
BIO 462 Endocrine Physiology		
MBB 445 / MIC 445 Techniques in Molecular Biology/Genetics		
MIC 205 Microbiology (SCIT) or MIC 220 Biology of Microorganisms		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		
Upper Division Evolutionary Medicine Electives	C	6
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 342 / **BIO 327 Evolution of Human Behavior**		
ASM 345 Disease and Human Evolution		
ASM 394 / **BIO 394 Topic: Ecology and Evolution of Infectious Diseases**		
ASM 401 Health and Human Biology		
ASM 446 / **BIO 446 Principles of Human Genetics**		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / **BIO 494 Topic: Evolution and Mental Disorders**		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 345 Evolution		
BIO 394 / **PSY 394 Topic: Introduction to Evolutionary Psychology**		
BIO 440 / **MBB 440 Functional Genomics**		
BIO 462 Endocrine Physiology		
MBB 445 / **MIC 445 Techniques in Molecular Biology/Genetics**		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Business Administration) and Applied Business Data Analytics (BABUSBABA and BABDACERT)

Program description:
In the Bachelor of Arts program in business with a concentration in business administration, students gain a breadth of knowledge and the skills needed for managing business operations.

The program provides the full business core plus 18 credit hours of concentration coursework focused on skills such as forecasting demand; planning inventory; purchasing services; conducting skillful negotiations; building strategies for the future; and managing people, finances and risk.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Polytechnic, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates are prepared to manage processes and people in a wide variety of industries. Career opportunities include these positions:

- administrative services manager
- business manager
- general and operations manager
- sales manager
- training and development manager

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Business Administration), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSBABA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
LES 305 Business Law and Ethics for Managers	C	3
FIN 300 Fundamentals of Finance	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course **AGB 302 International Management and Agribusiness (GCSI)** **ECN 306 Survey of International Economics (GCSI)** **MGT 302 Principles of International Business (GCSI)** **MKT 425 Global Marketing Management (GCSI)** **SCM 463 Global Supply Chain Management (GCSI)**	C	3

AND Global Communities, Societies, and Individuals (GCSI)

Major Courses

BUS 384 Business Operations and Planning	C	3
MGT 411 Leading Organizations	C	3
Business Administration Track Course Students choose three courses from one track: Business Administration, Healthy Lifestyles Coaching, or Human Resources. **Business Administration Track** **AGB 414 Food and Agribusiness Policy Issues**	C	3

Requirement	Minimum Grade	Credit Hours
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
AGB 452 Global Food and Agricultural Trade		
AGB 456 Food Product Innovation and Development		
AGB 481 Strategic Pricing in Food Markets		
BUS 424 Sales and Negotiations		
BUS 434 Business Risk Management		
COM 353 Professional Communication		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 420 Human Resource Management		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		
MGT 430 Negotiations		
PHI 360 Business and Professional Ethics (HUAD)		

Requirement	Minimum Grade	Credit Hours
PSY 304 Effective Thinking		
SCM 354 Procurement of Services		
SCM 385 Business and Sustainability I (SUST)		
TMC 320 Funding the Enterprise		
TWC 422 Social Media in the Workplace		
Healthy Lifestyles Coaching Track		
CHS 300 An Exploration of Well-Being (SOBE)		
CHS 340 Health Theory		
EXW 101 Foundations of Health and Fitness Science		
EXW 335 Physical Activity and Physiological Concepts		
EXW 400 Stress Management for Wellness		
HEP 380 Body Image and Wellness		
HSC 355 Eating for Lifelong Health (SOBE)		
HSC 440 Health Coaching Concepts and Skills		
NTR 100 Introduction to Nutrition Science		
NTR 241 Human Nutrition		
SSP 320 Coaching Leadership, Performance Team and Facility Management		
Human Resources Track		

Requirement	Minimum Grade	Credit Hours
Required Course:		
MGT 420 Human Resource Management		
Choose two other courses:		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		
Upper Division Business Administration Track Course	C	6
Students choose three courses from one track: Business Administration, Healthy Lifestyles Coaching, or Human Resources.		
Business Administration Track		
AGB 414 Food and Agribusiness Policy Issues		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		

Requirement	Minimum Grade	Credit Hours
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
AGB 452 Global Food and Agricultural Trade		
AGB 456 Food Product Innovation and Development		
AGB 481 Strategic Pricing in Food Markets		
BUS 424 Sales and Negotiations		
BUS 434 Business Risk Management		
COM 353 Professional Communication		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 420 Human Resource Management		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		
MGT 430 Negotiations		
PHI 360 Business and Professional Ethics (HUAD)		
PSY 304 Effective Thinking		
SCM 354 Procurement of Services		

Requirement	Minimum Grade	Credit Hours
SCM 385 Business and Sustainability I (SUST)		
TMC 320 Funding the Enterprise		
TWC 422 Social Media in the Workplace		
Healthy Lifestyles Coaching Track		
CHS 300 An Exploration of Well-Being (SOBE)		
CHS 340 Health Theory		
EXW 335 Physical Activity and Physiological Concepts		
EXW 400 Stress Management for Wellness		
HEP 380 Body Image and Wellness		
HSC 355 Eating for Lifelong Health (SOBE)		
HSC 440 Health Coaching Concepts and Skills		
SSP 320 Coaching Leadership, Performance Team and Facility Management		
Human Resources Track		
Required Course:		
MGT 420 Human Resource Management		
Choose two other courses:		

Requirement	Minimum Grade	Credit Hours
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		

Business Capstone

WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track

MAT 117 College Algebra (MATH)			
MAT 210 Brief Calculus (MATH)			
AND	Mathematics (MATH)		
OR	**MAT 210 Track**		
Required:			
MAT 210 Brief Calculus (MATH)			
Choose one quantitative course from the list below:		C	6
MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**			
AND	Mathematics (MATH)		

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing	3
COM 259 Communication in Business and the Professions (CIVI)	3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)	3

SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.
Students must complete a minimum of 25 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Business Administration) and International Business Studies (BABUSBABA and BAIBSCERT)

Program description:
In the Bachelor of Arts program in business with a concentration in business administration, students gain a breadth of knowledge and the skills needed for managing business operations.

The program provides the full business core plus 18 credit hours of concentration coursework focused on skills such as forecasting demand; planning inventory; purchasing services; conducting skillful negotiations; building strategies for the future; and managing people, finances and risk.

The certificate program in international business studies helps students develop competence in a foreign language and a sensitivity to foreign cultures. Students gain an awareness of global social processes and an understanding of international business environments, principles and operations.

The W. P. Carey School of Business has partnerships with universities all over the world, so students can experience new cultures, visit new places and build intercultural and language skills. International internships also are offered in conjunction with the ASU Global Education Office.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Polytechnic, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates are prepared to manage processes and people in a wide variety of industries. Career opportunities include these positions:

- administrative services manager
- business manager
- general and operations manager
- sales manager
- training and development manager

Students can advance their career options with an undergraduate certificate. The certificate program in international business enables students to develop additional competencies that complement the marketable knowledge and skills they acquire in their majors.

Graduates who have completed this undergraduate certificate often decide to pursue employment in management, sales, marketing and communication. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Business Administration), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSBABA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
LES 305 Business Law and Ethics for Managers	C	3
FIN 300 Fundamentals of Finance	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course **AGB 302 International Management and Agribusiness (GCSI)** **ECN 306 Survey of International Economics (GCSI)** **MGT 302 Principles of International Business (GCSI)** **MKT 425 Global Marketing Management (GCSI)** **SCM 463 Global Supply Chain Management (GCSI)**	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

BUS 384 Business Operations and Planning	C	3
MGT 411 Leading Organizations	C	3
Business Administration Track Course Students choose three courses from one track: Business Administration, Healthy Lifestyles Coaching, or Human Resources. **Business Administration Track** **AGB 414 Food and Agribusiness Policy Issues**	C	3

Requirement	Minimum Grade	Credit Hours
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
AGB 452 Global Food and Agricultural Trade		
AGB 456 Food Product Innovation and Development		
AGB 481 Strategic Pricing in Food Markets		
BUS 424 Sales and Negotiations		
BUS 434 Business Risk Management		
COM 353 Professional Communication		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 420 Human Resource Management		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		
MGT 430 Negotiations		
PHI 360 Business and Professional Ethics (HUAD)		

Requirement	Minimum Grade	Credit Hours
PSY 304 Effective Thinking		
SCM 354 Procurement of Services		
SCM 385 Business and Sustainability I (SUST)		
TMC 320 Funding the Enterprise		
TWC 422 Social Media in the Workplace		
Healthy Lifestyles Coaching Track		
CHS 300 An Exploration of Well-Being (SOBE)		
CHS 340 Health Theory		
EXW 101 Foundations of Health and Fitness Science		
EXW 335 Physical Activity and Physiological Concepts		
EXW 400 Stress Management for Wellness		
HEP 380 Body Image and Wellness		
HSC 355 Eating for Lifelong Health (SOBE)		
HSC 440 Health Coaching Concepts and Skills		
NTR 100 Introduction to Nutrition Science		
NTR 241 Human Nutrition		
SSP 320 Coaching Leadership, Performance Team and Facility Management		
Human Resources Track		

Requirement	Minimum Grade	Credit Hours
Required Course:		
MGT 420 Human Resource Management		
Choose two other courses:		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		
Upper Division Business Administration Track Course	C	6
Students choose three courses from one track: Business Administration, Healthy Lifestyles Coaching, or Human Resources.		
Business Administration Track		
AGB 414 Food and Agribusiness Policy Issues		
AGB 420 Food Advertising and Promotion		
AGB 425 Food Supply Networks		

Requirement	Minimum Grade	Credit Hours
AGB 435 Commodity Futures and Options Markets		
AGB 445 Food Retailing		
AGB 452 Global Food and Agricultural Trade		
AGB 456 Food Product Innovation and Development		
AGB 481 Strategic Pricing in Food Markets		
BUS 424 Sales and Negotiations		
BUS 434 Business Risk Management		
COM 353 Professional Communication		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 420 Human Resource Management		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		
MGT 430 Negotiations		
PHI 360 Business and Professional Ethics (HUAD)		
PSY 304 Effective Thinking		
SCM 354 Procurement of Services		

Requirement	Minimum Grade	Credit Hours
SCM 385 Business and Sustainability I (SUST)		
TMC 320 Funding the Enterprise		
TWC 422 Social Media in the Workplace		
Healthy Lifestyles Coaching Track		
CHS 300 An Exploration of Well-Being (SOBE)		
CHS 340 Health Theory		
EXW 335 Physical Activity and Physiological Concepts		
EXW 400 Stress Management for Wellness		
HEP 380 Body Image and Wellness		
HSC 355 Eating for Lifelong Health (SOBE)		
HSC 440 Health Coaching Concepts and Skills		
SSP 320 Coaching Leadership, Performance Team and Facility Management		
Human Resources Track		
Required Course:		
MGT 420 Human Resource Management		
Choose two other courses:		

Requirement	Minimum Grade	Credit Hours
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		

Business Capstone

WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track

> **MAT 117 College Algebra (MATH)**
>
> **MAT 210 Brief Calculus (MATH)**

AND Mathematics (MATH)

OR **MAT 210 Track**

> Required:
>
> **MAT 210 Brief Calculus (MATH)**
>
> Choose one quantitative course from the list below:
>
> **MAT 211 Mathematics for Business Analysis** **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

C 6

Other Business Courses

ENG 302 Business Writing	3
COM 259 Communication in Business and the Professions (CIVI)	3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)	3

SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.
Students must complete a minimum of 25 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - International Business Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAIBSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate program requires a minimum of 18 credit hours (at least 12 credit hours must be upper division). All business coursework must be completed through the W. P. Carey School of Business or through an approved ASU international study program.		
International Business Core Course		
MGT 302 Principles of International Business (GCSI) **or** **ECN 306 Survey of International Economics (GCSI)**	C	3
International Business Elective		
Upper Division International Business Certificate Elective	C	6
Select two courses		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
ECN 331 Economics of the European Economic Union (GCSI)		
ECN 335 South Asia and the World Economy		

Requirement	Minimum Grade	Credit Hours
ECN 360 Economic Development (GCSI)		
ECN 365 Economics of Russia and Eastern Europe		
ECN 436 International Trade Theory		
ECN 438 International Monetary Economics		
FIN 456 International Financial Management		
MGT 302 Principles of International Business (GCSI)		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 425 Global Human Resources		
MGT 459 International Management (GCSI)		
MGT 425 Global Human Resources		
SCM 463 Global Supply Chain Management (GCSI)		
300+ level WPC subject courses earned on a sponsored ASU study abroad program may be applied toward the elective area, per approval of the international programs coordinator. Courses applied toward the W. P. Carey business core cannot be used toward the elective area.		

Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies and Individuals Coursework	C	6
Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		

Requirement	Minimum Grade	Credit Hours
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.		
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Upper Division Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.	C	3
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Foreign Language Proficiency

Foreign Language Proficiency

Requirement	Minimum Grade	Credit Hours
The certificate program requires students to meet a foreign language proficiency by meeting one of the following:		
1) Completion of one year (two semesters) of the same foreign language at the college level.		
2) Completion of one semester of the equivalent of 101- and 102-level coursework.		
3) Completion of two years of the same foreign language in high school with a minimum grade of "C" (2.00 on a 4.00 scale).		
4) Documentation of a proficiency or placement test confirming preparedness to start at least the second year of a foreign language (201 level or above).		
A student whose native language is not English may have this requirement waived.		

International Study Experience

International Study Experience

The certificate program requires students to participate in an ASU Global Education Office sponsored program.		
Students cannot use independent non-sponsored programs to fulfill this requirement. Sponsored programs can be found on the Global Education Office website.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Only courses in which a student receives a grade of "C" (2.00 on a 4.00 scale) or better may be used to meet the certificate requirements, and an overall certificate GPA of at least 2.50 must be earned.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Communication) and International Business Studies (BABUSCBA and BAIBSCERT)

Program description:
The Bachelor of Arts in business with a concentration in communication is an innovative, transdisciplinary program that prepares students for positions in a variety of professions in which business and communication play an important role in ensuring success.

Students complete rigorous courses within the communication concentration, in addition to the skill and core courses required of all W. P. Carey School of business majors.

Graduates have specific knowledge of business practices and the capacity to effectively communicate complex business information.

The certificate program in international business studies helps students develop competence in a foreign language and a sensitivity to foreign cultures. Students gain an awareness of global social processes and an understanding of international business environments, principles and operations.

The W. P. Carey School of Business has partnerships with universities all over the world, so students can experience new cultures, visit new places and build intercultural and language skills. International internships also are offered in conjunction with the ASU Global Education Office.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Business communication has exploded as a distinct professional field as companies require rapid and considered responses, conveying ordinary information as well as disseminating crisis communications. Historically, these positions have been staffed with people who are trained in communication, English, journalism or other fields but lack specific business knowledge. Graduates of this program are qualified to enter these positions with knowledge that is useful immediately to potential employers and can quickly advance graduates' careers.

Students can advance their career options with an undergraduate certificate. The certificate program in international business enables students to develop additional competencies that complement the marketable knowledge and skills they acquire in their majors.

Graduates who have completed this undergraduate certificate often decide to pursue employment in management, sales, marketing and communication. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Communication), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSCBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

COM 100 Introduction to Human Communication (SOBE)	C	3
COM 230 Teamwork and Collaboration (SOBE)	C	3
COM 259 Communication in Business and the Professions (CIVI)	C	3
COM 312 Communication, Conflict, and Negotiation (CIVI)	C	3
COM 400 Communication in Professions OR COM 403 Intercultural Business Communication (CIVI) OR COM 451 Communication and Work Relationships	C	3

Requirement	Minimum Grade	Credit Hours
COM 430 Leadership in Group Communication	C	3
COM 453 Communication Training and Development	C	3

Business Capstone

WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track	C	6
MAT 117 College Algebra (MATH)		
MAT 210 Brief Calculus (MATH)		

AND Mathematics (MATH)

OR **MAT 210 Track**

Required:

MAT 210 Brief Calculus (MATH)

Choose one quantitative course from the list below:

MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

AND Mathematics (MATH)

Students must complete two math courses. Students will complete MAT 117 and MAT 210 OR MAT 210 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar

required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 22 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - International Business Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAIBSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate program requires a minimum of 18 credit hours (at least 12 credit hours must be upper division). All business coursework must be completed through the W. P. Carey School of Business or through an approved ASU international study program.		
International Business Core Course		
MGT 302 Principles of International Business (GCSI) **or** **ECN 306 Survey of International Economics (GCSI)**	C	3
International Business Elective		
Upper Division International Business Certificate Elective	C	6
Select two courses		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
ECN 331 Economics of the European Economic Union (GCSI)		
ECN 335 South Asia and the World Economy		

Requirement	Minimum Grade	Credit Hours
ECN 360 Economic Development (GCSI)		
ECN 365 Economics of Russia and Eastern Europe		
ECN 436 International Trade Theory		
ECN 438 International Monetary Economics		
FIN 456 International Financial Management		
MGT 302 Principles of International Business (GCSI)		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 425 Global Human Resources		
MGT 459 International Management (GCSI)		
MGT 425 Global Human Resources		
SCM 463 Global Supply Chain Management (GCSI)		
300+ level WPC subject courses earned on a sponsored ASU study abroad program may be applied toward the elective area, per approval of the international programs coordinator. Courses applied toward the W. P. Carey business core cannot be used toward the elective area.		

Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies and Individuals Coursework	C	6
Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		

Requirement	Minimum Grade	Credit Hours
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.		
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Upper Division Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.	C	3
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Foreign Language Proficiency

Foreign Language Proficiency

Requirement	Minimum Grade	Credit Hours
The certificate program requires students to meet a foreign language proficiency by meeting one of the following:		
1) Completion of one year (two semesters) of the same foreign language at the college level.		
2) Completion of one semester of the equivalent of 101- and 102-level coursework.		
3) Completion of two years of the same foreign language in high school with a minimum grade of "C" (2.00 on a 4.00 scale).		
4) Documentation of a proficiency or placement test confirming preparedness to start at least the second year of a foreign language (201 level or above).		
A student whose native language is not English may have this requirement waived.		

International Study Experience

International Study Experience

The certificate program requires students to participate in an ASU Global Education Office sponsored program.		
Students cannot use independent non-sponsored programs to fulfill this requirement. Sponsored programs can be found on the Global Education Office website.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Only courses in which a student receives a grade of "C" (2.00 on a 4.00 scale) or better may be used to meet the certificate requirements, and an overall certificate GPA of at least 2.50 must be earned.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Communication) and Professional Sales (BABUSCBA and BAPRSCERT)

Program description:
The Bachelor of Arts in business with a concentration in communication is an innovative, transdisciplinary program that prepares students for positions in a variety of professions in which business and communication play an important role in ensuring success.

Students complete rigorous courses within the communication concentration, in addition to the skill and core courses required of all W. P. Carey School of business majors.

Graduates have specific knowledge of business practices and the capacity to effectively communicate complex business information.

Designed for the nonmarketing business major, the certificate program in professional sales was created for business students who are interested in pursuing the many opportunities in professional sales.

With the inclusion of courses in professional sales as well as sales management, this program prepares students to be successful account managers or sales team leaders in business-to-business and business-to-consumer settings.

An optional internship in sales is strongly encouraged as part of the program.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe

Career opportunities:
Business communication has exploded as a distinct professional field as companies require rapid and considered responses, conveying ordinary information as well as disseminating crisis communications. Historically, these positions have been staffed with people who are trained in communication, English, journalism or other fields but lack specific business knowledge. Graduates of this program are qualified to enter these positions with knowledge that is useful immediately to potential employers and can quickly advance graduates' careers.

Graduates who have combined the certificate in professional sales with their major program of study may become more marketable to employers. They often decide to pursue employment in sales, marketing or procurement.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Communication), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSCBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design **OR** **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

COM 100 Introduction to Human Communication (SOBE)	C	3
COM 230 Teamwork and Collaboration (SOBE)	C	3
COM 259 Communication in Business and the Professions (CIVI)	C	3
COM 312 Communication, Conflict, and Negotiation (CIVI)	C	3
COM 400 Communication in Professions OR COM 403 Intercultural Business Communication (CIVI) OR COM 451 Communication and Work Relationships	C	3

Requirement	Minimum Grade	Credit Hours
COM 430 Leadership in Group Communication	C	3
COM 453 Communication Training and Development	C	3

Business Capstone

WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track	C	6
MAT 117 College Algebra (MATH)		
MAT 210 Brief Calculus (MATH)		

AND Mathematics (MATH)

OR **MAT 210 Track**

Required:

MAT 210 Brief Calculus (MATH)

Choose one quantitative course from the list below:

MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

AND Mathematics (MATH)

Students must complete two math courses. Students will complete MAT 117 and MAT 210 OR MAT 210 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar

required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 22 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Professional Sales, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAPRSCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in professional sales requires 15 credit hours with at least 12 upper division credits. To receive the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.		

Required Courses

MKT 300 Marketing and Business Performance **or** MKT 303 Honors Marketing Theory and Practice	C	3
MKT 370 Professional Sales and Relationship Management	C	3
MKT 410 Sales Management	C	3

Certificate Electives

Upper Division Professional Sales Certificate Electives	C	6

Select two courses

- MGT 430 Negotiations
- MKT 435 Entrepreneurial Marketing

Requirement	Minimum Grade	Credit Hours
MKT 438 Advanced Selling Using Data and Technology		
MKT 441 Sports Revenue Generation		
MGT 484 Internship		
MKT 493 Honors Thesis		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Corporate Accounting) and Applied Business Data Analytics (BABUSCABA and BABDACERT)

Program description:
The Bachelor of Arts program in business with a concentration in corporate accounting addresses the educational needs of many students who have an interest in accounting but do not plan to enter public accounting.

Managerial accounting is the emphasis of this program. The six major courses in the concentration prepare students for corporate accounting positions by helping them develop skills in strategic financial planning, control, corporate compliance and decision-making.

Upon completion of the program, students may take the Certified Management Accountant exam.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Career opportunities are generally substantive, and graduates are in high demand. Senior management roles for corporate accountants include chief financial officer. Currently, more than half of CFOs at larger corporations have formal accounting training. The longer-term projected trend is for CFOs to have extensive corporate accounting training, particularly given that CFOs at public U.S. corporations personally sign financial statements.

Typical early- to mid-career positions held by corporate accountants include controller, treasurer and vice president in areas such as financial planning, divisional controlling, cost accounting directing, senior financial analysis and senior accounting. Individuals in these positions typically report to the CFO.

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Corporate Accounting), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSCABA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

ACC 310 Intermediate Accounting	C	3
ACC 320 Management Accounting I	C	3
ACC 454 Tax Planning	C	3
ACC 455 Governance and Enterprise Risk Management	C	3
Upper Division Corporate Accounting Major Elective Select two courses ACC 410 Financial Statement Analysis ACC 420 Management Accounting II	C	6

Requirement	Minimum Grade	Credit Hours
ACC 444 Integrated Business Processes and Enabling Technologies		
ACC 450 Principles of Auditing		
ACC 460 Ethics for Professional Accountants		
ACC 494 Topic: ESG Reporting		

Business Capstone

WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track

MAT 117 College Algebra (MATH)			
MAT 210 Brief Calculus (MATH)			
AND Mathematics (MATH)			

OR **MAT 210 Track**

Required:		
MAT 210 Brief Calculus (MATH)		
Choose one quantitative course from the list below:	C	6
MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**		
AND Mathematics (MATH)		

Students must complete two math courses. Students will complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3

WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.
Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Financial Planning) and Applied Business Data Analytics (BABUSFPBA and BABDACERT)

Program description:
The Bachelor of Arts program in business with a concentration in financial planning provides students with knowledge and experience in personal financial planning.

Students learn the necessary skills in finance, taxes, portfolio management, insurance and estate planning from leading faculty.

This program delivers to the next generation of financial planning professionals the knowledge and skills needed to develop solutions that meet clients' personal financial needs.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Financial planners are in high demand in the dynamic field of financial services and planning. Aging populations are paying closer attention to their finances as they approach retirement, and the rising need for financial planning services and advisors translates into huge opportunities for careers in this growing market. Employment of personal financial advisors is projected to grow 17% between 2023 and 2033, much faster than the average for all occupations.

Graduates of the BA program in business with a concentration in financial planning can secure employment in the growing field of financial services and planning.

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Financial Planning), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSFPBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

ACC 435 Personal Tax Management and Planning	C	3
FIN 380 Personal Financial Management	C	3
FIN 385 Personal Insurance Planning	C	3
FIN 386 Estate Planning Strategies	C	3
FIN 420 Personal Portfolio Management	C	3
FIN 460 Personal Finance Cases and Modeling	C	3

Business Capstone

Requirement	Minimum Grade	Credit Hours
WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track	C	6

> **MAT 117 College Algebra (MATH)**
>
> **MAT 210 Brief Calculus (MATH)**

AND Mathematics (MATH)

OR **MAT 210 Track**

> Required:
>
> **MAT 210 Brief Calculus (MATH)**

Choose one quantitative course from the list below:

MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**		

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business		1

WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Health Care) and Cross-Sector Leadership (BABUSHCBA and PPCSLDCERT)

Program description:
The Bachelor of Arts program in business with a concentration in health care prepares students to operate within the challenging and dynamic health care industry. Students develop skills and acquire knowledge through one of the program's five specialized tracks: health care analytics, communication, coordination, innovation and delivery.

Students in this program gain core business skills, such as in computer information systems, accounting, basic economic theory, finance, management, marketing and supply chain management, as well as in-depth knowledge related to the business of health care.

The certificate program in cross-sector leadership provides a comprehensive overview of leading solutions to complex social challenges by integrating the public, private, nonprofit and military sectors.

Students engage in a systems-thinking approach to challenges faced by local and global communities, explore the diverse characteristics and motives of each sector in engaging in cross-sector collaborations, and master processes to formalize such partnerships. Students study values-based leadership and how individual, organizational and sector values can drive a leader's ability to act. Students gain leadership skills, such as leading change within and between organizations across multiple sectors; and they learn to use human-centered design, social entrepreneurship and other approaches when tackling community challenges.

Students end the program with a thesis or applied project that integrates the theories, procedures and concepts learned in the certificate courses with experiences from their internships in each sector.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: West Valley
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Graduates have the ability to understand different stakeholders in complex environments. They are prepared for careers in health care management, administration, access, analytics and policy-setting in public or private health care settings.

Students can advance their career options with an undergraduate certificate.

Graduates of the certificate in cross-sector leadership have acquired a beneficial knowledge of cross-sector collaboration, advanced leadership skills, and an understanding of how to use these. These transferrable skills complement students' major program of study and may make them more marketable to employers.

Curriculum - Business (Health Care), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSHCBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR WPC 347 Intermediate Career Management	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division International Business Course		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
MGT 302 Principles of International Business (GCSI)	C	3
MKT 425 Global Marketing Management (GCSI)		
SCM 463 Global Supply Chain Management (GCSI)		
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

HCR 220 Introduction to Health Professions and the U.S. Health Care System (CIVI)	C	3
Business Health Care Track Course	C	3
Students choose one of the five Health Care tracks: Health Care Analytics, Health Care Community, Health Care Coordination, Health Care Delivery, or Health Care Innovation.		
Health Care Analytics Track:		
CIS 235 Introduction to Information Systems, Analytics and AI in Business		
CIS 308 Advanced Excel in Business		
CIS 310 Business Data Visualization		
CIS 405 Business Intelligence		

Requirement	Minimum Grade	Credit Hours
Health Care Community Track:		
HCR 231 Fundamentals of Community Health		
HCR 335 Program Development and Management for Community Health		
HCR 430 Foundation to Health Care Systems		
HCR 435 Leaders in Community Health		
Health Care Coordination Track:		
HCR 302 Social Determinants of Health		
HCR 321 Advanced Concepts for Health Care Coordination		
HCR 420 Professional Role Development: Health Care Coordination		
HCR 422 Policy and Financial Principles in Health Care Coordination		
Health Care Delivery Track:		
HCD 302 Health Care Management		
HCD 303 Global Health Care Systems (GCSI)		
HCD 304 Health Care Finance		
HCD 330 Health Care Systems in the U.S. (CIVI)		
HCD 402 Health Economics (SOBE)		
HCD 403 Process Engineering		
MED 450 Leadership and Professionalism		

Requirement	Minimum Grade	Credit Hours
Health Care Innovation Track:		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		
Upper Division Business Health Care Track Course	C	9
Students choose one of the five Health Care tracks: Health Care Analytics, Health Care Community, Health Care Coordination, Health Care Delivery, or Health Care Innovation.		
Health Care Analytics Track:		
CIS 308 Advanced Excel in Business		
CIS 310 Business Data Visualization		
CIS 405 Business Intelligence		
Health Care Community Track:		
HCR 335 Program Development and Management for Community Health		
HCR 430 Foundation to Health Care Systems		
HCR 435 Leaders in Community Health		
Health Care Coordination Track:		
HCR 302 Social Determinants of Health		

Requirement	Minimum Grade	Credit Hours
HCR 321 Advanced Concepts for Health Care Coordination		
HCR 420 Professional Role Development: Health Care Coordination		
HCR 422 Policy and Financial Principles in Health Care Coordination		
Health Care Delivery Track:		
HCD 302 Health Care Management		
HCD 303 Global Health Care Systems (GCSI)		
HCD 304 Health Care Finance		
HCD 330 Health Care Systems in the U.S. (CIVI)		
HCD 402 Health Economics (SOBE)		
HCD 403 Process Engineering		
MED 450 Leadership and Professionalism		
Health Care Innovation Track:		
HCI 311 Health Innovation: Foundational Concepts		
HCI 421 Health Care Policy: The Innovator's View (CIVI)		
HCI 425 Facilitating Innovation to Achieve Outcomes		
HCI 428 Technology: A Tool to Advance Innovation in Health Care		

Requirement	Minimum Grade	Credit Hours
Business Capstone		
WPC 470 Business Leadership Capstone	C	3
Business Skills Courses		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3
Business Skill - Math Courses		
MAT 117 Track	C	6
MAT 117 College Algebra (MATH)		
MAT 210 Brief Calculus (MATH)		
AND Mathematics (MATH)		
OR MAT 210 Track		
Required:		
MAT 210 Brief Calculus (MATH)		

Choose one quantitative course from the list below:

MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 22 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Cross-Sector Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPCSLDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in cross-sector leadership is a requirement for, and is limited to, participants in the Public Service Academy's Next Generation Service Corps, a four-year leadership development track that engages future civilian leaders in the public, private and nonprofit sectors to engage in collaboration and change in the context of social challenges in which they hold interest. Students are required to demonstrate forward academic progress to maintain enrollment in the certificate as well as the Next Generation Service Corps. ROTC students also may pursue the certificate.		
PAF 215 NGSC Community Impact Lab	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 315 Cross-Sector Collaboration (CIVI)	C	3
PAF 415 Social Entrepreneurship	C	3
PAF 394 Topic: NGSC Leadership Instruction **or** **PAF 421 Leadership Capstone**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Human Resources) and Digital Business Innovation (BABUSHRBA and BADBICERT)

Program description:
The Bachelor of Arts program in business with a concentration in human resources involves both theoretical and applied concepts, with a focus on practical and applied aspects of human resources.

Students obtain foundational knowledge in labor relations and labor law; workforce planning; artificial intelligence influences in the employment arena; and diversity, equity and inclusion (commonly abbreviated as DEI) practices; they also engage in a deep exploration of staffing, global HR, training and development, employment law, and compensation and benefits. Students have an opportunity to participate in an HR project internship as part of their coursework.

The certificate program in digital business innovation provides students with a broad overview of today's digital information systems. Students are exposed to modern tools for transforming business processes, maintaining digital presence and developing analytical insights.

Students who complete the program are well suited for the business landscape, phenomenally transformed in recent years by digital innovations.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates have the knowledge, abilities and comprehensive set of skills to move into any business, industry or governmental organization and perform strategic human capital work as well as human resource technical work. As the national dialogue evolves regarding recruiting top talent, implementing robust DEI programming inside organizations, retaining and engaging workers, addressing employee relations and employment law concerns, implementing competitive and ethical compensation, and leveraging technology (i.e., automation, AI, etc.) in the workplace, the human resources profession remains highly relevant, and career opportunities continue to grow significantly.

Graduates who have combined the certificate in digital innovation with their major program of study may become more marketable to employers. They often decide to pursue employment in management, marketing, sales or communication.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Human Resources), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSHRBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR WPC 347 Intermediate Career Management	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division International Business Course		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
MGT 302 Principles of International Business (GCSI)	C	3
MKT 425 Global Marketing Management (GCSI)		
SCM 463 Global Supply Chain Management (GCSI)		
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

MGT 420 Human Resource Management	C	3
MGT 421 Compensation in Organizations	C	3
MGT 422 Staffing	C	3
MGT 423 Training and Development in Organizations	C	3
MGT 424 Employment Law	C	3
MGT 425 Global Human Resources	C	3

Business Capstone

WPC 470 Business Leadership Capstone	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track C 6

> **MAT 117 College Algebra (MATH)**
>
> **MAT 210 Brief Calculus (MATH)**

AND Mathematics (MATH)

OR **MAT 210 Track**

> Required:
>
> **MAT 210 Brief Calculus (MATH)**
>
> Choose one quantitative course from the list below:
>
> **MAT 211 Mathematics for Business Analysis** **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Digital Business Innovation, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BADBICERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in digital business innovation requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 235 Introduction to Information Systems, Analytics and AI in Business	C	3
CIS 300 Web Design and Development	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 311 Business Agile Project Management	C	3
CIS 312 Business Mobile Commerce and Monetization	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Language and Culture) and International Business Studies (BABSLACUBA and BAIBSCERT)

Program description:
The Bachelor of Arts program in business with a concentration in language and culture is an innovative, transdisciplinary program that prepares students for positions in a variety of professions in which business and communication play an important role in ensuring success.

Students complete rigorous language courses in Chinese, French, Italian or Spanish --- in addition to the skill and core courses required of all W. P. Carey School of Business students --- enabling them to become business professionals who can function well culturally and linguistically in the business environments of international and domestic markets.

The certificate program in international business studies helps students develop competence in a foreign language and a sensitivity to foreign cultures. Students gain an awareness of global social processes and an understanding of international business environments, principles and operations.

The W. P. Carey School of Business has partnerships with universities all over the world, so students can experience new cultures, visit new places and build intercultural and language skills. International internships also are offered in conjunction with the ASU Global Education Office.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, West Valley
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates of this program are equipped to play a key role in companies and organizations that are seeking new markets or dealing with international interests domestically. The demand for multilingual business professionals is strong in the hotel and tourism industry and in consulting, banking and finance, international trade, sports management and media companies.

Students can advance their career options with an undergraduate certificate. The certificate program in international business enables students to develop additional competencies that complement the marketable knowledge and skills they acquire in their majors.

Graduates who have completed this undergraduate certificate often decide to pursue employment in management, sales, marketing and communication. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Language and Culture), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABSLACUBA
Minimum credit hours: 120
Upper division minimum credit hours: 51.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course **AGB 302 International Management and Agribusiness (GCSI)** **ECN 306 Survey of International Economics (GCSI)** **ECN 360 Economic Development (GCSI)** **MGT 302 Principles of International Business (GCSI)** **MGT 400 Cross-Cultural Management (GCSI)** **MKT 425 Global Marketing Management (GCSI)** **SCM 463 Global Supply Chain Management (GCSI)**	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

MGT 459 International Management (GCSI)	C	3
Business Language and Culture Track Course Students select one language track: Chinese, Chinese Native Speaker, French, Italian, or Spanish. Chinese Language Track **CHI 120 Introduction to Chinese Culture (HUAD)** **CHI 201 Intermediate Chinese I**	C	11

Requirement	Minimum Grade	Credit Hours
CHI 301 Third-Year Chinese I		
CHI 302 Third-Year Chinese II		
CHI 333 China or **CHI 336 Interpreting China's Classics** or **CHI 343 Daoism (HUAD)**		
CHI 338 Daode Jing: Way to the West or **CHI 451 Chinese Cultural History I**		
CHI 401 Fourth-Year Chinese I		
CHI 402 Fourth-Year Chinese II		
CHI 407 Chinese for Academic and Professional Purposes I		
Chinese Native Speaker Language Track		
Complete all four courses below:		
CHI 307 Introduction to Literary Chinese I		
CHI 308 Introduction to Literary Chinese II		
CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)		
CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation		
Choose six course from below:		
CHI 333 China		
CHI 336 Interpreting China's Classics		
CHI 338 Daode Jing: Way to the West		

Requirement	Minimum Grade	Credit Hours
CHI 343 Daoism (HUAD)		
CHI 345 Chinese Film and Civilization		
CHI 451 Chinese Cultural History I		
CHI 452 Chinese Cultural History II		
CHI 470 Modern Chinese Literature and Culture		
French Language Track		
FRE 201 Intermediate French I **or** **FRE 110 Intensive French I**		
FRE 202 Intermediate French II **or** **FRE 210 Intensive French II**		
FRE 305 Readings in French Literature		
FRE 311 Oral and Written Expression I		
FRE 312 Oral and Written Expression II		
FRE 319 Business French		
FRE 321 French Cultural Masterpieces I		
FRE 411 Advanced Spoken French		
FRE 412 Advanced Written French		
FRE 416 French Civilization II		
Italian Language Track		
ITA 201 Intermediate Italian I **or** **ITA 110 Intensive Italian I**		

Requirement	Minimum Grade	Credit Hours
ITA 202 Intermediate Italian II or ITA 210 Intensive Italian II		
ITA 311 Speak Italy: Language, People, Culture		
ITA 312 Write Italy: Language, People, Culture		
ITA 319 Italian for Professions		
ITA 321 Italian Renaissance Culture: Politicians, Merchants, Artists and Courtesans		
ITA 322 Modern Italian Culture: Explorers, Scientists, Musicians and Revolutionaries (HUAD)		
ITA 413 Advanced Italian		
ITA 414 French and Italian Popular Culture (GCSI) or ITA 420 Italian Cinema		
Spanish Language Track		
SPA 201 Intermediate Spanish or SPA 203 Intermediate Spanish I for Bilinguals or SPA 110 Intensive Spanish I		
SPA 202 Intermediate Spanish or SPA 204 Intermediate Spanish II for Bilinguals or SPA 210 Intensive Spanish II		
SPA 313 Spanish Conversation and Composition or SPA 315 Advanced Spanish I for Bilinguals (SOBE)		
SPA 314 Spanish Conversation and Composition or SPA 316 Advanced Spanish II for Bilinguals (CIVI)		

Requirement	Minimum Grade	Credit Hours
SPA 319 Business Correspondence and Communication		
SPA 325 Introduction to Hispanic Literature (HUAD)		
400-Level SPA Elective Recommended: **SPA 472**		
SPA 402 Mastering Professional Spanish Writing **or** **SPA 405 Latino Cultural Perspectives for the Professions (HUAD)**		
SPA 412 Advanced Conversation and Composition		
Upper Division SPA Elective		
Upper Division Business Language and Culture Track Course	C	21
Students select one language track: Chinese, Chinese Native Speaker, French, Italian, or Spanish.		
Chinese Language Track		
CHI 301 Third-Year Chinese I		
CHI 302 Third-Year Chinese II		
CHI 333 China **or** **CHI 336 Interpreting China's Classics** **or** **CHI 343 Daoism (HUAD)**		
CHI 338 Daode Jing: Way to the West **or** **CHI 451 Chinese Cultural History I**		
CHI 401 Fourth-Year Chinese I		
CHI 402 Fourth-Year Chinese II		

Requirement	Minimum Grade	Credit Hours
CHI 407 Chinese for Academic and Professional Purposes I		
Chinese Native Speaker Language Track		
Complete all four courses below:		
CHI 307 Introduction to Literary Chinese I		
CHI 308 Introduction to Literary Chinese II		
CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)		
CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation		
Choose six course from below:		
CHI 333 China		
CHI 336 Interpreting China's Classics		
CHI 338 Daode Jing: Way to the West		
CHI 343 Daoism (HUAD)		
CHI 345 Chinese Film and Civilization		
CHI 451 Chinese Cultural History I		
CHI 452 Chinese Cultural History II		
CHI 470 Modern Chinese Literature and Culture		
French Language Track		
FRE 305 Readings in French Literature		

Requirement	Minimum Grade	Credit Hours
FRE 311 Oral and Written Expression I		
FRE 312 Oral and Written Expression II		
FRE 319 Business French		
FRE 321 French Cultural Masterpieces I		
FRE 411 Advanced Spoken French		
FRE 412 Advanced Written French		
FRE 416 French Civilization II		
Italian Language Track		
ITA 311 Speak Italy: Language, People, Culture		
ITA 312 Write Italy: Language, People, Culture		
ITA 319 Italian for Professions		
ITA 321 Italian Renaissance Culture: Politicians, Merchants, Artists and Courtesans		
ITA 322 Modern Italian Culture: Explorers, Scientists, Musicians and Revolutionaries (HUAD)		
ITA 413 Advanced Italian		
ITA 414 French and Italian Popular Culture (GCSI) **or** **ITA 420 Italian Cinema**		
Spanish Language Track		
SPA 313 Spanish Conversation and Composition **or** **SPA 315 Advanced Spanish I for Bilinguals (SOBE)**		

Requirement	Minimum Grade	Credit Hours
SPA 314 Spanish Conversation and Composition **or** **SPA 316 Advanced Spanish II for Bilinguals (CIVI)**		
SPA 319 Business Correspondence and Communication		
SPA 325 Introduction to Hispanic Literature (HUAD)		
400-Level SPA Elective Recommended: **SPA 472**		
SPA 402 Mastering Professional Spanish Writing **or** **SPA 405 Latino Cultural Perspectives for the Professions (HUAD)**		
SPA 412 Advanced Conversation and Composition		
Upper Division SPA Elective		

Business Capstone

WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3

ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track

> **MAT 117 College Algebra (MATH)**
>
> **MAT 210 Brief Calculus (MATH)**

AND Mathematics (MATH)

OR **MAT 210 Track**

> Required:
>
> **MAT 210 Brief Calculus (MATH)**
>
> Choose one quantitative course from the list below:
>
> **MAT 211 Mathematics for Business Analysis** **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

C 6

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.
Students must complete a minimum of 25 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - International Business Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAIBSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate program requires a minimum of 18 credit hours (at least 12 credit hours must be upper division). All business coursework must be completed through the W. P. Carey School of Business or through an approved ASU international study program.		
International Business Core Course		
MGT 302 Principles of International Business (GCSI) **or** **ECN 306 Survey of International Economics (GCSI)**	C	3
International Business Elective		
Upper Division International Business Certificate Elective	C	6
Select two courses		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
ECN 331 Economics of the European Economic Union (GCSI)		
ECN 335 South Asia and the World Economy		

Requirement	Minimum Grade	Credit Hours
ECN 360 Economic Development (GCSI)		
ECN 365 Economics of Russia and Eastern Europe		
ECN 436 International Trade Theory		
ECN 438 International Monetary Economics		
FIN 456 International Financial Management		
MGT 302 Principles of International Business (GCSI)		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 425 Global Human Resources		
MGT 459 International Management (GCSI)		
MGT 425 Global Human Resources		
SCM 463 Global Supply Chain Management (GCSI)		
300+ level WPC subject courses earned on a sponsored ASU study abroad program may be applied toward the elective area, per approval of the international programs coordinator. Courses applied toward the W. P. Carey business core cannot be used toward the elective area.		

Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies and Individuals Coursework	C	6
Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		

Requirement	Minimum Grade	Credit Hours
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.		
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Upper Division Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.	C	3
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Foreign Language Proficiency

Foreign Language Proficiency

Requirement	Minimum Grade	Credit Hours
The certificate program requires students to meet a foreign language proficiency by meeting one of the following:		
1) Completion of one year (two semesters) of the same foreign language at the college level.		
2) Completion of one semester of the equivalent of 101- and 102-level coursework.		
3) Completion of two years of the same foreign language in high school with a minimum grade of "C" (2.00 on a 4.00 scale).		
4) Documentation of a proficiency or placement test confirming preparedness to start at least the second year of a foreign language (201 level or above).		
A student whose native language is not English may have this requirement waived.		

International Study Experience

International Study Experience

The certificate program requires students to participate in an ASU Global Education Office sponsored program.		
Students cannot use independent non-sponsored programs to fulfill this requirement. Sponsored programs can be found on the Global Education Office website.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Only courses in which a student receives a grade of "C" (2.00 on a 4.00 scale) or better may be used to meet the certificate requirements, and an overall certificate GPA of at least 2.50 must be earned.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Law) and Sports, Cultures and Ethics (BABUSLBA and LASPCECERT)

Program description:
The Bachelor of Arts program in business with a concentration in law is an innovative, transdisciplinary program intended to prepare students for positions in a variety of professions in which business and law play an important role in ensuring success.

The law concentration, with its strong business background, gives students a systematic framework for analyzing actual legal regulation and corresponding business risks and liabilities. Students complete rigorous courses within the law concentration, in addition to the skill and core courses required of all W. P. Carey School of Business majors.

The certificate program in sports, cultures and ethics is a cross-disciplinary inquiry into the social, ethical and cultural influence of sports in society.

Courses explore the significance of sports in modern history, including relationships between sports and identity, community, politics, media, business and education. Students analyze the ethical and philosophical issues of participating in and watching sports. Students also explore how playing fields become places of connection and conflict, expanding opportunities or reinforcing inequalities based on race, gender, sexuality, religion and socioeconomic class.

Students who complete the program have knowledge and understanding of the multifaceted nature of sports and its wide-ranging impact on cultures and lives.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates of the law concentration pursue careers in the business world, and exposure to aspects of law and legal issues assists them in attaining their career goals. Graduates are prepared to use their skills in a variety of industries and in areas as diverse as new business ventures and corporate or agency compliance.

Students who combine the certificate in sports, cultures and ethics with their major program of study become more marketable to employers.

Students who complete this undergraduate certificate often decide to pursue employment in sports business, sports journalism, sports law, education, sports governance and administration, coaching or the sports sciences. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Law), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSLBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

LES 210 Introduction to American Legal System and Business Law	C	3
Business Law Major Elective AGB 414 Food and Agribusiness Policy Issues COM 222 Argumentation (CIVI) COM 326 Court Room Oratory ENG 216 Persuasive Writing on Public Issues (CIVI) ENG 472 Rhetorical Studies HST 322 Constitutional History of the United States	C	3

Requirement	Minimum Grade	Credit Hours
Since 1865		
LES 380 Consumer Perspective of Business Law		
LES 394 Special Topics		
LES 494 Special Topics		
MGT 420 Human Resource Management		
MGT 424 Employment Law		
MGT 430 Negotiations		
PHI 103 Principles of Sound Reasoning (QTRS)		
PHI 307 Philosophy of Law (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 465 International Organization and Law (GCSI)		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		
POS 484 Internship		
(Maximum three credits of POS 484 may be applied toward the major)		
REA 411 Real Estate Law		
Upper Division Business Law Major Elective	C	9
AGB 414 Food and Agribusiness Policy Issues		
COM 326 Court Room Oratory		

Requirement	Minimum Grade	Credit Hours
ENG 472 Rhetorical Studies		
HST 322 Constitutional History of the United States Since 1865		
LES 380 Consumer Perspective of Business Law		
LES 394 Special Topics		
LES 494 Special Topics		
MGT 420 Human Resource Management		
MGT 424 Employment Law		
MGT 430 Negotiations		
PHI 307 Philosophy of Law (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 465 International Organization and Law (GCSI)		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		
POS 484 Internship		
(Maximum three credits of POS 484 may be applied toward the major)		
REA 411 Real Estate Law		
LES 480 Business Law	C	3

Requirement	Minimum Grade	Credit Hours
Business Capstone		
WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3
Business Skills Courses		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3
Business Skill - Math Courses		
MAT 117 Track	C	6
MAT 117 College Algebra (MATH)		
MAT 210 Brief Calculus (MATH)		
AND Mathematics (MATH)		
OR **MAT 210 Track**		

Required:

MAT 210 Brief Calculus (MATH)

Choose one quantitative course from the list below:

MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar

required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 22 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Sports, Cultures and Ethics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LASPCECERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in sports, cultures and ethics requires a minimum of 18 credit hours, of which at least 12 must be upper division. At least six upper-division hours must be in courses offered by The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search. All courses for the certificate must be passed with a minimum grade of "C" (2.00 on a 4.00 scale).		
AFR 375 Race, Gender and Sport (SOBE) **or** **HST 377 Sports in United States History (HUAD)**	C	3
PHI 370 Sports Ethics (HUAD)	C	3
Upper Division Electives AFR 375 or HST 377 may be used as an elective if not used as a required sports culture course. **AFR 375 Race, Gender and Sport (SOBE)** **CEL 394 Topic: Sports and Leadership** **COM 394** / **SBS 394** / **SOC 394 Topic: Soccer: The Global Game** **COM 477 Sport, Culture, and Discourses** **CSM 335** / **PRM 335 Sports and Recreation for Youth Development**	C	6

Requirement	Minimum Grade	Credit Hours
FMS 360 Topic: Sports Media		
HST 302 Topic: History of the Olympic Movement		
HST 302 Topic: The Mexico City 1968 Olympics in Global Context		
HST 306 Topic: History of Baseball		
HST 377 Sports in United States History (HUAD)		
HST 379 History of College Sports		
HST 494 / MCO 494 / TGM 494 Topic: Sport and Globalization		
NEW 300 Topic: International Cities Barcelona		
PHI 371 Philosophy of Sport		
PHI 394 Topic: The Olympics and Philosophy		
REL 383 / ASB 383 Religion and Sports (HUAD)		
SGS 394 Topic: The Geopolitics of Sport		
Electives	C	6
AFR 375 or HST 377 may be used as an elective if not used as a required sports culture course.		
AFR 375 Race, Gender and Sport (SOBE)		
ASB 252 Sports and Culture (GCSI)		
CEL 394 Topic: Sports and Leadership		
COM 394 / SBS 394 / SOC 394 Topic: Soccer: The Global Game		
COM 477 Sport, Culture, and Discourses		
CSM 335 / PRM 335 Sports and Recreation for Youth Development		
FMS 360 Topic: Sports Media		

Requirement	Minimum Grade	Credit Hours
HST 214 / SLC 214 The World's Game: History and Culture of Soccer		
HST 302 Topic: History of the Olympic Movement		
HST 302 Topic: The Mexico City 1968 Olympics in Global Context		
HST 306 Topic: History of Baseball		
HST 377 Sports in United States History (HUAD)		
HST 379 History of College Sports		
HST 494 / MCO 494 / TGM 494 Topic: Sport and Globalization		
NEW 300 Topic: International Cities Barcelona		
PHI 371 Philosophy of Sport		
PHI 394 Topic: The Olympics and Philosophy		
POS 294 Topic: Sports, Politics, & the Law		
REL 383 / ASB 383 Religion and Sports (HUAD)		
SGS 394 Topic: The Geopolitics of Sport		
SOC 220 Sociology of Sport		

Additional courses related to sports, cultures and ethics that are not on the Electives list may be used with the approval of the certificate directors.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Not all courses listed for this program are available every term. Students should consult the class schedule prior to each term to confirm course availability.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Law) and Veterans, Society and Service (BABUSLBA and LAVSSCERT)

Program description:
The Bachelor of Arts program in business with a concentration in law is an innovative, transdisciplinary program intended to prepare students for positions in a variety of professions in which business and law play an important role in ensuring success.

The law concentration, with its strong business background, gives students a systematic framework for analyzing actual legal regulation and corresponding business risks and liabilities. Students complete rigorous courses within the law concentration, in addition to the skill and core courses required of all W. P. Carey School of Business majors.

Through the certificate program in veterans, society and service, students explore the history, representations, experiences and culture of military service and veterans.

Students study the veteran community with an interdisciplinary approach that combines history, politics, business, journalism, psychology, law, sociology and the arts through the intersectional lenses of gender, race, ethnicity and national identity. This program trains students to listen to, learn from, serve, research and advocate for veterans and their families.

Future professionals and current employees at government agencies, health provider organizations, nonprofit organizations and media industries can benefit from this multifaceted certificate program.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Tempe or Online

Career opportunities:
Graduates of the law concentration pursue careers in the business world, and exposure to aspects of law and legal issues assists them in attaining their career goals. Graduates are prepared to use their skills in a variety of industries and in areas as diverse as new business ventures and corporate or agency compliance.

Students can advance their career options with an undergraduate certificate.

Graduates who have combined the certificate in veterans, society and service with their major program of study may become more marketable to employers.

Graduates often pursue employment as health care social workers, social and community service managers, or community health workers. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Law), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSLBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

LES 210 Introduction to American Legal System and Business Law	C	3
Business Law Major Elective AGB 414 Food and Agribusiness Policy Issues COM 222 Argumentation (CIVI) COM 326 Court Room Oratory ENG 216 Persuasive Writing on Public Issues (CIVI) ENG 472 Rhetorical Studies HST 322 Constitutional History of the United States	C	3

Requirement	Minimum Grade	Credit Hours
Since 1865		
LES 380 Consumer Perspective of Business Law		
LES 394 Special Topics		
LES 494 Special Topics		
MGT 420 Human Resource Management		
MGT 424 Employment Law		
MGT 430 Negotiations		
PHI 103 Principles of Sound Reasoning (QTRS)		
PHI 307 Philosophy of Law (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 465 International Organization and Law (GCSI)		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		
POS 484 Internship		
(Maximum three credits of POS 484 may be applied toward the major)		
REA 411 Real Estate Law		
Upper Division Business Law Major Elective	C	9
AGB 414 Food and Agribusiness Policy Issues		
COM 326 Court Room Oratory		

Requirement	Minimum Grade	Credit Hours
ENG 472 Rhetorical Studies		
HST 322 Constitutional History of the United States Since 1865		
LES 380 Consumer Perspective of Business Law		
LES 394 Special Topics		
LES 494 Special Topics		
MGT 420 Human Resource Management		
MGT 424 Employment Law		
MGT 430 Negotiations		
PHI 307 Philosophy of Law (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 465 International Organization and Law (GCSI)		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		
POS 484 Internship		
(Maximum three credits of POS 484 may be applied toward the major)		
REA 411 Real Estate Law		
LES 480 Business Law	C	3

Requirement	Minimum Grade	Credit Hours
Business Capstone		
WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3
Business Skills Courses		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3
Business Skill - Math Courses		
MAT 117 Track	C	6
MAT 117 College Algebra (MATH)		
MAT 210 Brief Calculus (MATH)		
AND Mathematics (MATH)		
OR **MAT 210 Track**		

Required:

MAT 210 Brief Calculus (MATH)

Choose one quantitative course from the list below:

MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar

required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 22 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Veterans, Society and Service, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LAVSSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires 18 credit hours, of which at least 12 credit hours must be completed at the upper-division level and nine must be completed at ASU. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Required Courses

MVS 100 Introduction to Military Studies	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals or **MVS 301 Experience of America's Modern Wars**	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3

Elective

Upper Division Electives	C	3
AFR 494 Topic: Black Military History		

Requirement	Minimum Grade	Credit Hours
CAP 316 Combat Trauma		
CAP 336 Counseling Military Veterans		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 414 Crisis Communication		
COM 420 Rhetoric and Community Advocacy		
HST 302 Topic: War and Political Thought		
HST 302 Topic: Women, War and Peace		
HST 306 Topic: World War II		
HST 340 American Military History (HUAD)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 372 Modern Middle East (GCSI)		
HST 456 The Vietnam War (HUAD)		
IAP 307 Art and War (GCSI)		
ISS 428 Religion and Global Violence (GCSI)		
ISS 441 Conflict and Conflict Resolution		
ISS 456 Culture, Conflict and War		
JST 346 Israeli Wars in Israeli Movies		
MCO 494 Topic: War and Media		
MVS 376 Writing a Personal History		
MVS 394 Special Topics		
MVS 395 Combat in Film		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		

Requirement	Minimum Grade	Credit Hours
MVS 494 Special Topics		
PAF 302 Public Service Research Methods		
POS 310 American National Government (AMIT)		
POS 316 American Political Institutions (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 346 Problems of Democracy (HUAD)		
POS 350 Comparative Politics (GCSI)		
POS 360 World Politics (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 378 / **REL 378 Religion, War and Peace (CIVI)**		
POS 414 Political History and Leadership		
POS 426 Elements of Public Policy		
POS 467 International Security (GCSI)		
SGS 394 Topic: Gender and Armed Conflict		

Internship

MVS 484 Internship All students must complete an internship and should review their internship options, including virtual, with the CISA internship coordinator. Prerequisite courses may be needed in order to complete the requirements of this certificate.	C	3

Notes

Prerequisite courses may be needed in order to complete the

requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Sports Business) and Applied Business Data Analytics (BABUSMSBA and BABDACERT)

Program description:
The Bachelor of Arts program in business with a concentration in sports business is attractive to students with an interest in the sports industry.

Students acquire the skills necessary to build knowledge and understanding of the development of the strategic business process in sports organizations and its relationship to media. The program emphasizes practical aspects of the sports industry, particularly focusing on media and its influence on the field.

The proliferation of mass communication, including television, game systems and social networks, has transformed sports into a highly commercialized industry; in turn, sports continue to generate revenues for these businesses. The interaction between sports and media has led to a multitude of applications of business knowledge to these fields.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates with this concentration find opportunities in mass communication, including television, game systems and social networks. Career opportunities for graduates include these positions:

- administrative service manager
- advertising and sponsorship salesperson
- agent
- business manager
- event planner
- management analyst
- operations specialist
- purchasing or buying manager
- wholesale and manufacturing representative

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Sports Business), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSMSBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

MKT 311 Sports Business	C	3
MKT 421 Fan Behavior and Sports Marketing	C	3
MCO 465 Sports and Media	C	3
Upper Division Sports Business Major Elective Select three courses AFR 375 Race, Gender and Sport (SOBE) MCO 420 Strategic Sports Communication MKT 412 Innovations in Marketing	C	9

Requirement	Minimum Grade	Credit Hours
MKT 420 Retail Management		
MKT 431 Sports Experiences		
MKT 441 Sports Revenue Generation		
MKT 451 Sports Business Analytics		
MKT 465 Projects in Sports Business		
MKT 484 Internship		
(Maximum three credits of MKT 484 may be applied towards the major)		
MKT 493 Honors Thesis		
MKT 494 Special Topics		
(MKT 494 Special Topics course must be sports related to apply towards the major)		

Business Capstone

WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3

ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track

> **MAT 117 College Algebra (MATH)**
>
> **MAT 210 Brief Calculus (MATH)**

AND Mathematics (MATH)

OR **MAT 210 Track**

> Required:
>
> **MAT 210 Brief Calculus (MATH)**
>
> Choose one quantitative course from the list below:
>
> **MAT 211 Mathematics for Business Analysis** **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

C 6

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 26 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Business (Sports Business) and International Business Studies (BABUSMSBA and BAIBSCERT)

Program description:
The Bachelor of Arts program in business with a concentration in sports business is attractive to students with an interest in the sports industry.

Students acquire the skills necessary to build knowledge and understanding of the development of the strategic business process in sports organizations and its relationship to media. The program emphasizes practical aspects of the sports industry, particularly focusing on media and its influence on the field.

The proliferation of mass communication, including television, game systems and social networks, has transformed sports into a highly commercialized industry; in turn, sports continue to generate revenues for these businesses. The interaction between sports and media has led to a multitude of applications of business knowledge to these fields.

The certificate program in international business studies helps students develop competence in a foreign language and a sensitivity to foreign cultures. Students gain an awareness of global social processes and an understanding of international business environments, principles and operations.

The W. P. Carey School of Business has partnerships with universities all over the world, so students can experience new cultures, visit new places and build intercultural and language skills. International internships also are offered in conjunction with the ASU Global Education Office.

BA At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
or MAT 117 College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates with this concentration find opportunities in mass communication, including television, game systems and social networks. Career opportunities for graduates include these positions:

- administrative service manager
- advertising and sponsorship salesperson
- agent
- business manager
- event planner
- management analyst
- operations specialist
- purchasing or buying manager
- wholesale and manufacturing representative

Students can advance their career options with an undergraduate certificate. The certificate program in international business enables students to develop additional competencies that complement the marketable knowledge and skills they acquire in their majors.

Graduates who have completed this undergraduate certificate often decide to pursue employment in management, sales, marketing and communication. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Business (Sports Business), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: W. P. Carey School of Business
Plan Code: BABUSMSBA
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248 after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
MKT 300 Marketing and Business Performance	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course **AGB 302 International Management and Agribusiness (GCSI)** **ECN 306 Survey of International Economics (GCSI)** **MGT 302 Principles of International Business (GCSI)** **MKT 425 Global Marketing Management (GCSI)** **SCM 463 Global Supply Chain Management (GCSI)**	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

MKT 311 Sports Business	C	3
MKT 421 Fan Behavior and Sports Marketing	C	3
MCO 465 Sports and Media	C	3
Upper Division Sports Business Major Elective Select three courses **AFR 375 Race, Gender and Sport (SOBE)** **MCO 420 Strategic Sports Communication** **MKT 412 Innovations in Marketing**	C	9

Requirement	Minimum Grade	Credit Hours
MKT 420 Retail Management		
MKT 431 Sports Experiences		
MKT 441 Sports Revenue Generation		
MKT 451 Sports Business Analytics		
MKT 465 Projects in Sports Business		
MKT 484 Internship		
(Maximum three credits of MKT 484 may be applied towards the major)		
MKT 493 Honors Thesis		
MKT 494 Special Topics		
(MKT 494 Special Topics course must be sports related to apply towards the major)		

Business Capstone

WPC 470 Business Leadership Capstone All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 470.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3

ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 221 Business Statistics (QTRS)	C	3

Business Skill - Math Courses

MAT 117 Track

MAT 117 College Algebra (MATH)

MAT 210 Brief Calculus (MATH)

AND Mathematics (MATH)

OR **MAT 210 Track**

Required:

MAT 210 Brief Calculus (MATH)

Choose one quantitative course from the list below: C 6

MAT 211 Mathematics for Business Analysis **or** **ACO 100 All About Data: Design, Query, and Visualization (QTRS)** **or** **EDS 223 Design Thinking** **or** **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**

AND Mathematics (MATH)

Students must complete two math courses. Students either complete MAT 117 and MAT 210 OR MAT 210 and MAT 211 or a quantitative course.

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must complete a minimum of 26 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - International Business Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAIBSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate program requires a minimum of 18 credit hours (at least 12 credit hours must be upper division). All business coursework must be completed through the W. P. Carey School of Business or through an approved ASU international study program.		
International Business Core Course		
MGT 302 Principles of International Business (GCSI) **or** **ECN 306 Survey of International Economics (GCSI)**	C	3
International Business Elective		
Upper Division International Business Certificate Elective	C	6
Select two courses		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
ECN 331 Economics of the European Economic Union (GCSI)		
ECN 335 South Asia and the World Economy		

Requirement	Minimum Grade	Credit Hours
ECN 360 Economic Development (GCSI)		
ECN 365 Economics of Russia and Eastern Europe		
ECN 436 International Trade Theory		
ECN 438 International Monetary Economics		
FIN 456 International Financial Management		
MGT 302 Principles of International Business (GCSI)		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 425 Global Human Resources		
MGT 459 International Management (GCSI)		
MGT 425 Global Human Resources		
SCM 463 Global Supply Chain Management (GCSI)		
300+ level WPC subject courses earned on a sponsored ASU study abroad program may be applied toward the elective area, per approval of the international programs coordinator. Courses applied toward the W. P. Carey business core cannot be used toward the elective area.		

Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies and Individuals Coursework	C	6
Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		

Requirement	Minimum Grade	Credit Hours
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.		
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Upper Division Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.	C	3
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Foreign Language Proficiency

Foreign Language Proficiency

Requirement	Minimum Grade	Credit Hours
The certificate program requires students to meet a foreign language proficiency by meeting one of the following:		
1) Completion of one year (two semesters) of the same foreign language at the college level.		
2) Completion of one semester of the equivalent of 101- and 102-level coursework.		
3) Completion of two years of the same foreign language in high school with a minimum grade of "C" (2.00 on a 4.00 scale).		
4) Documentation of a proficiency or placement test confirming preparedness to start at least the second year of a foreign language (201 level or above).		
A student whose native language is not English may have this requirement waived.		

International Study Experience

International Study Experience

The certificate program requires students to participate in an ASU Global Education Office sponsored program.		
Students cannot use independent non-sponsored programs to fulfill this requirement. Sponsored programs can be found on the Global Education Office website.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Only courses in which a student receives a grade of "C" (2.00 on a 4.00 scale) or better may be used to meet the certificate requirements, and an overall certificate GPA of at least 2.50 must be earned.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Civic and Economic Thought and Leadership and Philosophy, Politics and Economics (LACELBA and LAPHPECERT)

Program description:
The Bachelor of Arts program in civic and economic thought and leadership incorporates the study of political philosophy, economic thought, history, and foundational texts and ideas in American politics.

Faculty teach using the Socratic method, which challenges students to analyze the complex topics that impact lives today. Students refine their ability to read closely, think analytically, write carefully and speak effectively.

Students have internship opportunities on Capitol Hill, in congressional offices in their district, with nonprofit organizations or in an area of their academic interest. These internships enable students to build their resume with professional experience and network with potential future employers. Global intensive experiences allow students to study in places such as Romania and India. They also engage with world-renowned scholars who visit ASU through the school's public programs.

The philosophy, politics and economics certificate program provides students with a foundation in each of these three fields, as well as the opportunity to consider how to integrate the three disciplinary perspectives through the introductory and capstone courses.

The program offers core concepts, tools and content in the fundamental disciplines of ethics, politics and economics, providing students the means to address social and political challenges.

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates are inspired and prepared to lead and serve in civil society, public affairs or government.

Possible career paths include business, education, foreign service, government, law, politics, national security affairs and public office.

The certificate emphasizes the transferability of the knowledge and skills gained in philosophy and economics to practical problems of political and societal governance.

The certificate prepares students for a variety of important career opportunities --- and, more generally, to be leading citizens and contributors across many sectors of life, public or private, political affairs or civil society. Graduates of similar programs in Europe, the U.S. and around the world have had successful careers in business administration, consulting, finance, government and political affairs, health care, industry, international affairs, international development, investment banking, journalism, law, management, marketing, public policy, the tech sector and various nonprofit organizations.

Curriculum - Civic and Economic Thought and Leadership, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LACELBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Core Courses

CEL 101 Introduction to Civic Thought and Leadership	C	2
CEL 110 Civic Thought and Leadership in Action	C	1
CEL 200 Great Debates in American Politics (AMIT)	C	3
CEL 306 Justice and Virtue: Classical Political Thought	C	3
CEL 308 Liberty and Equality: Early Modern Political Thought (CIVI)	C	3
CEL 352 Debating Capitalism (SOBE)	C	3

Requirement	Minimum Grade	Credit Hours
CEL 475 Statesmanship and American Grand Strategy (HUAD)	C	3
CEL 484 Internship	C	3
CEL 485 Capstone Seminar in Civic and Economic Thought and Leadership	C	3

American Political Thought

Upper Division American Political Thought

CEL 331 Debating American Constitutionalism: The Founding	C	3
CEL 334 Tocqueville's Democracy in America		
CEL 335 Lincoln: Rhetoric, Thought, Statesmanship (HUAD)		
CEL 394 Topic: Civil-Military Relations in America		
CEL 394 Topic: Debates in American Civic and Public Affairs		
CEL 394 Topic: Liberalism and Conservatism in America		
CEL 394 Topic: Race and the American Story		
CEL 494 Topic: Arizona Politics & Constitution		
CEL 494 Topic: The American Constitution I		
CEL 494 Topic: The American Constitution II: Civil Liberties		

Requirement	Minimum Grade	Credit Hours
Economic Thought and Political Economy		
Upper Division Economic Thought and Political Economy		
CEL 345 Modern Economic Classics		
CEL 350 Philosophy, Politics and Economics (SOBE)		
CEL 351 Classical to Modern Economic Thought		
CEL 352 Debating Capitalism (SOBE)	C	3
CEL 394 Topic: Debating Socialism		
CEL 394 Topic: The American Political Economy		
CEL 494 Topic: Adam Smith and Classical Political Economy		
Leadership and Statesmanship for the 21st Century		
Upper Division Leadership and Statesmanship for the 21st Century	C	3
CEL 371 Classical Political Statecraft		
CEL 390 Leading a Life of Meaning: Liberal Learning and You (HUAD)		
CEL 394 Topic: US National Security Issues		
CEL 394 Topic: Law and Culture of War		
CEL 394 Topic: Civil-Military Relations in America		
CEL 394 Topic: Left and Right Around the World		

Requirement	Minimum Grade	Credit Hours
CEL 394 Topic: Sports and Leadership		
CEL 394 Topic: Leadership and Service: Israel & the West Bank		
CEL 394 Topic: War&Culture Cntrl Europe: Empire or Lib Democracy		
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
CEL 395 Leadership and Service Global Intensive Experience: India		
CEL 481 Debating Globalism and Nationalism, Past and Present		
CEL 494 Topic: Just War		
CEL 494 Topic: National Security Policy Design		

CEL Electives

Upper Division **CEL Elective**	C	6
CEL Elective	C	3

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Mathematics (MATH)	C	3

Recommended: **MAT 114**		
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a Second Language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

Additional Requirements

Upper Division Related Area Electives

Upper Division AFR Elective		
Upper Division COM Elective		
Upper Division ECN Elective		
Upper Division HON Elective		
Upper Division HST Elective	C	6
Upper Division JUS Elective		
Upper Division PHI Elective		
Upper Division POS Elective		
Upper Division SGS Elective		
Upper Division SOS Elective		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go

to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Philosophy, Politics and Economics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAPHPECERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in philosophy, politics and economics requires 15 credit hours, of which at least 12 must be upper division. All courses for the certificate must be completed with a minimum grade of "C" (2.00 on a 4.00 scale). Students should contact the School of Civic and Economic Thought and Leadership for more information.		
Required Courses		
CEL 350 Philosophy, Politics and Economics (SOBE) or PHI 350 Philosophy, Politics and Economics (SOBE)	C	3
CEL 485 Capstone Seminar in Civic and Economic Thought and Leadership	C	3
Economic Electives		
CEL 351 Classical to Modern Economic Thought or ECN 304 Classical to Modern Economic Thought	C	3
Philosophy Electives (choose one)		

Requirement	Minimum Grade	Credit Hours
Upper Division Philosophy Electives		
PHI 306 Applied Ethics (CIVI)		
PHI 307 Philosophy of Law (AMIT)		
PHI 325 Philosophy of Social Science	C	3
PHI 336 Social and Political Philosophy		
PHI 337 Ethical Theory		
PHI 360 Business and Professional Ethics (HUAD)		

Political Science Electives (choose one)

Upper Division Political Science Electives		
POS 340 History of Political Philosophy I		
POS 341 History of Political Philosophy II		
POS 346 Problems of Democracy (HUAD)	C	3
POS 442 American Political Thought (HUAD)		
POS 443 Topics in Contemporary Political Theory		
POS 475 Morality and Politics		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSE/CERT Civil Engineering and Geographic Information Science (ESCEEBSE and LAGISCERT)

Program description:
Civil engineering majors in the Ira A. Fulton Schools of Engineering have two choices within the accredited Bachelor of Science in Engineering program: civil engineering and civil engineering with the sustainable engineering concentration. Regardless of choice, the BSE in civil engineering is accredited by ABET.

Civil engineering involves the analysis, planning, design, construction, maintenance and application of sustainable practices in all areas of urban infrastructure for government, commerce, industry and the public domain. These include airports, bridges, canals, dams, factories, office towers, roadway systems, schools, tunnels and subway systems, and water purification facilities. Civil engineers are concerned with the impact their projects have on the public and the environment --- they coordinate the needs of society with technical and economic feasibility.

The curriculum exposes students to the following areas of civil engineering, with a strong emphasis on sustainability:

- construction engineering
- environmental engineering
- geotechnical engineering
- hydrosystems engineering
- structures
- transportation

Accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Civil Engineering Program Criteria.

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BSE At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
ASU graduates with a bachelor's degree in civil engineering readily find employment. Civil engineers work in many different types of companies, including large corporations and small, private consulting firms, as well as government agencies. A civil engineering background is an excellent foundation for jobs in management and public service.

Civil engineering is one of the best engineering professions from the viewpoint of international travel opportunities or eventually establishing one's own consulting business.

The bachelor's degree program prepares graduates for the Fundamentals of Engineering examination, the Principles and Practice of Engineering exam, and graduate degree programs.

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Civil Engineering, BSE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Engineering, BSE
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESCEEBSE
Minimum credit hours: 120
Upper division minimum credit hours: 52

Requirement	Minimum Grade	Credit Hours
Major Upper Division Requirements		
IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)		3
CEE 300 Engineering Business Practice		3
CEE 321 Structural Analysis and Design		3
CEE 341 Fluid Mechanics for Civil Engineers		3
CEE 351 Geotechnical Engineering		3
CEE 353 Civil Engineering Materials	C	3
CEE 361 Introduction to Environmental Engineering		3
CEE 372 Transportation Engineering		3
CEE 384 Numerical Methods for Engineers (QTRS)		3
CEE 400 Earth Systems Engineering and Management (SUST)		3

Requirement	Minimum Grade	Credit Hours
CEE 487 Integrated Civil, Construction, and Environmental Engineering Design I		2
CEE 488 Integrated Civil, Construction, and Environmental Engineering Design II		2

Upper Division Design Elective

Upper Division Design Electives

CEE 412 Pavement Analysis and Design	6
CEE 420 Steel Structures	
CEE 421 Concrete Structures	
CEE 441 Water Resources Engineering	
CEE 452 Foundations	
CEE 462 Unit Operations in Environmental Engineering	
CEE 466 Urban Water System Design	
CEE 475 Highway Geometric Design	

Technical Elective Requirements

Upper Division CEE Tech Electives 12

Construction:	
CEE 481 Civil Engineering Project Management	
CEE 453 Earth Structures Engineering	

Requirement	Minimum Grade	Credit Hours
Environmental:		
CEE 462 Unit Operations in Environmental Engineering		
CEE 467 Environmental Microbiology		
CEE 470 Sustainable Environmental Biotechnologies		
Geotechnical:		
CEE 452 Foundations		
CEE 453 Earth Structures Engineering		
Structures:		
CEE 420 Steel Structures		
CEE 421 Concrete Structures		
CEE 423 Structural Design		
Sustainability:		
CEE 485 Sustainable Civil and Environmental Systems Engineering		
Transportation:		
CEE 412 Pavement Analysis and Design		
CEE 474 Transportation Systems Planning		
CEE 475 Highway Geometric Design		
CEE 483 Highway Materials, Construction, and Quality		
Water Resources:		

Requirement	Minimum Grade	Credit Hours
CEE 440 Hydrology		
CEE 441 Water Resources Engineering		
CEE 466 Urban Water System Design		
Other:		
CEE 493 Honors Thesis		
CEE 494 Special Topics		
CEE 494 Special Topics		
CON 453 Construction Technology		
CHE 469 Air Quality Engineering		
FSE 301 Entrepreneurship and Value Creation		
IEE 431 Engineering Administration		

Civil Engineering Major GPA

Check: Minimum 2.0 Major GPA

Interdisciplinary Requirements

BIO 181 General Biology I (SCIT) OR **BIO 182 General Biology II (SCIT)** OR **CHM 231 Elementary Organic Chemistry (SCIT)** OR **GLG 101 Introduction to Geology I (Physical) (SCIT)**		3
CHM 114 General Chemistry for Engineers (SCIT)		4

ECN 211 Macroeconomic Principles (SOBE) OR ECN 212 Microeconomic Principles (SOBE)		3
MAE 241 Introduction to Thermodynamics		3
MAT 242 Elementary Linear Algebra	C	2
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH)	C	3
MAT 275 Modern Differential Equations (MATH)	C	3
PHY 121 University Physics I: Mechanics (SCIT)	C	3
PHY 122 University Physics Laboratory I (SCIT)	C	1
PHY 131 University Physics II: Electricity and Magnetism (SCIT)	C	3
PHY 132 University Physics Laboratory II (SCIT)	C	1

Major Lower Division Requirements

CEE 210 Engineering Mechanics I: Statics	C	3
CEE 212 Engineering Mechanics II: Dynamics	C	3
CEE 213 Introduction to Deformable Solids	C	3
FSE 100 Introduction to Engineering	C	2

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CEE The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Communication, and Entrepreneurship and Innovation (LACOMBS and BAKEICERT)

Program description:
How can someone create messages that are appropriate across different cultures? How can messaging convince people to change behaviors? How can someone measure the impact of social media? In the Bachelor of Science program in communication, students explore these questions and many more as they come to understand how messages create, maintain and improve relationships, workplaces and communities.

In this degree program, which provides a social science and data-analytic focus, students gain an understanding of quantitative research methods. They learn to write and speak effectively and to convey complex ideas simply, becoming prepared for employment in a variety of career fields and for graduate study.

The certificate program in entrepreneurship and innovation engages students, challenging them to discover new ways of thinking while approaching business in a new way. Students benefit from an entrepreneurship curriculum focused on principles that involve the startup of a new organization and its management into a fully established firm.

Beyond those related specifically to entrepreneurial business practices, courses in the certificate in entrepreneurship and innovation include such topics as social entrepreneurship, arts entrepreneurship, idea generation and storytelling as additional perspectives for the student entrepreneur.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or any math course that meets the MATH designation
Math intensity: General

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe

Career opportunities:
Graduates often attend leading graduate schools in communication, law or business, or find gainful employment in the areas of:

- business consulting
- data analysis
- event planning
- fundraising
- human resource management
- marketing
- public relations
- sales
- social media
- training and development

Students advance their career options through this undergraduate certificate program, developing additional competencies that complement the marketable knowledge and skills they acquire in their majors. Those who complete this program often decide to pursue employment in management, sales and marketing.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Communication, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LACOMBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Major Core

COM 100 Introduction to Human Communication (SOBE)	C	3
COM 207 Critical Thinking and Writing in Communication	C	3
COM 225 Public Speaking and Presentations (CIVI)	C	3
COM 308 Communication Research Strategies	C	3

Career Competencies

Teamwork, Collaboration, and Leadership	C	3
COM 230 Teamwork and Collaboration (SOBE)		

Requirement	Minimum Grade	Credit Hours
COM 250 Communication and the Workplace (SOBE)		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 327 Civil Communication		
Global/Intercultural Fluency		
COM 263 Communication Across Cultures and Global Engagement (GCSI)		
COM 394 Topic: Communication, Culture, and New Media Technologies	C	3
COM 403 Intercultural Business Communication (CIVI)		
COM 463 Intercultural Communication for Global Leadership and Collaboration (GCSI)		
Interpersonal Communication		
COM 110 Elements of Interpersonal Communication (SOBE)		
COM 310 Communication in Interpersonal Relationships (SOBE)	C	3
COM 394 Topic: Technology and Communication in Relationships		
COM 452 Communication and the Art of Happiness		
Upper Division Specialized Knowledge and Skills	C	6
COM 317 Nonverbal Communication (SOBE)		

Requirement	Minimum Grade	Credit Hours
COM 319 Persuasion and Social Influence (CIVI)		
COM 320 Communication and Consumerism		
COM 321 Rhetorical Theory and Research		
COM 325 Advanced Public Speaking and Presentations (CIVI)		
COM 407 Qualitative Data Analysis in Communication		
COM 410 Advanced Interpersonal Communication (SOBE)		
COM 411 Communication in the Family (SOBE)		
COM 414 Crisis Communication		
COM 421 Rhetoric of Social Issues		
COM 426 Political Communication		
COM 442 Identity, Performance, and Human Communication		
COM 450 Organizational Communication (SOBE)		
COM 453 Communication Training and Development		

Career Management

COM 201 Career Explorations in Communication	C	1
COM 301 Computer Applications for Careers in Communication	C	1

Requirement	Minimum Grade	Credit Hours
COM 401 Career Preparation and Self Development in Communication	C	1

Capstone

COM 408 Quantitative Data Analysis in Communication	C	3

Major Electives

400-Level **COM Elective**	C	6
Upper Division **COM Elective**	C	6

A maximum of six credits of COM 484 may apply to major electives.

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Mathematics (MATH) Recommended: **MAT 114**	C	3

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count

towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
ASU 101-LA The ASU Experience **OR LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq		
All undergraduate students must complete General Studies		

requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Entrepreneurship and Innovation, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAKEICERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The entrepreneurship and innovation certificate requires 15 credit hours and is available to all majors. At least 12 credit hours must be upper division. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.		
Required Courses		
ENT 305 Principles of Entrepreneurship	C	3
ENT 340 Creativity and Innovation **or** **TEM 230 Creativity and Business Innovation**	C	3
ENT 360 Entrepreneurship and Value Creation **or** **TEM 400 Technology Entrepreneurship**	C	3
Focus Area Electives		
Upper Division Focus Area Electives Students will select two courses within the same focus area below. It is the student's responsibility to check the prerequisites required by courses in their discipline.	C	6

Requirement	Minimum Grade	Credit Hours
American Indian Studies Focus Area		
AIS 375 Indigenous Sustainability and Social Justice		
AIS 385 Entrepreneurship for American Indian Sustainability		
Anticipating Futures Focus Area		
FIS 305 Ways of Knowing		
FIS 307 Navigating Futures (SOBE)		
FIS 308 Politics, Markets and Innovation (CIVI)		
Aviation Management Focus Area		
AMT 491 is required in the aviation management focus area. Students will choose one other AMT course.		
AMT 491 Aviation Management Capstone		
AMT 308 Air Transportation (GCSI)		
AMT 489 Airline Administration		
Biomedical Engineering Focus Area		
BME 300 Bioengineering Product Design		
BME 417 Biomedical Engineering Capstone Design I		
Business/Start-up Focus Area		
AGB 456 Food Product Innovation and Development		
ENT 445 Business Model Development		
ENT 446 Venture Capital Experience		
ENT 447 Lean Launch		
ENT 464 Collaborative Design Development I		
ENT 465 Collaborative Design Development II		

Requirement	Minimum Grade	Credit Hours
ENT 494 Topic: Entrepreneurship Thought Leaders Speaker Series		
FIN 455 Entrepreneurial Finance		
MKT 375 Services Marketing		
Design and Arts Focus Area		
ARA 396 Professional Practices for Design and the Arts		
ARA 460 Gallery Exhibitions		
DSC 394 Topic: Design Entrepreneurship & Society		
FMP 417 Business and Legal Practices in Entertainment		
MUP 438 The Enterprising Artist		
MUP 439 Performing Arts Product Creation and Development		
THP 351 Arts Management (HUAD)		
THP 450 Theatre Organization and Management		
Digital Media Entrepreneurship: Web Focus Area		
AME 435 Mobile Development		
GIT 402 New Media Internet Technologies		
GIT 414 Web Site Design and Internet/Web Technologies		
GIT 417 Advanced Web Markup and Scripting		
GIT 435 Website and E-Commerce Strategies		
GIT 480 Senior Project		
Herberger, FSE, WPC: Innovation Space Focus Area		
New product development. Students enroll in the courses associated with their major.		
ENT 464 Collaborative Design Development I		

Requirement	Minimum Grade	Credit Hours
ENT 465 Collaborative Design Development II		
GRA 464 Collaborative Design Development I		
GRA 465 Collaborative Design Development II		
IND 464 Collaborative Design Development I		
IND 465 Collaborative Design Development II		
Ira A. Fulton School of Engineering: Alternative Energy Entrepreneurship Focus Area		
ALT 420 Electrochemical Energy Technologies		
ALT 435 Applied Photovoltaics		
ALT 445 Automotive and Stationary Fuel Cell Systems		
Ira A. Fulton School of Engineering: Process Innovation Focus Area		
TMC 331 Quality Assurance		
TMC 430 Enterprise Strategy and Innovation		
Ira A. Fulton School of Engineering: New Product Development Focus Area		
CSE 335 Principles of Mobile Application Development		
TEM 330 Systems Innovation		
TEM 400 Technology Entrepreneurship		
Ira A. Fulton School of Engineering: Social Entrepreneurship Focus Area		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
TEM 482 Startup Workshop		
Small Business Focus Area		

Requirement	Minimum Grade	Credit Hours
ENT 441 Entrepreneurial Management		
ENT 445 Business Model Development		
ENT 448 Corporate Entrepreneurship		
ENT 494 Topic: Entrepreneurship Thought Leaders Speaker Series		
MKT 435 Entrepreneurial Marketing		
MKT 440 Creating Digital Experiences		
The College of Liberal Arts and Sciences: Science Focus Area		
BIO 312 Bioethics (HUAD)		
BIO 416 Biomedical Research Ethics (CIVI)		
NTR 344 Nutrition Management and Leadership		
PHI 320 Bioethics (HUAD)		
Walter Cronkite School of Journalism and Mass Communication Focus Area		
JMC 455 Digital Media Entrepreneurship		
JMC 473 The Business and Future of Journalism		
JMC 477 New Media Innovation and Entrepreneurship Lab		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
Watts College of Public Service and Community Solutions Focus Area		
NLM 410 Social Entrepreneurship		
NLM 430 Managing Nonprofit Organizations		
NLM 435 Service Learning for Community Development		

Requirement	Minimum Grade	Credit Hours
PRM 402 Assessment and Evaluation of Community Services (QTRS)		
PRM 427 Where's the Money: Special Event Revenue Generation		
PRM 475 Entrepreneurial Recreation and Tourism		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Communication and Project Management Essentials (LACOMBS and LSPMGECERT)

Program description:
How can someone create messages that are appropriate across different cultures? How can messaging convince people to change behaviors? How can someone measure the impact of social media? In the Bachelor of Science program in communication, students explore these questions and many more as they come to understand how messages create, maintain and improve relationships, workplaces and communities.

In this degree program, which provides a social science and data-analytic focus, students gain an understanding of quantitative research methods. They learn to write and speak effectively and to convey complex ideas simply, becoming prepared for employment in a variety of career fields and for graduate study.

In the stackable undergraduate certificate program in project management essentials, students gain the skills to lead successful projects. This program covers key areas of project management including: project leadership, strategy, sustainability and organizational behavior. The program is ideal for those looking to enhance their project management expertise and drive positive change in any industry.

This certificate program can be completed as a standalone certificate, completed alongside a degree program, or it can stack into a future bachelor's degree.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or any math course that meets the MATH designation
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe or Online

Career opportunities:
Graduates often attend leading graduate schools in communication, law or business, or find gainful employment in the areas of:

- business consulting
- data analysis
- event planning
- fundraising
- human resource management
- marketing
- public relations
- sales
- social media
- training and development

This certificate in project management essentials opens doors to a wide variety of entry-level career opportunities. Graduates can pursue roles such as project coordinator, project assistant, junior project manager and project scheduler, among others. These positions offer the chance to support senior project managers, manage project schedules, assist with administrative tasks, and help ensure the smooth execution of projects.

Curriculum - Communication, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LACOMBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Major Core

COM 100 Introduction to Human Communication (SOBE)	C	3
COM 207 Critical Thinking and Writing in Communication	C	3
COM 225 Public Speaking and Presentations (CIVI)	C	3
COM 308 Communication Research Strategies	C	3

Career Competencies

Teamwork, Collaboration, and Leadership	C	3
COM 230 Teamwork and Collaboration (SOBE)		

Requirement	Minimum Grade	Credit Hours
COM 250 Communication and the Workplace (SOBE)		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 327 Civil Communication		
Global/Intercultural Fluency		
COM 263 Communication Across Cultures and Global Engagement (GCSI)		
COM 394 Topic: Communication, Culture, and New Media Technologies	C	3
COM 403 Intercultural Business Communication (CIVI)		
COM 463 Intercultural Communication for Global Leadership and Collaboration (GCSI)		
Interpersonal Communication		
COM 110 Elements of Interpersonal Communication (SOBE)		
COM 310 Communication in Interpersonal Relationships (SOBE)	C	3
COM 394 Topic: Technology and Communication in Relationships		
COM 452 Communication and the Art of Happiness		
Upper Division Specialized Knowledge and Skills	C	6
COM 317 Nonverbal Communication (SOBE)		

Requirement	Minimum Grade	Credit Hours
COM 319 Persuasion and Social Influence (CIVI)		
COM 320 Communication and Consumerism		
COM 321 Rhetorical Theory and Research		
COM 325 Advanced Public Speaking and Presentations (CIVI)		
COM 407 Qualitative Data Analysis in Communication		
COM 410 Advanced Interpersonal Communication (SOBE)		
COM 411 Communication in the Family (SOBE)		
COM 414 Crisis Communication		
COM 421 Rhetoric of Social Issues		
COM 426 Political Communication		
COM 442 Identity, Performance, and Human Communication		
COM 450 Organizational Communication (SOBE)		
COM 453 Communication Training and Development		

Career Management

COM 201 Career Explorations in Communication	C	1
COM 301 Computer Applications for Careers in Communication	C	1

Requirement	Minimum Grade	Credit Hours
COM 401 Career Preparation and Self Development in Communication	C	1

Capstone

COM 408 Quantitative Data Analysis in Communication	C	3

Major Electives

400-Level **COM Elective**	C	6
Upper Division **COM Elective**	C	6

A maximum of six credits of COM 484 may apply to major electives.

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Mathematics (MATH) Recommended: **MAT 114**	C	3

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count

towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies

requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Project Management Essentials, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LSPMGECERT

Minimum credit hours: 15

Upper division minimum credit hours: 3

Requirement	Minimum Grade	Credit Hours
OGL 220 Behavioral Dynamics in Organizations (SOBE)	C	3
PMG 101 Navigating Project Management: Successes, Failures, and Leadership Dynamics	C	3
PMG 203 Project Management for People, Planet and Prosperity	C	3
PMG 240 Introduction to Project Management	C	3
PMG 321 Project Leadership, Strategy and Scope	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Computer Information Systems and Computer Gaming (BACISBS and ESSCICERT)

Program description:
Computer information systems are part of every business and organization. In this Bachelor of Science program, students learn about the exciting and innovative ways that information technology is used to help organizations succeed.

Dedicated faculty members teach students how to design, build and maintain information systems that support business operations and managerial decision-making. In particular, students learn about business intelligence for competitive advantage, business process for workflow redesign, data management for decision-making, distributed systems for collaboration and globalization, enterprise integration for synergy, and project management and solution development for value creation.

The computer gaming certificate program provides students with a game development skill set that they can apply to domain-specific applications in their major. The skill set includes architecture of game engines, art design and computer graphics for gaming, and game software development.

Students learn to apply gaming technology to the rapidly growing video game industry and to fields including business, medicine, geography, biotechnology and education. Examples of projects are:

- building a game that teaches linear algebra by incorporating trigonometric rules into the game design
- creating a game that teaches correct sentence construction to beginning learners of English
- creating a game to help patients with physical therapy
- creating an interactive virtual world for corporate training
- designing a game platform that incorporates geographic information systems
- inventing a surgical simulation to educate medical students

At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe

Career opportunities:
Currently, there is a shortage of information systems professionals, with many more jobs than qualified applicants. With a degree in computer information systems, graduates have limitless career choices. A computer information systems degree can lead to job opportunities in a variety of industries, including:

- education
- entertainment
- finance
- health care
- national defense
- transportation

Information systems are key components in the success of other functional business areas such as accounting, supply chain management, finance and marketing. Entry-level information systems positions include:

- computer forensics analyst
- database administrator
- information systems consultant
- information technology security manager
- network administrator
- project manager
- software or systems developer
- systems administrator
- systems analyst

Long-term career aspirations for a graduate with a computer information systems degree could include:

- chief executive officer
- chief information officer
- chief knowledge officer
- chief security officer
- chief technology officer

Students can advance their career options with an undergraduate certificate. Those who add this computer gaming specialization as a complement to their major program of study may be more marketable to employers in the gaming industry.

Curriculum - Computer Information Systems, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BACISBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MKT 300 Marketing and Business Performance	C	3
MGT 300 Principles of Management and Leadership	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

CIS 235 Introduction to Information Systems, Analytics and AI in Business	C	3
CIS 340 Business Information System Development I	C	3
CIS 407 Business Database Systems Development	C	3
CIS 401 Managing Cyber Risks in Enterprise Business Processes	C	3
CIS 425 Web Technologies for the Enterprise	C	3
CIS 440 Capstone in Information Systems	C	3
Upper Division Computer Information Systems Major Elective	C	6

Requirement	Minimum Grade	Credit Hours
CIS 300 Web Design and Development		
CIS 308 Advanced Excel in Business		
CIS 309 Business Process Management		
CIS 310 Business Data Visualization		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
CIS 313 Location Analytics in Business		
CIS 315 Introduction to Business Data Analytics		
CIS 404 Programming for Analytics and AI in Business		
CIS 405 Business Intelligence		
CIS 406 AI Foundations in Business		
CIS 409 Business Data Warehouses and Dimensional Modeling		
CIS 412 Business Machine Learning		
CIS 415 Big Data and AI in Business		
CIS 446 Data and Technology Governance in Business		
CIS 484 Internship		
(Maximum three credits of CIS 484 may be applied towards the major)		
CIS 493 Honors Thesis		

Requirement	Minimum Grade	Credit Hours
(Maximum three credits of CIS 493 may be applied towards the major)		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skill Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3

COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit

hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.
Students must earn a 2.0 GPA in major courses.
Students must complete a minimum of 34 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Computer Gaming, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Ira A. Fulton Schools of Engineering

Plan Code: ESSCICERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Students will complete nine credit hours of core courses (including a final capstone project) and nine credit hours of elective courses. The certificate requires 12 credit hours of upper-division coursework. All courses must be passed with a "C" or better. Students need to allow at least three years to complete the certificate program due to the prerequisite structure.		

Computer Gaming Certificate Requirements

CPI 111 Game Development I (QTRS)	C	3
CPI 211 Game Development II	C	3
CPI 441 Gaming Capstone CPI 441 is only offered in Spring semesters	C	3
Upper Division Elective Courses (choose three)	C	9
CPI 311 Game Engine Development **OR** **SER 332 Introduction to Graphics and Game Development**		
CPI 321 Fundamentals of Game Art		
CPI 394 Topic: Game Design Fundamentals		

Requirement	Minimum Grade	Credit Hours
CPI 411 Graphics for Games OR SER 432 Game Engine Architecture		
CPI 421 3-D Modeling and Texturing		
CPI 462 Design for Learning in Virtual Worlds		
CPI 484 Internship		
FMS 365 Video Games and Narrative		
SER 431 Advanced Graphics		

CPI 411 is only offered in the spring semester. CPI 421 is only offered in the fall semester. CPI 462 and SER 431 are offered infrequently.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Computer Information Systems and International Business Studies (BACISBS and BAIBSCERT)

Program description:
Computer information systems are part of every business and organization. In this Bachelor of Science program, students learn about the exciting and innovative ways that information technology is used to help organizations succeed.

Dedicated faculty members teach students how to design, build and maintain information systems that support business operations and managerial decision-making. In particular, students learn about business intelligence for competitive advantage, business process for workflow redesign, data management for decision-making, distributed systems for collaboration and globalization, enterprise integration for synergy, and project management and solution development for value creation.

The certificate program in international business studies helps students develop competence in a foreign language and a sensitivity to foreign cultures. Students gain an awareness of global social processes and an understanding of international business environments, principles and operations.

The W. P. Carey School of Business has partnerships with universities all over the world, so students can experience new cultures, visit new places and build intercultural and language skills. International internships also are offered in conjunction with the ASU Global Education Office.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Currently, there is a shortage of information systems professionals, with many more jobs than qualified applicants. With a degree in computer information systems, graduates have limitless career choices. A computer information systems degree can lead to job opportunities in a variety of industries, including:

- education
- entertainment
- finance
- health care
- national defense
- transportation

Information systems are key components in the success of other functional business areas such as accounting, supply chain management, finance and marketing. Entry-level information systems positions include:

- computer forensics analyst
- database administrator
- information systems consultant
- information technology security manager
- network administrator
- project manager
- software or systems developer
- systems administrator
- systems analyst

Long-term career aspirations for a graduate with a computer information systems degree could include:

- chief executive officer
- chief information officer
- chief knowledge officer
- chief security officer

- chief technology officer

Students can advance their career options with an undergraduate certificate. The certificate program in international business enables students to develop additional competencies that complement the marketable knowledge and skills they acquire in their majors.

Graduates who have completed this undergraduate certificate often decide to pursue employment in management, sales, marketing and communication. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Computer Information Systems, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BACISBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MKT 300 Marketing and Business Performance	C	3
MGT 300 Principles of Management and Leadership	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

CIS 235 Introduction to Information Systems, Analytics and AI in Business	C	3
CIS 340 Business Information System Development I	C	3
CIS 407 Business Database Systems Development	C	3
CIS 401 Managing Cyber Risks in Enterprise Business Processes	C	3
CIS 425 Web Technologies for the Enterprise	C	3
CIS 440 Capstone in Information Systems	C	3
Upper Division Computer Information Systems Major Elective	C	6

Requirement	Minimum Grade	Credit Hours
CIS 300 Web Design and Development		
CIS 308 Advanced Excel in Business		
CIS 309 Business Process Management		
CIS 310 Business Data Visualization		
CIS 311 Business Agile Project Management		
CIS 312 Business Mobile Commerce and Monetization		
CIS 313 Location Analytics in Business		
CIS 315 Introduction to Business Data Analytics		
CIS 404 Programming for Analytics and AI in Business		
CIS 405 Business Intelligence		
CIS 406 AI Foundations in Business		
CIS 409 Business Data Warehouses and Dimensional Modeling		
CIS 412 Business Machine Learning		
CIS 415 Big Data and AI in Business		
CIS 446 Data and Technology Governance in Business		
CIS 484 Internship		
(Maximum three credits of CIS 484 may be applied towards the major)		
CIS 493 Honors Thesis		

Requirement	Minimum Grade	Credit Hours
(Maximum three credits of CIS 493 may be applied towards the major)		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skill Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3

COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit

hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.
Students must earn a 2.0 GPA in major courses.
Students must complete a minimum of 34 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - International Business Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAIBSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate program requires a minimum of 18 credit hours (at least 12 credit hours must be upper division). All business coursework must be completed through the W. P. Carey School of Business or through an approved ASU international study program.		
International Business Core Course		
MGT 302 Principles of International Business (GCSI) **or** **ECN 306 Survey of International Economics (GCSI)**	C	3
International Business Elective		
Upper Division International Business Certificate Elective	C	6
Select two courses		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
ECN 331 Economics of the European Economic Union (GCSI)		
ECN 335 South Asia and the World Economy		

Requirement	Minimum Grade	Credit Hours
ECN 360 Economic Development (GCSI)		
ECN 365 Economics of Russia and Eastern Europe		
ECN 436 International Trade Theory		
ECN 438 International Monetary Economics		
FIN 456 International Financial Management		
MGT 302 Principles of International Business (GCSI)		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 425 Global Human Resources		
MGT 459 International Management (GCSI)		
MGT 425 Global Human Resources		
SCM 463 Global Supply Chain Management (GCSI)		
300+ level WPC subject courses earned on a sponsored ASU study abroad program may be applied toward the elective area, per approval of the international programs coordinator. Courses applied toward the W. P. Carey business core cannot be used toward the elective area.		

Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies and Individuals Coursework	C	6
Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		

Requirement	Minimum Grade	Credit Hours
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.		
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Upper Division Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.	C	3
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Foreign Language Proficiency

Foreign Language Proficiency

Requirement	Minimum Grade	Credit Hours
The certificate program requires students to meet a foreign language proficiency by meeting one of the following:		
1) Completion of one year (two semesters) of the same foreign language at the college level.		
2) Completion of one semester of the equivalent of 101- and 102-level coursework.		
3) Completion of two years of the same foreign language in high school with a minimum grade of "C" (2.00 on a 4.00 scale).		
4) Documentation of a proficiency or placement test confirming preparedness to start at least the second year of a foreign language (201 level or above).		
A student whose native language is not English may have this requirement waived.		

International Study Experience

International Study Experience

The certificate program requires students to participate in an ASU Global Education Office sponsored program.		
Students cannot use independent non-sponsored programs to fulfill this requirement. Sponsored programs can be found on the Global Education Office website.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Only courses in which a student receives a grade of "C" (2.00 on a 4.00 scale) or better may be used to meet the certificate requirements, and an overall certificate GPA of at least 2.50 must be earned.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Computer Science and Computer Gaming (ESCSEBS and ESSCICERT)

Program description:
The Bachelor of Science program in computer science aims to produce graduates who are well prepared to pursue careers in a wide variety of computing-related fields or to embark on further studies in graduate degree programs.

The program is anchored with core courses that provide a solid foundation in theoretical and practical aspects of computer science and ensure that students have the requisite critical thinking, effective programming and problem-solving skills in a variety of modern programming languages, with an emphasis on understanding security and systems issues.

The program caters to a variety of interests in subfields of computer science and related disciplines. Students have access to a flexible set of electives that enable them to develop, as part of their programs of study, in-depth knowledge and skills in artificial intelligence, machine learning, robotics, database systems, informatics, or other engineering and science disciplines. Students can also pursue concentrations in software engineering or cybersecurity as part of their degree program.

Accredited by the Computing Accreditation Commission of ABET, https://www.abet.org/, under the General Criteria and the Computer Science Program Criteria.

The computer gaming certificate program provides students with a game development skill set that they can apply to domain-specific applications in their major. The skill set includes architecture of game engines, art design and computer graphics for gaming, and game software development.

Students learn to apply gaming technology to the rapidly growing video game industry and to fields including business, medicine, geography, biotechnology and education. Examples of projects are:

- building a game that teaches linear algebra by incorporating trigonometric rules into the game design
- creating a game that teaches correct sentence construction to beginning learners of English
- creating a game to help patients with physical therapy
- creating an interactive virtual world for corporate training
- designing a game platform that incorporates geographic information systems
- inventing a surgical simulation to educate medical students

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe

Career opportunities:
Computer science professionals design, analyze and improve the quality of computer software and systems. Graduates of this program secure employment in a variety of capacities, such as computer and software design, and development of information technologies. Their jobs are often distinguished by the high level of theoretical expertise applied to solving complex problems and to the creation and application of new computing technologies.

Computer science graduates work in a variety of areas, including:

- artificial intelligence
- computer vision
- cybersecurity
- graphics
- information management
- multimedia
- networking

Computer science-related jobs include:

- creating computer games and graphics systems

- designing artificial intelligence systems
- developing mobile computing applications
- developing network security applications
- discovering data management and mining solutions for large-scale data analytics
- inventing and implementing more efficient computing systems for managing data and information, including information retrieval and search on the Internet

With the theoretical foundation built into the program, computer science graduates can excel in system and software development, as well as in designing effective computing solutions for emerging and challenging problems in modern society. Skills in system development and research can lead to entrepreneurial activity that produces innovative computing products and services.

Students can advance their career options with an undergraduate certificate. Those who add this computer gaming specialization as a complement to their major program of study may be more marketable to employers in the gaming industry.

Curriculum - Computer Science, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESCSEBS
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours
Some ASU Online courses are only offered in specific sessions. Please see advising for course planning.		
Please see our degree requirements website for links to our flowcharts and our most up to date course lists. Tempe Campus: https://scai.engineering.asu.edu/computer-science-bs/degree-requirements/ Online Campus: https://scai.engineering.asu.edu/cs-online-degree-requirements/		

Computer Science Lower Division

CSE 110 Principles of Programming (QTRS)	C	3
EEE 120 Digital Design Fundamentals	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
CSE 230 Computer Organization and Assembly Language Programming	C	3

Requirement	Minimum Grade	Credit Hours
CSE 240 Introduction to Programming Languages	C	3
FSE 100 Introduction to Engineering	C	2
Computer Science Upper Division		
CSE 301 Computing Ethics	C	1
CSE 310 Data Structures and Algorithms	C	3
CSE 330 Operating Systems	C	3
CSE 340 Principles of Programming Languages	C	3
CSE 355 Introduction to Theoretical Computer Science	C	3
CSE 360 Introduction to Software Engineering	C	3
CSE 365 Information Assurance	C	3
CSE 485 Computer Science Capstone Project I	C	3
CSE 486 Computer Science Capstone Project II	C	3
IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 343 Applied Linear Algebra	C	3
Computer Science Electives		
CSE 412 Database Management OR CSE 434 Computer Networks	C	3

Requirement	Minimum Grade	Credit Hours
OR **CSE 445 Distributed Software Development**		
400-Level **CSE Elective**	C	12
Technical Electives	C	6

- **AEE 415 Vibration Analysis**
- **AEE 426 Design of Aerospace Structures**
- **AEE 462 Space Vehicle Dynamics and Control**
- **AEE 463 Aircraft Propulsion**
- **AEE 465 Rocket Propulsion**
- **AEE 468 Aircraft Systems Design**
- **AEE 471 Computational Fluid Dynamics**
- **AME 430 Mac Development for Media Arts**
- **AME 435 Mobile Development**
- **BCH 361 Advanced Principles of Biochemistry**
- **BCH 461 General Biochemistry**
- **BCH 462 General Biochemistry**
- **BIO 340 General Genetics**
- **BIO 343 Genetic Engineering and Society**
- **BIO 345 Evolution**
- **BME 350 Signals and Systems for Bioengineers**
- **BME 416 Advanced Biomechanics**

Requirement	Minimum Grade	Credit Hours
BME 494 Topic: Applied Computational Behavioral Science		
CEE 412 Pavement Analysis and Design		
CEE 432 Developing Software for Engineering Applications		
CEE 440 Hydrology		
CEE 441 Water Resources Engineering		
CEE 452 Foundations		
CEE 462 Unit Operations in Environmental Engineering		
CEE 466 Urban Water System Design		
CEE 467 Environmental Microbiology		
CEE 474 Transportation Systems Planning		
CEE 475 Highway Geometric Design		
CEE 481 Civil Engineering Project Management		
CEE 486 Integrated Civil Engineering Design		
CHE 342 Introduction to Applied Chemical Thermodynamics		
CHE 432 Principles of Chemical Engineering Design		
CHE 442 Introduction to Chemical Reactor Design		
CHE 461 Process Dynamic Control (QTRS)		
CHE 462 Process Design		

Requirement	Minimum Grade	Credit Hours
CHE 469 Air Quality Engineering		
CHE 475 Biochemical Engineering		
CIS 415 Big Data and AI in Business		
CPI 311 Game Engine Development		
CPI 350 Evaluation of Informatics Systems		
CPI 360 Decision Making and Problem Solving		
CPI 411 Graphics for Games		
CPI 460 Intelligent Interactive Instructional Systems		
CPI 462 Design for Learning in Virtual Worlds		
CSE 320 Design and Synthesis of Digital Hardware		
CSE 325 Embedded Microprocessor Systems		
CSE 335 Principles of Mobile Application Development		
DAT 300 Mathematical Tools for Data Science		
DAT 301 Exploring Data in R and Python		
DAT 401 Statistical Modeling and Inference for Data Science		
DAT 402 Machine Learning for Data Science		
EEE 304 Signals and Systems II		
EEE 333 Hardware Design Languages and Programmable Logic		
EEE 335 Analog and Digital Circuits		

Requirement	Minimum Grade	Credit Hours
EEE 350 Random Signal Analysis		
EEE 360 Energy Systems and Power Electronics		
EEE 404 Real-Time DSP Systems		
EEE 407 Digital Signal Processing		
EEE 425 Digital Systems and Circuits		
EEE 433 Analog Integrated Circuits		
EEE 434 Quantum Mechanics for Engineers		
EEE 435 Fundamentals of CMOS and MEMS		
EEE 436 Fundamentals of Solid-State Devices		
EEE 437 Optoelectronics		
EEE 443 Antennas for Wireless Communications		
EEE 445 Microwaves		
EEE 448 Fiber Optics		
EEE 455 Communication Systems		
EEE 459 Communication Networks		
EEE 460 Nuclear Power Engineering		
EEE 463 Electrical Power Plants		
EEE 470 Electric Power Devices		
EEE 471 Power System Analysis		
EEE 473 Electrical Machinery		

Requirement	Minimum Grade	Credit Hours
EEE 480 Feedback Systems		
EEE 481 Computer-Controlled Systems		
FSE 301 Entrepreneurship and Value Creation		
FSE 394 Topic: Engineering for Humanity		
FSE 404 EPICS Gold: EPICS in Action		
IEE 376 Operations Research Deterministic Techniques/Applications		
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 412 Introduction to Financial Engineering		
IEE 426 Operations Research in Healthcare		
IEE 431 Engineering Administration		
IEE 456 Introduction to Systems Engineering		
IEE 458 Project Management		
IEE 461 Production Control		
IEE 470 Stochastic Operations Research		
IEE 474 Quality Control		
IEE 475 Simulating Stochastic Systems (QTRS)		
MAE 341 Mechanism Analysis and Design		
MAE 404 Finite Elements in Engineering		

Requirement	Minimum Grade	Credit Hours
MAE 417 System Dynamics and Control II		
MAE 436 Combustion		
MAE 455 Polymers and Composites		
MEE 351 Manufacturing Processes		
MEE 434 Internal Combustion Engines		
MEE 446 Energy Systems Design II		
MSE 335 Materials Kinetics		
MSE 415 Mathematical and Computer Methods in Materials		
PHY 302 Mathematical Methods in Physics II		
PHY 361 Introductory Modern Physics		
PHY 462 Particle and Nuclear Physics		
SER 421 Web-Based Applications		
SER 422 Web Application Programming		
SER 423 Mobile Systems		
STP 421 Probability		
STP 425 Stochastic Processes		
STP 427 Mathematical Statistics		
STP 429 Applied Regression (QTRS)		
400-Level CSE Elective		

Requirement	Minimum Grade	Credit Hours

Computer Science Major GPA

Check: Minimum 2.00 Major GPA

Not all courses are available through ASU Online campus.

Computer Science - Mathematics Lower Division

MAT 243 Discrete Mathematical Structures	C	3
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH) OR MAT 271 Calculus with Analytic Geometry II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH) OR CSE 259 Logic in Computer Science	C	3

Lab Science (SCIT)

Lab Science	11

Applied Biological Science:

ABS 130 Introduction to Environmental Science (SCIT)

Astronomy:

AST 112 Introduction to Stars, Galaxies, and Cosmology (SCIT)

AST 112 Introduction to Stars, Galaxies, and Cosmology (SCIT)

Biology:

BIO 100 The Living World (SCIT)

BIO 130 Introduction to Environmental Science (SCIT)

BIO 160 Introduction to Anatomy and Physiology (SCIT)

BIO 151 Biological Thinking

BIO 181 General Biology I (SCIT)

BIO 182 General Biology II (SCIT)

BIO 201 Human Anatomy and Physiology I (SCIT)

BIO 202 Human Anatomy and Physiology II (SCIT)

Chemistry:

CHM 101 Introductory Chemistry (SCIT)

CHM 107 Chemistry and Society (SCIT) **AND** CHM 108 Chemistry and Society Laboratory (SCIT)

CHM 113 General Chemistry I (SCIT)

CHM 114 General Chemistry for Engineers (SCIT)

CHM 116 General Chemistry II (SCIT)

CHM 111 General Chemistry Laboratory for Majors I (SCIT) **AND** CHM 117 General Chemistry for Majors I (SCIT)

CHM 112 General Chemistry Laboratory for Majors II (SCIT) **AND** CHM 118 General Chemistry for Majors II (SCIT)

CHM 231 Elementary Organic Chemistry (SCIT)

CHM 235 Elementary Organic Chemistry Laboratory (SCIT)

Environmental Sciences:

ENV 130 Introduction to Environmental Science (SCIT)

Forensics:

FOR 105 Physical Evidence and the Crime Scene (SCIT)

FOR 106 Biology Behind the Crime Scene (SCIT)

Geological Sciences:

GLG 108 Water Planet (SCIT)

GLG 101 Introduction to Geology I (Physical) (SCIT) **AND** GLG 103 Introduction to Geology I: Laboratory (SCIT)

GLG 102 Introduction to Geology II (Historical) (SCIT) **AND** GLG 104 Introduction to Geology II: Laboratory (SCIT)

GLG 110 Dangerous World (SCIT) AND GLG 111 Dangerous World Laboratory (SCIT)

Physical Geography:

GPH 211 Landform Processes (SCIT)

GPH 111 Introduction to Physical Geography (SCIT) AND GPH 112 Introduction to Physical Geography Lab (SCIT)

GPH 212 Introduction to Meteorology (SCIT) AND GPH 214 Introduction to Meteorology Laboratory (SCIT)

Material Science:

MSE 208 Patterns in Nature (SCIT)

Physical Science:

PHS 110 Fundamentals of Physical Science (SCIT)

PHS 115 The Science of Musical Instruments

PHS 208 Patterns in Nature (SCIT)

Physics:

PHY 101 Introduction to Physics (SCIT)

PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)

PHY 112 General Physics (SCIT) **AND** **PHY 114 General Physics Laboratory (SCIT)**

PHY 121 University Physics I: Mechanics (SCIT) **AND** **PHY 122 University Physics Laboratory I (SCIT)**

PHY 131 University Physics II: Electricity and Magnetism (SCIT) **AND** **PHY 132 University Physics Laboratory II (SCIT)**

PHY 150 Physics I (SCIT)

PHY 151 Physics II (SCIT)

PHY 252 Physics III (SCIT)

Science Education:

SCN 250 Physical Science by Inquiry

Earth Space:

SES 106 Habitable Worlds (SCIT)

SES 121 Earth, Solar System and Universe (SCIT) **AND** **SES 123 Earth, Solar System and Universe Laboratory (SCIT)**

SES 141 Energy In Everyday Life (SCIT)

Sustainability:

SOS 182 Water Planet (SCIT)

AND Scientific Thinking in Natural Sciences (SCIT)

Three total (SCIT) lab science courses are required. Two (SCIT) courses must be from the same subject area and one (SCIT) course must be from a different subject area.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CAI The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Computer Gaming, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Ira A. Fulton Schools of Engineering

Plan Code: ESSCICERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Students will complete nine credit hours of core courses (including a final capstone project) and nine credit hours of elective courses. The certificate requires 12 credit hours of upper-division coursework. All courses must be passed with a "C" or better. Students need to allow at least three years to complete the certificate program due to the prerequisite structure.		

Computer Gaming Certificate Requirements

CPI 111 Game Development I (QTRS)	C	3
CPI 211 Game Development II	C	3
CPI 441 Gaming Capstone CPI 441 is only offered in Spring semesters	C	3
Upper Division Elective Courses (choose three)	C	9
CPI 311 Game Engine Development **OR** **SER 332 Introduction to Graphics and Game Development**		
CPI 321 Fundamentals of Game Art		
CPI 394 Topic: Game Design Fundamentals		

Requirement	Minimum Grade	Credit Hours
CPI 411 Graphics for Games OR SER 432 Game Engine Architecture		
CPI 421 3-D Modeling and Texturing		
CPI 462 Design for Learning in Virtual Worlds		
CPI 484 Internship		
FMS 365 Video Games and Narrative		
SER 431 Advanced Graphics		

CPI 411 is only offered in the spring semester. CPI 421 is only offered in the fall semester. CPI 462 and SER 431 are offered infrequently.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Computer Science and Political History and Leadership (ESCSEBS and LAPTLCERT)

Program description:
The Bachelor of Science program in computer science aims to produce graduates who are well prepared to pursue careers in a wide variety of computing-related fields or to embark on further studies in graduate degree programs.

The program is anchored with core courses that provide a solid foundation in theoretical and practical aspects of computer science and ensure that students have the requisite critical thinking, effective programming and problem-solving skills in a variety of modern programming languages, with an emphasis on understanding security and systems issues.

The program caters to a variety of interests in subfields of computer science and related disciplines. Students have access to a flexible set of electives that enable them to develop, as part of their programs of study, in-depth knowledge and skills in artificial intelligence, machine learning, robotics, database systems, informatics, or other engineering and science disciplines. Students can also pursue concentrations in software engineering or cybersecurity as part of their degree program.

Accredited by the Computing Accreditation Commission of ABET, https://www.abet.org/, under the General Criteria and the Computer Science Program Criteria.

The certificate program in political history and leadership provides students with a strong foundation in the history of politics and political thought, with a special emphasis on the role of leadership and citizenship. Students come to understand the complexities of real decision-making beyond the abstractions. The program prepares students for leadership in their careers.

Required courses combine academic study and mentoring contact with political, media and business leaders from the wider Phoenix area and Arizona communities, while electives drawn from a variety of disciplines are used to broaden the scope of emphasis.

The program offers scholarship and internship or job placement opportunities.

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Computer science professionals design, analyze and improve the quality of computer software and systems. Graduates of this program secure employment in a variety of capacities, such as computer and software design, and development of information technologies. Their jobs are often distinguished by the high level of theoretical expertise applied to solving complex problems and to the creation and application of new computing technologies.

Computer science graduates work in a variety of areas, including:
- artificial intelligence
- computer vision
- cybersecurity
- graphics
- information management
- multimedia
- networking

Computer science-related jobs include:
- creating computer games and graphics systems
- designing artificial intelligence systems

- developing mobile computing applications
- developing network security applications
- discovering data management and mining solutions for large-scale data analytics
- inventing and implementing more efficient computing systems for managing data and information, including information retrieval and search on the Internet

Graduates become more marketable to employers and advance their career options when they have complemented their major program of study with this specialization in political history and leadership.

Graduates with this certificate often pursue employment as military officers, governor's office staff, members of congress, city council officials, county prosecutors, financial advisors and campaign strategists. Advanced degrees or certifications may be required for academic, clinical or other positions.

Curriculum - Computer Science, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESCSEBS
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours
Some ASU Online courses are only offered in specific sessions. Please see advising for course planning.		
Please see our degree requirements website for links to our flowcharts and our most up to date course lists. Tempe Campus: https://scai.engineering.asu.edu/computer-science-bs/degree-requirements/ Online Campus: https://scai.engineering.asu.edu/cs-online-degree-requirements/		

Computer Science Lower Division

CSE 110 Principles of Programming (QTRS)	C	3
EEE 120 Digital Design Fundamentals	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
CSE 230 Computer Organization and Assembly Language Programming	C	3

Requirement	Minimum Grade	Credit Hours
CSE 240 Introduction to Programming Languages	C	3
FSE 100 Introduction to Engineering	C	2
Computer Science Upper Division		
CSE 301 Computing Ethics	C	1
CSE 310 Data Structures and Algorithms	C	3
CSE 330 Operating Systems	C	3
CSE 340 Principles of Programming Languages	C	3
CSE 355 Introduction to Theoretical Computer Science	C	3
CSE 360 Introduction to Software Engineering	C	3
CSE 365 Information Assurance	C	3
CSE 485 Computer Science Capstone Project I	C	3
CSE 486 Computer Science Capstone Project II	C	3
IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 343 Applied Linear Algebra	C	3
Computer Science Electives		
CSE 412 Database Management OR CSE 434 Computer Networks	C	3

Requirement	Minimum Grade	Credit Hours
OR **CSE 445 Distributed Software Development**		
400-Level **CSE Elective**	C	12
Technical Electives	C	6

- **AEE 415 Vibration Analysis**
- **AEE 426 Design of Aerospace Structures**
- **AEE 462 Space Vehicle Dynamics and Control**
- **AEE 463 Aircraft Propulsion**
- **AEE 465 Rocket Propulsion**
- **AEE 468 Aircraft Systems Design**
- **AEE 471 Computational Fluid Dynamics**
- **AME 430 Mac Development for Media Arts**
- **AME 435 Mobile Development**
- **BCH 361 Advanced Principles of Biochemistry**
- **BCH 461 General Biochemistry**
- **BCH 462 General Biochemistry**
- **BIO 340 General Genetics**
- **BIO 343 Genetic Engineering and Society**
- **BIO 345 Evolution**
- **BME 350 Signals and Systems for Bioengineers**
- **BME 416 Advanced Biomechanics**

Requirement	Minimum Grade	Credit Hours
BME 494 Topic: Applied Computational Behavioral Science		
CEE 412 Pavement Analysis and Design		
CEE 432 Developing Software for Engineering Applications		
CEE 440 Hydrology		
CEE 441 Water Resources Engineering		
CEE 452 Foundations		
CEE 462 Unit Operations in Environmental Engineering		
CEE 466 Urban Water System Design		
CEE 467 Environmental Microbiology		
CEE 474 Transportation Systems Planning		
CEE 475 Highway Geometric Design		
CEE 481 Civil Engineering Project Management		
CEE 486 Integrated Civil Engineering Design		
CHE 342 Introduction to Applied Chemical Thermodynamics		
CHE 432 Principles of Chemical Engineering Design		
CHE 442 Introduction to Chemical Reactor Design		
CHE 461 Process Dynamic Control (QTRS)		
CHE 462 Process Design		

Requirement	Minimum Grade	Credit Hours
CHE 469 Air Quality Engineering		
CHE 475 Biochemical Engineering		
CIS 415 Big Data and AI in Business		
CPI 311 Game Engine Development		
CPI 350 Evaluation of Informatics Systems		
CPI 360 Decision Making and Problem Solving		
CPI 411 Graphics for Games		
CPI 460 Intelligent Interactive Instructional Systems		
CPI 462 Design for Learning in Virtual Worlds		
CSE 320 Design and Synthesis of Digital Hardware		
CSE 325 Embedded Microprocessor Systems		
CSE 335 Principles of Mobile Application Development		
DAT 300 Mathematical Tools for Data Science		
DAT 301 Exploring Data in R and Python		
DAT 401 Statistical Modeling and Inference for Data Science		
DAT 402 Machine Learning for Data Science		
EEE 304 Signals and Systems II		
EEE 333 Hardware Design Languages and Programmable Logic		
EEE 335 Analog and Digital Circuits		

Requirement	Minimum Grade	Credit Hours
EEE 350 Random Signal Analysis		
EEE 360 Energy Systems and Power Electronics		
EEE 404 Real-Time DSP Systems		
EEE 407 Digital Signal Processing		
EEE 425 Digital Systems and Circuits		
EEE 433 Analog Integrated Circuits		
EEE 434 Quantum Mechanics for Engineers		
EEE 435 Fundamentals of CMOS and MEMS		
EEE 436 Fundamentals of Solid-State Devices		
EEE 437 Optoelectronics		
EEE 443 Antennas for Wireless Communications		
EEE 445 Microwaves		
EEE 448 Fiber Optics		
EEE 455 Communication Systems		
EEE 459 Communication Networks		
EEE 460 Nuclear Power Engineering		
EEE 463 Electrical Power Plants		
EEE 470 Electric Power Devices		
EEE 471 Power System Analysis		
EEE 473 Electrical Machinery		

Requirement	Minimum Grade	Credit Hours
EEE 480 Feedback Systems		
EEE 481 Computer-Controlled Systems		
FSE 301 Entrepreneurship and Value Creation		
FSE 394 Topic: Engineering for Humanity		
FSE 404 EPICS Gold: EPICS in Action		
IEE 376 Operations Research Deterministic Techniques/Applications		
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 412 Introduction to Financial Engineering		
IEE 426 Operations Research in Healthcare		
IEE 431 Engineering Administration		
IEE 456 Introduction to Systems Engineering		
IEE 458 Project Management		
IEE 461 Production Control		
IEE 470 Stochastic Operations Research		
IEE 474 Quality Control		
IEE 475 Simulating Stochastic Systems (QTRS)		
MAE 341 Mechanism Analysis and Design		
MAE 404 Finite Elements in Engineering		

Requirement	Minimum Grade	Credit Hours
MAE 417 System Dynamics and Control II		
MAE 436 Combustion		
MAE 455 Polymers and Composites		
MEE 351 Manufacturing Processes		
MEE 434 Internal Combustion Engines		
MEE 446 Energy Systems Design II		
MSE 335 Materials Kinetics		
MSE 415 Mathematical and Computer Methods in Materials		
PHY 302 Mathematical Methods in Physics II		
PHY 361 Introductory Modern Physics		
PHY 462 Particle and Nuclear Physics		
SER 421 Web-Based Applications		
SER 422 Web Application Programming		
SER 423 Mobile Systems		
STP 421 Probability		
STP 425 Stochastic Processes		
STP 427 Mathematical Statistics		
STP 429 Applied Regression (QTRS)		
400-Level CSE Elective		

Requirement	Minimum Grade	Credit Hours

Computer Science Major GPA

Check: Minimum 2.00 Major GPA

Not all courses are available through ASU Online campus.

Computer Science - Mathematics Lower Division

MAT 243 Discrete Mathematical Structures	C	3
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH) OR MAT 271 Calculus with Analytic Geometry II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH) OR CSE 259 Logic in Computer Science	C	3

Lab Science (SCIT)

Lab Science	11

Applied Biological Science:

ABS 130 Introduction to Environmental Science (SCIT)

Astronomy:

AST 112 Introduction to Stars, Galaxies, and Cosmology (SCIT)

AST 112 Introduction to Stars, Galaxies, and Cosmology (SCIT)

Biology:

BIO 100 The Living World (SCIT)

BIO 130 Introduction to Environmental Science (SCIT)

BIO 160 Introduction to Anatomy and Physiology (SCIT)

BIO 151 Biological Thinking

BIO 181 General Biology I (SCIT)

BIO 182 General Biology II (SCIT)

BIO 201 Human Anatomy and Physiology I (SCIT)

BIO 202 Human Anatomy and Physiology II (SCIT)

Chemistry:

CHM 101 Introductory Chemistry (SCIT)

CHM 107 Chemistry and Society (SCIT) **AND** CHM 108 Chemistry and Society Laboratory (SCIT)

CHM 113 General Chemistry I (SCIT)

CHM 114 General Chemistry for Engineers (SCIT)

CHM 116 General Chemistry II (SCIT)

CHM 111 General Chemistry Laboratory for Majors I (SCIT) **AND** CHM 117 General Chemistry for Majors I (SCIT)

CHM 112 General Chemistry Laboratory for Majors II (SCIT) **AND** CHM 118 General Chemistry for Majors II (SCIT)

CHM 231 Elementary Organic Chemistry (SCIT)

CHM 235 Elementary Organic Chemistry Laboratory (SCIT)

Environmental Sciences:

ENV 130 Introduction to Environmental Science (SCIT)

Forensics:

FOR 105 Physical Evidence and the Crime Scene (SCIT)

FOR 106 Biology Behind the Crime Scene (SCIT)

Geological Sciences:

GLG 108 Water Planet (SCIT)

GLG 101 Introduction to Geology I (Physical) (SCIT) **AND** GLG 103 Introduction to Geology I: Laboratory (SCIT)

GLG 102 Introduction to Geology II (Historical) (SCIT) **AND** GLG 104 Introduction to Geology II: Laboratory (SCIT)

GLG 110 Dangerous World (SCIT) AND GLG 111 Dangerous World Laboratory (SCIT)

Physical Geography:

GPH 211 Landform Processes (SCIT)

GPH 111 Introduction to Physical Geography (SCIT) AND GPH 112 Introduction to Physical Geography Lab (SCIT)

GPH 212 Introduction to Meteorology (SCIT) AND GPH 214 Introduction to Meteorology Laboratory (SCIT)

Material Science:

MSE 208 Patterns in Nature (SCIT)

Physical Science:

PHS 110 Fundamentals of Physical Science (SCIT)

PHS 115 The Science of Musical Instruments

PHS 208 Patterns in Nature (SCIT)

Physics:

PHY 101 Introduction to Physics (SCIT)

PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)

PHY 112 General Physics (SCIT) **AND** **PHY 114 General Physics Laboratory (SCIT)**

PHY 121 University Physics I: Mechanics (SCIT) **AND** **PHY 122 University Physics Laboratory I (SCIT)**

PHY 131 University Physics II: Electricity and Magnetism (SCIT) **AND** **PHY 132 University Physics Laboratory II (SCIT)**

PHY 150 Physics I (SCIT)

PHY 151 Physics II (SCIT)

PHY 252 Physics III (SCIT)

Science Education:

SCN 250 Physical Science by Inquiry

Earth Space:

SES 106 Habitable Worlds (SCIT)

SES 121 Earth, Solar System and Universe (SCIT) **AND** **SES 123 Earth, Solar System and Universe Laboratory (SCIT)**

SES 141 Energy In Everyday Life (SCIT)

Sustainability:

SOS 182 Water Planet (SCIT)

AND Scientific Thinking in Natural Sciences (SCIT)

Three total (SCIT) lab science courses are required. Two (SCIT) courses must be from the same subject area and one (SCIT) course must be from a different subject area.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CAI The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Political History and Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAPTLCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires 15 credit hours, of which at least 12 must be upper division. At least six upper-division hours must be completed in courses offered by The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search. All courses must be completed in residence at ASU and with a grade of "C" (2.00 on a 4.00 scale) or higher.		
HST 112 Foundations of Democracy (CIVI) **or** **POS 112 Foundations of Democracy (CIVI)**	C	3
HST 414 Political History and Leadership **or** **POS 414 Political History and Leadership**	C	3
Upper Division Elective Courses	C	9
AFR 330 / **JUS 330 Survey of African American Politics**		
CEL 307 Reason and Revelation: Medieval Political Thought		
CEL 308 Liberty and Equality: Early Modern Political Thought (CIVI)		
CEL 334 Tocqueville's Democracy in America		
CEL 335 Lincoln: Rhetoric, Thought, Statesmanship (HUAD)		
CEL 345 Modern Economic Classics		

Requirement	Minimum Grade	Credit Hours
CEL 350 / PHI 350 Philosophy, Politics and Economics (SOBE)		
CEL 351 / ECN 304 Classical to Modern Economic Thought		
CEL 352 Debating Capitalism (SOBE)		
CEL 371 Classical Political Statecraft		
CEL 375 Politics and Leadership in the Age of Revolutions, 1776-1826		
HST 302 Topic: History of Money		
HST 306 Topic: American Political Conspiracy		
HST 306 Topic: Civil Rights to Black Lives Matter		
HST 306 Topic: Debating American Liberty		
HST 306 Topic: Jacksonian America: Pwer & Politics in US 1828-61		
HST 306 Topic: Liberal Revolution		
HST 306 Topic: The Civil War in Global Perspective		
HST 306 Topic: The U.S. Presidency		
HST 315 Political History of the U. S.		
HST 317 / POS 317 History of Postwar U.S. Conservatism		
HST 321 Constitutional History/US to 1865		
HST 322 Constitutional History of the United States Since 1865		
HST 323 / AFR 335 / TCL 335 Historical Studies in Race, Crime, and the Law		
HST 327 Women in U.S. History, 1600 to 1880 (HUAD)		
HST 328 Women in U.S. History, 1880-1980 (HUAD)		
HST 334 / AFR 364 African American History Since 1865 (HUAD)		

Requirement	Minimum Grade	Credit Hours
HST 354 Revolutionary Europe (GCSI)		
HST 356 Europe since 1945		
HST 370 Eastern Europe in Transition		
HST 374 / LAT 374 / SLC 374 Roman History II: The Roman Empire (GCSI)		
HST 405 Colonial American History to 1763		
HST 406 American Revolution/1763-1789		
HST 407 Early U.S. Republic/1789-1850		
HST 408 Civil War and Reconstruction (HUAD)		
HST 412 Contemporary U.S., 1973- Present		
HST 415 Debating the Constitution		
HST 426 The British Empire		
HST 427 French Revolution/Napoleonic Era		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 439 Athenian Democracy (CIVI)		
PHI 307 Philosophy of Law (AMIT)		
PHI 328 History of Ancient Philosophy (GCSI)		
PHI 329 History of Modern Philosophy (GCSI)		
PHI 335 History of Ethics (GCSI)		
PHI 336 Social and Political Philosophy		
PHI 347 Philosophical Theories of Constitutional Law		
PHI 401 Rationalism		
PHI 402 Empiricism		

Requirement	Minimum Grade	Credit Hours
POS 310 American National Government (AMIT)		
POS 313 The Congress (AMIT)		
POS 314 The American Presidency (AMIT)		
POS 315 The Supreme Court		
POS 316 American Political Institutions (AMIT)		
POS 332 American Political Parties		
POS 340 History of Political Philosophy I		
POS 341 History of Political Philosophy II		
POS 342 Political Theory		
POS 346 Problems of Democracy (HUAD)		
POS 352 European Democracies		
POS 356 European Union (GCSI)		
POS 417 Arizona Politics		
POS 435 Women and Politics (SOBE)		
POS 442 American Political Thought (HUAD)		
POS 470 Law and the Political Order		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		
POS 475 Morality and Politics		
POS 485 Political Economy (SOBE)		
REL 388 / POS 388 Religion, Ethics, and International Politics (CIVI)		
WST 440 Politics of Women's Health (CIVI)		

Requirement	Minimum Grade	Credit Hours
Additional upper-division courses with relevant content may be used with the approval of the certificate co-directors.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Not all courses for this program are available every term. Students should consult the class schedule prior to each term to confirm course availability.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Computer Science (Cybersecurity) and Artificial Intelligence and Digital Media (ESCSEIBS and HIAIDMCERT)

Program description:
The Bachelor of Science program in computer science with a concentration in cybersecurity provides students with the knowledge and skills they need to build dependable and secure information systems and networks and to ensure the integrity and quality of information being stored, processed and transmitted.

ASU has been certified as a National Center of Academic Excellence in Information Assurance Education and a National Center of Academic Excellence in Information Assurance - Research by the National Security Agency and the Department of Homeland Security. Information assurance courseware at ASU has been certified by the Information Assurance Courseware Evaluation Program to satisfy the standards for Information Systems Security Professionals (NSTISSI 4011) and Senior Systems Managers (CNSSI 4012).

Domestic students enrolled in the cybersecurity concentration are eligible for federal fellowships, such as the Department of Defense Information Assurance Scholarship Program and the Federal Cyber Service Scholarship for Service Program. For more information, students can visit the Cybersecurity and Trusted Foundations website.

Accredited by the Computing Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Computer Science Program Criteria.

The artificial intelligence and digital media certificate program focuses on the creative exploration of how new media, built on advances in AI and machine learning, influences the way people live, learn, create and communicate.

Pursuing the certificate enables students to enhance their program of study with integrated, transdisciplinary training in the use of AI in new media and its sociocultural implications. Students learn how to design and create new media as well as analyze existing media products in the world from a transdisciplinary perspective.

The School of Arts, Media and Engineering educates the next generation of learners and empowers them with technofluency --- its development, application and implications. The School of Arts, Media and Engineering prepares students to be socially aware, critically thinking global citizens who strive to bring about positive change in a society that is increasingly shaped by new technologies.

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe

Career opportunities:
Computer scientists are highly sought-after in multiple areas of industry, including education, logistics, tech, government and security.

Graduates of the BS program in computer science with a concentration in cybersecurity find employment in a variety of capacities, including computer system and software development, and research on information assurance technologies. Related jobs include these areas:

- analyzing computer forensic data
- designing secure information systems and databases
- developing secure software
- information security consulting
- secure computer and network applications

There are several companies who hire in the space of augmented and virtual reality, image and video multimedia including Adobe, Dreamscape, NVIDIA, Disney and Intel.

According to the U.S. Bureau of Labor Statistics, employment of media and communication occupations is projected to

grow about as fast as the average for all occupations from 2023 to 2033, which will result in about 27,600 new jobs. Demand for media and communication occupations is expected to arise from the need to create, edit, translate and disseminate information through a variety of different platforms. About 109,500 openings are projected each year, on average, in these occupations due to employment growth and the need to replace workers who leave the occupations permanently. The median annual wage for media and communication workers (such as public relations specialists, news analysts, and writers and authors) was $66,320 in May 2023, which was higher than the median annual wage for all occupations of $48,060. Media and communication equipment workers (such as broadcast technicians, film and video editors, and photographers) had a median annual wage of $53,850 in May 2023, which was higher than the median annual wage for all occupations.

Employment in computer and information technology occupations is projected to grow much faster than the average for all occupations from 2023 to 2033. About 356,700 openings are projected each year, on average, in these occupations due to employment growth and the need to replace workers who leave the occupations permanently. All these numbers show a promising future for graduates who develop the skills taught in this certificate program.

Example careers:

- augmented and virtual reality software developer
- computer animator
- data scientist
- graphics software developer
- machine learning engineer
- media and communications designer
- user experience and user interface designer

Curriculum - Computer Science (Cybersecurity), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: New College of Interdisciplinary Arts and Sciences
Ira A. Fulton Schools of Engineering
Plan Code: ESCSEIBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Not all courses are available at the West Campus.		
Not all major required courses are available every term. - Please see our degree requirements website for links to our flowcharts and our most up to date course lists. https://scai.engineering.asu.edu/computer-science-ba/cs-ba-degree-requirement		

Major Lower Division Requirements

ACO 201 Data Structures and Algorithms (QTRS) OR **SER 222 Design and Analysis of Data Structures and Algorithms** OR **CPI 220 Applied Data Structures and Algorithms**	C	3
CSE 110 Principles of Programming (QTRS)	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
CSE 225 Introduction to Modern Computing Systems	C	3

Requirement	Minimum Grade	Credit Hours
CSE 240 Introduction to Programming Languages	C	3

Computer Science Upper Division Core Requirements

CSE 301 Computing Ethics	C	1
ACO 320 Database Systems	C	3
ACO 330 Computer Networks	C	3
ACO 350 Systems Programming (QTRS)	C	3
CSE 360 Introduction to Software Engineering	C	3

Cybersecurity Concentration Core

ACO 361 Secure Coding Concepts	C	3
Upper Division Computing Electives	C	6

- ACO 321 Database Development & Applications
- ACO 331 Network Forensics Analysis
- ACO 351 Governance, Risk and Compliance
- ACO 361 Secure Coding Concepts
- ACO 394 Special Topics
- ACO 420 Big Data Systems
- ACO 423 Data Science
- ACO 430 Wireless Networks and Security

Requirement	Minimum Grade	Credit Hours
ACO 431 Network Security		
ACO 432 Distributed Systems		
ACO 461 Security Operations		
ACO 494 Special Topics		
CPI 310 Web-Based Information Management Systems		
CPI 350 Evaluation of Informatics Systems		
CPI 360 Decision Making and Problem Solving		
CSE 335 Principles of Mobile Application Development		
CSE 365 Information Assurance		
CSE 445 Distributed Software Development		
CSE 446 Software Integration and Engineering		
CSE 460 Software Analysis and Design		
CSE 463 Introduction to Human Computer Interaction		
CSE 494 Special Topics		
Upper Division Cybersecurity Electives	C	12
ACO 331 Network Forensics Analysis		
ACO 351 Governance, Risk and Compliance		
ACO 401 Managing Cyber Risks in Enterprise Business Processes		
ACO 402 Privacy, Ethics and Compliance Issues		

Requirement	Minimum Grade	Credit Hours
ACO 430 Wireless Networks and Security **ACO 431 Network Security** **ACO 461 Security Operations** **FOR 350 Digital Forensics**		
Upper Division **FSE Elective** Recommended: **FSE 301** OR **FSE 350** The FSE Upper Division Elective may be met with two one-credit hour courses, or a three-credit hour course with the additional credit being allocated to university electives.	C	2

Computing Capstone/Experiential Learning Requirement

Completion of all major MAT/STP coursework and the listed CSE or ACO prerequisites with a C or better is required prior to enrollment in the experiential learning courses. This is a two-semester requirement. Experiential learning courses may not be taken concurrently in the same semester.

All students must take at least three credit hours of CSE 484 or ACO/CSE 499, and may choose to take all six credit hours as CSE 484 and/or ACO/CSE 499, if they desire. See academic advisor for questions.

CSE 484 Internship OR **CSE 499 Individualized Instruction** OR **ACO 499 Individualized Instruction**	C	3
Upper Division Computing Capstone/Experiential Learning Requirement	C	3

Requirement	Minimum Grade	Credit Hours
Only one of ACO 482 or ACO 494 Industry Capstone Projects may apply for three out of the six credit hours for the Experiential Learning requirement.		
ACO 482 Design Thinking for National Security		
ACO 484 Internship		
ACO 494 Topic: Industry Capstone Projects		
ACO 499 Individualized Instruction		
CSE 484 Internship		
CSE 492 Honors Directed Study		
CSE 493 Honors Thesis		
CSE 499 Individualized Instruction		

Computer Science - Cybersecurity - Major Requirement

Check: Minimum 2.0 Major GPA

Interdisciplinary Requirements

MAT 210 Brief Calculus (MATH) OR **MAT 251 Calculus for Life Sciences (MATH)** OR **MAT 265 Calculus for Engineers I (MATH)** OR **MAT 270 Calculus with Analytic Geometry I (MATH)**		C	3 - 4
MAT 243 Discrete Mathematical Structures		C	3

STP 226 Elements of Statistics (QTRS)	C	3

Communication Elective

Upper Division Communication Elective

COM 316 Gender and Communication (SOBE)	C	3
COM 317 Nonverbal Communication (SOBE)		
COM 353 Professional Communication		
COM 371 Language, Culture and Communication (GCSI)		
COM 415 Risk Communication (SOBE)		
COM 416 Gender and Race in the Media		
COM 457 New Media		
COM 459 Theory and Methods of Social Media Networks		
COM 471 Global Media and Cultural Identity (GCSI)		
COM 477 Sport, Culture, and Discourses		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CAI The ASU Experience	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Artificial Intelligence and Digital Media, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Herberger Institute for Design and the Arts

Plan Code: HIAIDMCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
AME 130 Prototyping Dreams **or** AME 230 Programming for the Media Arts (QTRS)	C	3
AME 400 Minds and Machines	C	3
AME 404 Reading the Algorithm	C	3
Upper Division Media Processing Electives	C	6
AME 430 Mac Development for Media Arts		
AME 434 Machine Learning for Media Arts		
AME 435 Mobile Development		
AME 436 Animating Virtual Worlds		
AME 470 Programming for Social and Interactive Media		
CPI 321 Fundamentals of Game Art		
CPI 411 Graphics for Games		
CPI 421 3-D Modeling and Texturing		
CPI 462 Design for Learning in Virtual Worlds		
SER 332 Introduction to Graphics and Game Development		

Requirement	Minimum Grade	Credit Hours
SER 431 Advanced Graphics		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Counseling and Applied Psychological Science and Juvenile Justice (LSCAPSBS and PPJVJUCERT)

Program description:
Counseling and applied psychological science is a specialty in promoting psychological well-being. Counselors and applied psychologists provide the tools and resources necessary for individuals, families and organizations to cope with everyday problems.

The Bachelor of Science program in counseling and applied psychological science provides foundational training in counseling theories, addictions, trauma, lifespan development, group counseling and professional ethics. A distinct aspect of the program is its attention to cultural diversity, focusing on age, gender, race, ethnicity, sexual orientation, religion and socioeconomic status. As part of the program, students participate in a hands-on internship in which they shadow a licensed therapist and apply counseling theory.

The curriculum of the juvenile justice certificate program covers key topics focused on justice-involved youth, including theoretical perspectives on why youth engage in delinquent acts; life-course criminology and how key turning points in life impact trajectories of youth; the number of youth who engage in delinquency who have a prior history of victimization; and juvenile justice and how the criminal justice system, including police, courts and correctional agencies, responds to youth.

BS At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 119 - Finite Mathematics
or MAT 170 Precalculus
Math intensity: Moderate

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Graduates with a degree in counseling and applied psychological sciences are prepared for careers in various settings:

- community centers
- government (sales and marketing, human resources management)
- mental health professions (youth counselor, substance abuse counselor, behavioral health technician)
- schools and colleges (school psychologist, educator, professor)
- social services (high school psychology teacher, occupational analyst)
- substance abuse treatment clinics

Graduates may qualify for employment in behavioral health care delivery settings such as community agencies, hospitals and rehabilitation centers to support counselors and other mental health professionals. They are prepared for a variety of positions, such as vocational rehabilitation assistant, human service worker and life skills instructor. The Bureau of Labor Statistics shows a projected job growth of 19% (2023 to 2033) for substance abuse, behavioral disorder and mental health counselors --- much faster than average.

Graduates of this program are not license eligible as professional counselors but are well prepared with an excellent foundation to enter graduate degree programs in disciplines such as counselor education, counseling psychology, clinical psychology, social work and family studies, counseling and related fields.

Those who complete this certificate have developed expertise in understanding youth crime and responses to it. This expertise prepares them for employment opportunities in juvenile courts, juvenile probation and corrections, and social service agencies.

Curriculum - Counseling and Applied Psychological Science, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: College of Integrative Sciences and Arts
Plan Code: LSCAPSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Counseling and Applied Psychological Science Core		
CAP 120 Introduction to Counseling (SOBE)	C	3
CAP 220 Self in a Multicultural Society (SOBE)	C	3
CAP 240 Counseling Skills	C	3
CAP 290 Research Methods in Counseling and Psychology (QTRS)	C	4
CAP 310 Addictions I: Foundations and Basic Principles	C	3
CAP 320 Theories of Counseling and Psychotherapy	C	3
CAP 340 Multicultural Counseling Theory and Practice	C	3
CAP 484 Internship	C	3
CED 250 Career Development	C	3
MAT 119 Finite Mathematics (MATH) OR MAT 170 Precalculus (MATH)	C	3

Requirement	Minimum Grade	Credit Hours
PSY 101 Introduction to Psychology (SOBE)	C	3
PSY 230 Introduction to Statistics (QTRS)	C	3
PSY 366 Psychological Disorders (SOBE)	C	3

Counseling and Applied Psychological Science - Science

ABS Elective **AND** Scientific Thinking in Natural Sciences (SCIT) **OR** BIO Elective **AND** Scientific Thinking in Natural Sciences (SCIT) **OR** MIC Elective **AND** Scientific Thinking in Natural Sciences (SCIT)	4

Counseling and Applied Psychological Science Electives

Upper Division Counseling and Applied Psychological Science A Courses	12

- CAP 315 Trauma and Crisis Intervention
- CAP 316 Combat Trauma
- CAP 323 Psychology of Coaching
- CAP 325 Professional Practice and Ethics in Counseling
- CAP 330 Group Counseling
- CAP 335 Addiction Group Counseling
- CAP 336 Counseling Military Veterans

Requirement	Minimum Grade	Credit Hours
CAP 342 Community Outreach, Prevention and Intervention		
CAP 345 Social Issues in Counseling and Psychology		
CAP 351 Issues in Assessment, Diagnosis and Treatment		
CAP 400 Advanced Counseling Research Methods		
CAP 420 School Counseling		
CAP 440 Addictions II: Treatment, Recovery and Relapse Prevention		
Upper Division Upper Division Counseling and Applied Psychological Sciences B Courses		12
CDE 414 The School-Aged Child: Development in the Elementary Years		
ENG 420 Multicultural Autobiographies (HUAD)		
FAS 331 Modern Family Relationships (SOBE)		
FAS 370 Family Ethnic and Cultural Diversity (CIVI)		
HCR 310 Fundamentals of Human Trafficking (SOBE)		
JUS 305 Principles of Justice Studies (HUAD)		
PSY 304 Effective Thinking		
PSY 315 Personality Theory and Research (SOBE)		
PSY 320 Learning and Motivation		
PSY 323 Sensation and Perception		

Requirement	Minimum Grade	Credit Hours
PSY 324 Memory and Cognition		
PSY 325 Physiological Psychology		
PSY 330 Statistical Methods (QTRS)		
PSY 341 Developmental Psychology (SOBE)		
PSY 369 Biology of Human Sexuality		
PSY 370 Interpersonal Relationships (SOBE)		
PSY 385 Psychology of Gender (SOBE)		
PSY 399 Supervised Research		
PSY 425 Biological Bases of Behavior		
PSY 444 Adolescent Psychology and Psychopathology		
PSY 447 Psychology of Aging		
PSY 462 Health Psychology		
PSY 465 Psychology of Stress and Coping		
PSY 470 Psychopharmacology		
PSY 472 Clinical Psychology		
PSY 499 Individualized Instruction		
SOC 315 Sociology of Dating, Relationships and Marriage (SOBE)		
SWU 456 Immigrants and Refugees (CIVI)		
SWU 457 Southwest Borderland Immigration Issues (CIVI)		

Requirement	Minimum Grade	Credit Hours
ASU 101 or College-Specific First-Year Seminar		
ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
ASU 101-CLS The ASU Experience		1
First-Year Composition		
ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq	
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr	
Mathematics Placement Assessment score determines placement in first mathematics course.	
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.	

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Juvenile Justice, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPJVJUCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
At least 12 credit hours must be taken in residence at ASU.		

Required Courses

CRJ 204 Juvenile Justice	C	3
CRJ 404 Juvenile Delinquency	C	3
CRJ 425 Life-Course Criminology	C	3

Elective Courses

Upper Division Electives	C	6

- **CDE 312 / SOC 312 Adolescence (SOBE)**
- **CDE 450 Childhood Disorders and Family Functioning**
- **CRJ 462 Gangs**
- **CRJ 494 Topic: Children and The Law**
- **JUS 477 Youth and Justice (SOBE)**

Requirement	Minimum Grade	Credit Hours
PSY 341 Developmental Psychology (SOBE)		
TEL 315 Child and Adolescent Development		
Special Topics course (CRJ 494): Other juvenile justice-related topics may be substituted.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Criminology and Criminal Justice and Criminal Investigations (PPCRIMJBS and PPCRICERT)

Program description:
The Bachelor of Science program in criminology and criminal justice is for students who want to understand the causes of crime, the role of criminal justice agencies in the control of crime, and the consequences of crime. This program also provides a solid foundation for those interested in pursuing a prelaw track.

Students learn sociological, psychological, biological and economic explanations for individual crime as well as differences in crime across neighborhoods, states, countries and over time. They also learn about the history, legal issues and current practices of crime control via police agencies, the court system, prisons, probation and parole.

These topics are delivered by top-ranking research faculty who offer students hands-on research opportunities and by experienced criminal justice professionals with intimate knowledge of the daily realities of crime and those who engage in crime. Students are encouraged to take advantage of internship opportunities in more than 200 agencies, study abroad programs and flexible course scheduling offered in-person, online and across multiple campuses.

The certificate program in criminal investigations educates students about a variety of aspects of criminal investigations and criminalistics. The program is designed to provide students of the social sciences, natural sciences, humanities and public services with an understanding of the nature of criminal evidence; the language of forensic science; the scope, probative value and limitations of a variety of investigative specializations and their techniques; and an appreciation of how forensic investigative methods are used in the quest for justice.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or MAT 117 College Algebra
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley

Career opportunities:
Graduates of the criminology and criminal justice program find a strong job market in the public and private sectors. Employment opportunities exist in:

- corrections
- courts
- federal agencies
- homeland security
- law enforcement
- legal offices
- parole offices
- private security
- probation offices
- victim advocate agencies

In addition, graduates are able to work in combating bank fraud and domestic terrorism. They also may pursue advanced degrees in law, criminology and criminal justice, and other social science disciplines.

Graduates of the criminal investigations certificate program find a strong job market in the public and private sectors. In their roles, they can work to stop bank fraud and domestic terrorism. Employment opportunities exist in:

- courts
- federal agencies
- forensic agencies
- homeland security
- law enforcement
- legal offices

Graduates also may pursue advanced degrees in law, criminology and criminal justice, and other social science disciplines. Advanced degrees or certifications may be required for academic or clinical positions.

This program is not designed to prepare students for work in a crime laboratory.

Curriculum - Criminology and Criminal Justice, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPCRIMJBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
CRJ 100 Introduction to Criminal Justice (SOBE)	C	3
CRJ 201 Criminal Justice Crime Control Policies and Practices (SOBE)	C	3
CRJ 203 Courts and Sentencing	C	3
CRJ 230 Introduction to Policing	C	3
CRJ 240 Introduction to Corrections	C	3
CRJ 302 Research Methods	C	3
CRJ 303 Statistical Analysis (QTRS)	C	3
CRJ 304 Inequality, Crime and Criminal Justice (CIVI)	C	3
CRJ 309 Criminology (SOBE)	C	3
Major Electives		
200-Level **CRJ Elective**	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division **CRJ Elective**	C	6
400-Level **CRJ Elective**	C	12

Solution-Based Learning

Solution-Based Learning (SBL) 3

- **CPP 350 Community Works**
- **CPP 353 Community Impact Lab**
- **CRD 301 Sustainable Communities (SUST)**
- **CRD 435 Service Learning for Community Development**
- **CRJ 317 Inside-Out Prison Exchange Program**
- **CRJ 394 Topic: Comparative Organized Crime**
- **CRJ 394 Topic: Taking it to the Streets: Service-Based Learning**
- **CRJ 394 Topic: The British Roots of U.S. Criminal Justice**
- **CRJ 455 Police and International Terrorism**
- **CRJ 456 Etiology of Martyrdom**
- **CRJ 484 Internship**
- **CRJ 492 Honors Directed Study**
- **CRJ 493 Honors Thesis**
- **CRJ 496 Directed Research**

CRJ 499 Individualized Instruction
NLM 160 Voluntary Action and Community Leadership (CIVI)
NLM 435 Service Learning for Community Development
PRM 145 Special Events Management
PRM 203 Program Planning
PRM 315 Creating Community Through Park and Recreation Systems
PRM 370 Public Lands Management
SWU 291 Social Service Delivery Systems
SWU 394 Topic: Ending Homelessness
TDM 345 Meeting and Convention Planning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of SBL-designated coursework will satisfy this requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	

RTH Elective

TDM Elective

Area 2: Public Affairs

PAF Elective

Area 3: Social Work

SWU Elective

Area 4: Public Service and Community Solutions

CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Related Area

Upper Division Related Area	C	9

ASB 305 Poverty and Global Health (CIVI)

COM 312 Communication, Conflict, and Negotiation (CIVI)

COM 319 Persuasion and Social Influence (CIVI)

COM 414 Crisis Communication

CPP 350 Community Works

CRD 302 Inclusive Community Development (SOBE)

ENG 301 Writing for the Professions

ENG 311 Persuasive Writing (CIVI)

FMS 380 Race and Gender in U.S. Media (HUAD)

HST 325 Immigration and Ethnicity in the United States (HUAD)

HST 328 Women in U.S. History, 1880-1980 (HUAD)

HST 338 American Indian History since 1900 (HUAD)

HST 454 History of Genocide (GCSI)

IAS 300 Career Strategies and Personal Resilience

JUS 329 Domestic Violence (SOBE)

JUS 350 Immigration and Justice (SOBE)

JUS 374 The Holocaust, Genocide, and Human Rights

JUS 432 Racial Justice (CIVI)

JUS 477 Youth and Justice (SOBE)

PAF 300 Public Management and Administration

PAF 311 Leadership and Change (SOBE)

PAF 340 Contemporary Policy Challenges

PAF 410 Building Leadership Skills (SOBE)

PAF 460 Public Service Ethics

PAF 469 Terrorism Defense

PHI 306 Applied Ethics (CIVI)

PHI 307 Philosophy of Law (AMIT)

PHI 336 Social and Political Philosophy

PHI 360 Business and Professional Ethics (HUAD)

POS 310 American National Government (AMIT)

POS 325 Public Policy Development (CIVI)

POS 364 National Security, Intelligence, and Terrorism (SOBE)

POS 370 Law and Society (CIVI)

POS 442 American Political Thought (HUAD)

POS 471 Constitutional Law I (AMIT)

PSY 350 Social Psychology (SOBE)

PSY 366 Psychological Disorders (SOBE)

PUP 301 Introduction to Urban Planning

REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)

REL 381 Religion and Moral Issues (HUAD)

SOC 340 Social Deviance

SOC 352 Social Change (CIVI)

SOC 363 Men and Masculinity (SOBE)

SOC 426 Social Inequalities (CIVI)

STS 364 Science, Technology, and National Security

SWU 454 Overview of Addictions

SWU 456 Immigrants and Refugees (CIVI)

SWU 457 Southwest Borderland Immigration Issues (CIVI)

SWU 460 Legal Issues in Social Work

TCL 314 Transborder Latin American Migration to the U.S. (SOBE)

TCL 332 Mexican American History Since 1900 (GCSI)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Criminal Investigations, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPCRICERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Required Courses		
CRJ 210 Introduction to Criminal Investigations	C	3
CRJ 211 Documenting the Crime Scene	C	3
CRJ 410 Criminal Procedure I: The Law of Investigations	C	3
Elective Courses		
Upper Division Electives	C	9
CRJ 321 Evidence: Imperatives of Proof		
CRJ 433 Death Investigations: Principles of Forensic Medicine		
CRJ 434 Drugs of Abuse		
CRJ 435 Crime and Forensic Mental Health (SOBE)		
CRJ 450 Crime Analysis (QTRS)		
CRJ 484 Internship		
CRJ 494 Special Topics		
FOR 350 Digital Forensics		

Requirement	Minimum Grade	Credit Hours
FOR 394 Special Topics		
FOR 410 Testimony and Ethics in the Forensic Sciences		
FOR 484 Internship		

Special Topics courses (FOR 394 and CRJ 494) will be designated and approved by departments and schools. Students will need to work with an advisor in order to select appropriate special topics courses that are approved for credit in the criminal investigations certificate program.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

At least 12 credit hours must be taken in residence at ASU.

Upper-division coursework may not be used to satisfy the requirements of both a major and the certificate. Thus, if any elective courses in the certificate program are being used to satisfy the requirements of a major, different elective courses must be taken to satisfy the requirements of the certificate program. For example, students majoring in criminology and criminal justice may not use CRJ 321, CRJ 410, CRJ 433, CRJ 434, CRJ 435, CRJ 450, CRJ 484 or CRJ 494 to satisfy the requirements of the major and the certificate in criminal investigations. Similarly, students majoring in forensic science may not use FOR 350, FOR 410 or FOR 484 to satisfy the requirements of the major and the certificate in criminal investigations.

Prerequisite Information

CRJ 100 Introduction to Criminal Justice is a prerequisite requirement to enroll in CRJ 210, CRJ 211, CRJ 433, CRJ 434, CRJ 435, and CRJ 494.

ACO 100 is a prerequisite requirement to enroll in FOR 350.

FOR 370 is a prerequisite requirement to enroll in FOR 410. Completion of ENG 102 or 105 or 108 is also the prerequisite for FOR 410.

The completion of at least 45 credit hours is a prerequisite requirement to enroll in FOR 484 Internship.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Criminology and Criminal Justice and Juvenile Justice (PPCRIMJBS and PPJVJUCERT)

Program description:
The Bachelor of Science program in criminology and criminal justice is for students who want to understand the causes of crime, the role of criminal justice agencies in the control of crime, and the consequences of crime. This program also provides a solid foundation for those interested in pursuing a prelaw track.

Students learn sociological, psychological, biological and economic explanations for individual crime as well as differences in crime across neighborhoods, states, countries and over time. They also learn about the history, legal issues and current practices of crime control via police agencies, the court system, prisons, probation and parole.

These topics are delivered by top-ranking research faculty who offer students hands-on research opportunities and by experienced criminal justice professionals with intimate knowledge of the daily realities of crime and those who engage in crime. Students are encouraged to take advantage of internship opportunities in more than 200 agencies, study abroad programs and flexible course scheduling offered in-person, online and across multiple campuses.

The curriculum of the juvenile justice certificate program covers key topics focused on justice-involved youth, including theoretical perspectives on why youth engage in delinquent acts; life-course criminology and how key turning points in life impact trajectories of youth; the number of youth who engage in delinquency who have a prior history of victimization; and juvenile justice and how the criminal justice system, including police, courts and correctional agencies, responds to youth.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or MAT 117 College Algebra
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Graduates of the criminology and criminal justice program find a strong job market in the public and private sectors. Employment opportunities exist in:

- corrections
- courts
- federal agencies
- homeland security
- law enforcement
- legal offices
- parole offices
- private security
- probation offices
- victim advocate agencies

In addition, graduates are able to work in combating bank fraud and domestic terrorism. They also may pursue advanced degrees in law, criminology and criminal justice, and other social science disciplines.

Those who complete this certificate have developed expertise in understanding youth crime and responses to it. This expertise prepares them for employment opportunities in juvenile courts, juvenile probation and corrections, and social service agencies.

Curriculum - Criminology and Criminal Justice, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPCRIMJBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
CRJ 100 Introduction to Criminal Justice (SOBE)	C	3
CRJ 201 Criminal Justice Crime Control Policies and Practices (SOBE)	C	3
CRJ 203 Courts and Sentencing	C	3
CRJ 230 Introduction to Policing	C	3
CRJ 240 Introduction to Corrections	C	3
CRJ 302 Research Methods	C	3
CRJ 303 Statistical Analysis (QTRS)	C	3
CRJ 304 Inequality, Crime and Criminal Justice (CIVI)	C	3
CRJ 309 Criminology (SOBE)	C	3
Major Electives		
200-Level **CRJ Elective**	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division **CRJ Elective**	C	6
400-Level **CRJ Elective**	C	12

Solution-Based Learning

Solution-Based Learning (SBL) 3

- **CPP 350 Community Works**
- **CPP 353 Community Impact Lab**
- **CRD 301 Sustainable Communities (SUST)**
- **CRD 435 Service Learning for Community Development**
- **CRJ 317 Inside-Out Prison Exchange Program**
- **CRJ 394 Topic: Comparative Organized Crime**
- **CRJ 394 Topic: Taking it to the Streets: Service-Based Learning**
- **CRJ 394 Topic: The British Roots of U.S. Criminal Justice**
- **CRJ 455 Police and International Terrorism**
- **CRJ 456 Etiology of Martyrdom**
- **CRJ 484 Internship**
- **CRJ 492 Honors Directed Study**
- **CRJ 493 Honors Thesis**
- **CRJ 496 Directed Research**

CRJ 499 Individualized Instruction
NLM 160 Voluntary Action and Community Leadership (CIVI)
NLM 435 Service Learning for Community Development
PRM 145 Special Events Management
PRM 203 Program Planning
PRM 315 Creating Community Through Park and Recreation Systems
PRM 370 Public Lands Management
SWU 291 Social Service Delivery Systems
SWU 394 Topic: Ending Homelessness
TDM 345 Meeting and Convention Planning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of SBL-designated coursework will satisfy this requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	

RTH Elective

TDM Elective

Area 2: Public Affairs

PAF Elective

Area 3: Social Work

SWU Elective

Area 4: Public Service and Community Solutions

CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Related Area

Upper Division Related Area	C	9

ASB 305 Poverty and Global Health (CIVI)

COM 312 Communication, Conflict, and Negotiation (CIVI)

COM 319 Persuasion and Social Influence (CIVI)

COM 414 Crisis Communication

CPP 350 Community Works

CRD 302 Inclusive Community Development (SOBE)

ENG 301 Writing for the Professions

ENG 311 Persuasive Writing (CIVI)

FMS 380 Race and Gender in U.S. Media (HUAD)

HST 325 Immigration and Ethnicity in the United States (HUAD)

HST 328 Women in U.S. History, 1880-1980 (HUAD)

HST 338 American Indian History since 1900 (HUAD)

HST 454 History of Genocide (GCSI)

IAS 300 Career Strategies and Personal Resilience

JUS 329 Domestic Violence (SOBE)

JUS 350 Immigration and Justice (SOBE)

JUS 374 The Holocaust, Genocide, and Human Rights

JUS 432 Racial Justice (CIVI)

JUS 477 Youth and Justice (SOBE)

PAF 300 Public Management and Administration

PAF 311 Leadership and Change (SOBE)

PAF 340 Contemporary Policy Challenges

PAF 410 Building Leadership Skills (SOBE)

PAF 460 Public Service Ethics

PAF 469 Terrorism Defense

PHI 306 Applied Ethics (CIVI)

PHI 307 Philosophy of Law (AMIT)

PHI 336 Social and Political Philosophy

PHI 360 Business and Professional Ethics (HUAD)

POS 310 American National Government (AMIT)

POS 325 Public Policy Development (CIVI)

POS 364 National Security, Intelligence, and Terrorism (SOBE)

POS 370 Law and Society (CIVI)

POS 442 American Political Thought (HUAD)

POS 471 Constitutional Law I (AMIT)

PSY 350 Social Psychology (SOBE)

PSY 366 Psychological Disorders (SOBE)

PUP 301 Introduction to Urban Planning

REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)

REL 381 Religion and Moral Issues (HUAD)

SOC 340 Social Deviance

SOC 352 Social Change (CIVI)

SOC 363 Men and Masculinity (SOBE)

SOC 426 Social Inequalities (CIVI)

STS 364 Science, Technology, and National Security

SWU 454 Overview of Addictions

SWU 456 Immigrants and Refugees (CIVI)

SWU 457 Southwest Borderland Immigration Issues (CIVI)

SWU 460 Legal Issues in Social Work

TCL 314 Transborder Latin American Migration to the U.S. (SOBE)

TCL 332 Mexican American History Since 1900 (GCSI)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Juvenile Justice, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPJVJUCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
At least 12 credit hours must be taken in residence at ASU.		

Required Courses

CRJ 204 Juvenile Justice	C	3
CRJ 404 Juvenile Delinquency	C	3
CRJ 425 Life-Course Criminology	C	3

Elective Courses

Upper Division Electives	C	6

- **CDE 312 / SOC 312 Adolescence (SOBE)**
- **CDE 450 Childhood Disorders and Family Functioning**
- **CRJ 462 Gangs**
- **CRJ 494 Topic: Children and The Law**
- **JUS 477 Youth and Justice (SOBE)**

Requirement	Minimum Grade	Credit Hours
PSY 341 Developmental Psychology (SOBE)		
TEL 315 Child and Adolescent Development		
Special Topics course (CRJ 494): Other juvenile justice-related topics may be substituted.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Criminology and Criminal Justice and Law and Human Behavior (PPCRIMJBS and PPLWHBCERT)

Program description:
The Bachelor of Science program in criminology and criminal justice is for students who want to understand the causes of crime, the role of criminal justice agencies in the control of crime, and the consequences of crime. This program also provides a solid foundation for those interested in pursuing a prelaw track.

Students learn sociological, psychological, biological and economic explanations for individual crime as well as differences in crime across neighborhoods, states, countries and over time. They also learn about the history, legal issues and current practices of crime control via police agencies, the court system, prisons, probation and parole.

These topics are delivered by top-ranking research faculty who offer students hands-on research opportunities and by experienced criminal justice professionals with intimate knowledge of the daily realities of crime and those who engage in crime. Students are encouraged to take advantage of internship opportunities in more than 200 agencies, study abroad programs and flexible course scheduling offered in-person, online and across multiple campuses.

Law and human behavior is an umbrella term that encompasses various aspects of the rapidly emerging field of forensic psychology, law and justice.

This certificate program focuses on the criminal justice aspects of forensic psychology, emphasizing victimology, offender treatment, criminal incapacity, mental health law, juvenile justice and delinquency, and the dynamics of how the criminal justice system intersects with behavioral science.

The program is designed to provide students of social services and social sciences with an understanding of important but understudied areas where justice policy is in desperate need of empirical, psychological research.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or MAT 117 College Algebra
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, Tempe, West Valley

Career opportunities:
Graduates of the criminology and criminal justice program find a strong job market in the public and private sectors. Employment opportunities exist in:

- corrections
- courts
- federal agencies
- homeland security
- law enforcement
- legal offices
- parole offices
- private security
- probation offices
- victim advocate agencies

In addition, graduates are able to work in combating bank fraud and domestic terrorism. They also may pursue advanced degrees in law, criminology and criminal justice, and other social science disciplines.

Graduates of the law and human behavior certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local), such as:

- evidence and crime scene supervisor (crime scene investigation activities)

- forensic psychologist
- intelligence analyst
- law enforcement officer

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Criminology and Criminal Justice, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPCRIMJBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
CRJ 100 Introduction to Criminal Justice (SOBE)	C	3
CRJ 201 Criminal Justice Crime Control Policies and Practices (SOBE)	C	3
CRJ 203 Courts and Sentencing	C	3
CRJ 230 Introduction to Policing	C	3
CRJ 240 Introduction to Corrections	C	3
CRJ 302 Research Methods	C	3
CRJ 303 Statistical Analysis (QTRS)	C	3
CRJ 304 Inequality, Crime and Criminal Justice (CIVI)	C	3
CRJ 309 Criminology (SOBE)	C	3
Major Electives		
200-Level **CRJ Elective**	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division **CRJ Elective**	C	6
400-Level **CRJ Elective**	C	12

Solution-Based Learning

Solution-Based Learning (SBL) 3

- **CPP 350 Community Works**
- **CPP 353 Community Impact Lab**
- **CRD 301 Sustainable Communities (SUST)**
- **CRD 435 Service Learning for Community Development**
- **CRJ 317 Inside-Out Prison Exchange Program**
- **CRJ 394 Topic: Comparative Organized Crime**
- **CRJ 394 Topic: Taking it to the Streets: Service-Based Learning**
- **CRJ 394 Topic: The British Roots of U.S. Criminal Justice**
- **CRJ 455 Police and International Terrorism**
- **CRJ 456 Etiology of Martyrdom**
- **CRJ 484 Internship**
- **CRJ 492 Honors Directed Study**
- **CRJ 493 Honors Thesis**
- **CRJ 496 Directed Research**

CRJ 499 Individualized Instruction
NLM 160 Voluntary Action and Community Leadership (CIVI)
NLM 435 Service Learning for Community Development
PRM 145 Special Events Management
PRM 203 Program Planning
PRM 315 Creating Community Through Park and Recreation Systems
PRM 370 Public Lands Management
SWU 291 Social Service Delivery Systems
SWU 394 Topic: Ending Homelessness
TDM 345 Meeting and Convention Planning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of SBL-designated coursework will satisfy this requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	

RTH Elective

TDM Elective

Area 2: Public Affairs

PAF Elective

Area 3: Social Work

SWU Elective

Area 4: Public Service and Community Solutions

CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Related Area

Upper Division Related Area	C	9

ASB 305 Poverty and Global Health (CIVI)

COM 312 Communication, Conflict, and Negotiation (CIVI)

COM 319 Persuasion and Social Influence (CIVI)

COM 414 Crisis Communication

CPP 350 Community Works

CRD 302 Inclusive Community Development (SOBE)

ENG 301 Writing for the Professions

ENG 311 Persuasive Writing (CIVI)

FMS 380 Race and Gender in U.S. Media (HUAD)

HST 325 Immigration and Ethnicity in the United States (HUAD)

HST 328 Women in U.S. History, 1880-1980 (HUAD)

HST 338 American Indian History since 1900 (HUAD)

HST 454 History of Genocide (GCSI)

IAS 300 Career Strategies and Personal Resilience

JUS 329 Domestic Violence (SOBE)

JUS 350 Immigration and Justice (SOBE)

JUS 374 The Holocaust, Genocide, and Human Rights

JUS 432 Racial Justice (CIVI)

JUS 477 Youth and Justice (SOBE)

PAF 300 Public Management and Administration

PAF 311 Leadership and Change (SOBE)

PAF 340 Contemporary Policy Challenges

PAF 410 Building Leadership Skills (SOBE)

PAF 460 Public Service Ethics

PAF 469 Terrorism Defense

PHI 306 Applied Ethics (CIVI)

PHI 307 Philosophy of Law (AMIT)

PHI 336 Social and Political Philosophy

PHI 360 Business and Professional Ethics (HUAD)

POS 310 American National Government (AMIT)

POS 325 Public Policy Development (CIVI)

POS 364 National Security, Intelligence, and Terrorism (SOBE)

POS 370 Law and Society (CIVI)

POS 442 American Political Thought (HUAD)

POS 471 Constitutional Law I (AMIT)

PSY 350 Social Psychology (SOBE)

PSY 366 Psychological Disorders (SOBE)

PUP 301 Introduction to Urban Planning

REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)

REL 381 Religion and Moral Issues (HUAD)

SOC 340 Social Deviance

SOC 352 Social Change (CIVI)

SOC 363 Men and Masculinity (SOBE)

SOC 426 Social Inequalities (CIVI)

STS 364 Science, Technology, and National Security

SWU 454 Overview of Addictions

SWU 456 Immigrants and Refugees (CIVI)

SWU 457 Southwest Borderland Immigration Issues (CIVI)

SWU 460 Legal Issues in Social Work

TCL 314 Transborder Latin American Migration to the U.S. (SOBE)

TCL 332 Mexican American History Since 1900 (GCSI)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Law and Human Behavior, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPLWHBCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Required Courses		
CRJ 260 Criminal Law I: Introduction to Substantive Criminal Law	C	3
CRJ 410 Criminal Procedure I: The Law of Investigations	C	3
PSY 366 Psychological Disorders (SOBE)	C	3
PSY 468 Psychology and Law	C	3
Elective Course		
Upper Division Electives	C	3
CRJ 309 Criminology (SOBE)		
CRJ 403 Victims and the Criminal Justice System		
CRJ 406 Sex Crimes		
CRJ 434 Drugs of Abuse		
CRJ 435 Crime and Forensic Mental Health (SOBE)		
CRJ 484 Internship		
CRJ 494 Special Topics		

Requirement	Minimum Grade	Credit Hours
PSY 341 Developmental Psychology (SOBE)		
PSY 368 Forensic Psychology		
PSY 443 Child and Adolescent Psychological Disorders (SOBE)		
PSY 472 Clinical Psychology		
PSY 474 Correctional Psychology		
PSY 494 Special Topics		
Special Topics courses (CRJ 494 and PSY 494) will be designated and approved by departments and schools. Students will need to work with an advisor in order to select appropriate special topics courses that are approved for credit in the law and human behavior certificate program.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.		
At least 12 credit hours must be taken in residence at ASU.		
Bachelor of Science in criminology and criminal justice majors who are also pursuing the Law and Human Behavior certificate may not use CRJ 309, CRJ 403, CRJ 406, CRJ 410, CRJ 434, CRJ 435, CRJ 484, and CRJ 494 towards both their degree and certificate.		

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Criminology and Criminal Justice and Leadership and Ethics (PPCRIMJBS and PPLDECERT)

Program description:
The Bachelor of Science program in criminology and criminal justice is for students who want to understand the causes of crime, the role of criminal justice agencies in the control of crime, and the consequences of crime. This program also provides a solid foundation for those interested in pursuing a prelaw track.

Students learn sociological, psychological, biological and economic explanations for individual crime as well as differences in crime across neighborhoods, states, countries and over time. They also learn about the history, legal issues and current practices of crime control via police agencies, the court system, prisons, probation and parole.

These topics are delivered by top-ranking research faculty who offer students hands-on research opportunities and by experienced criminal justice professionals with intimate knowledge of the daily realities of crime and those who engage in crime. Students are encouraged to take advantage of internship opportunities in more than 200 agencies, study abroad programs and flexible course scheduling offered in-person, online and across multiple campuses.

The certificate program in leadership and ethics focuses on understanding the broad transdisciplinary field of leadership and its application to various elements of society and community. It prepares individuals for positions of leadership and responsibility in the university, in student organizations, in their communities, and throughout their careers in business and government.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or MAT 117 College Algebra
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix

Career opportunities:
Graduates of the criminology and criminal justice program find a strong job market in the public and private sectors. Employment opportunities exist in:

- corrections
- courts
- federal agencies
- homeland security
- law enforcement
- legal offices
- parole offices
- private security
- probation offices
- victim advocate agencies

In addition, graduates are able to work in combating bank fraud and domestic terrorism. They also may pursue advanced degrees in law, criminology and criminal justice, and other social science disciplines.

Graduates are prepared to pursue a career in a field related to public administration or public policy, particularly in the areas of participatory governance and public engagement. This may include opportunities as a manager or policy analyst in local, state or federal agencies, in nonprofit organizations, and in private organizations whose work interfaces with the public sector.

Curriculum - Criminology and Criminal Justice, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPCRIMJBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
CRJ 100 Introduction to Criminal Justice (SOBE)	C	3
CRJ 201 Criminal Justice Crime Control Policies and Practices (SOBE)	C	3
CRJ 203 Courts and Sentencing	C	3
CRJ 230 Introduction to Policing	C	3
CRJ 240 Introduction to Corrections	C	3
CRJ 302 Research Methods	C	3
CRJ 303 Statistical Analysis (QTRS)	C	3
CRJ 304 Inequality, Crime and Criminal Justice (CIVI)	C	3
CRJ 309 Criminology (SOBE)	C	3
Major Electives		
200-Level **CRJ Elective**	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division **CRJ Elective**	C	6
400-Level **CRJ Elective**	C	12

Solution-Based Learning

Solution-Based Learning (SBL) 3

- **CPP 350 Community Works**
- **CPP 353 Community Impact Lab**
- **CRD 301 Sustainable Communities (SUST)**
- **CRD 435 Service Learning for Community Development**
- **CRJ 317 Inside-Out Prison Exchange Program**
- **CRJ 394 Topic: Comparative Organized Crime**
- **CRJ 394 Topic: Taking it to the Streets: Service-Based Learning**
- **CRJ 394 Topic: The British Roots of U.S. Criminal Justice**
- **CRJ 455 Police and International Terrorism**
- **CRJ 456 Etiology of Martyrdom**
- **CRJ 484 Internship**
- **CRJ 492 Honors Directed Study**
- **CRJ 493 Honors Thesis**
- **CRJ 496 Directed Research**

CRJ 499 Individualized Instruction

NLM 160 Voluntary Action and Community Leadership (CIVI)

NLM 435 Service Learning for Community Development

PRM 145 Special Events Management

PRM 203 Program Planning

PRM 315 Creating Community Through Park and Recreation Systems

PRM 370 Public Lands Management

SWU 291 Social Service Delivery Systems

SWU 394 Topic: Ending Homelessness

TDM 345 Meeting and Convention Planning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of SBL-designated coursework will satisfy this requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6

Area 1: Community Resources and Development

CRD Elective

NLM Elective

PRM Elective

RTH Elective

TDM Elective

Area 2: Public Affairs

PAF Elective

Area 3: Social Work

SWU Elective

Area 4: Public Service and Community Solutions

CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Related Area

Upper Division Related Area	C	9

ASB 305 Poverty and Global Health (CIVI)

COM 312 Communication, Conflict, and Negotiation (CIVI)

COM 319 Persuasion and Social Influence (CIVI)

COM 414 Crisis Communication

CPP 350 Community Works

CRD 302 Inclusive Community Development (SOBE)

ENG 301 Writing for the Professions

ENG 311 Persuasive Writing (CIVI)

FMS 380 Race and Gender in U.S. Media (HUAD)

HST 325 Immigration and Ethnicity in the United States (HUAD)

HST 328 Women in U.S. History, 1880-1980 (HUAD)

HST 338 American Indian History since 1900 (HUAD)

HST 454 History of Genocide (GCSI)

IAS 300 Career Strategies and Personal Resilience

JUS 329 Domestic Violence (SOBE)

JUS 350 Immigration and Justice (SOBE)

JUS 374 The Holocaust, Genocide, and Human Rights

JUS 432 Racial Justice (CIVI)

JUS 477 Youth and Justice (SOBE)

PAF 300 Public Management and Administration

PAF 311 Leadership and Change (SOBE)

PAF 340 Contemporary Policy Challenges

PAF 410 Building Leadership Skills (SOBE)

PAF 460 Public Service Ethics

PAF 469 Terrorism Defense

PHI 306 Applied Ethics (CIVI)

PHI 307 Philosophy of Law (AMIT)

PHI 336 Social and Political Philosophy

PHI 360 Business and Professional Ethics (HUAD)

POS 310 American National Government (AMIT)

POS 325 Public Policy Development (CIVI)

POS 364 National Security, Intelligence, and Terrorism (SOBE)

POS 370 Law and Society (CIVI)

POS 442 American Political Thought (HUAD)

POS 471 Constitutional Law I (AMIT)

PSY 350 Social Psychology (SOBE)

PSY 366 Psychological Disorders (SOBE)

PUP 301 Introduction to Urban Planning

REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)

REL 381 Religion and Moral Issues (HUAD)

SOC 340 Social Deviance

SOC 352 Social Change (CIVI)

SOC 363 Men and Masculinity (SOBE)

SOC 426 Social Inequalities (CIVI)

STS 364 Science, Technology, and National Security

SWU 454 Overview of Addictions

SWU 456 Immigrants and Refugees (CIVI)

SWU 457 Southwest Borderland Immigration Issues (CIVI)

SWU 460 Legal Issues in Social Work

TCL 314 Transborder Latin American Migration to the U.S. (SOBE)

TCL 332 Mexican American History Since 1900 (GCSI)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Leadership and Ethics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPLDECERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in leadership and ethics requires three core courses (nine credit hours), plus two elective discipline-based courses in leadership or ethics (six credit hours). Elective coursework may be selected from the approved list of elective courses or upon the recommendation of the department.		
All required courses must be taken at Arizona State University. Any course substitutions for the certificate are at the discretion of the School of Public Affairs.		
PAF 311 Leadership and Change (SOBE)	C	3
PAF 410 Building Leadership Skills (SOBE)	C	3
PAF 460 Public Service Ethics	C	3
Upper Division Electives	C	6
COM 430 Leadership in Group Communication		
HON 497 Honors Colloquium		
MGT 300 Principles of Management and Leadership		
NLM 430 Managing Nonprofit Organizations		
PAF 420 Managing Across Boundaries		

Requirement	Minimum Grade	Credit Hours
POS 314 The American Presidency (AMIT)		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Criminology and Criminal Justice and Legal Issues in Criminal Justice (PPCRIMJBS and PPLCRJCERT)

Program description:
The Bachelor of Science program in criminology and criminal justice is for students who want to understand the causes of crime, the role of criminal justice agencies in the control of crime, and the consequences of crime. This program also provides a solid foundation for those interested in pursuing a prelaw track.

Students learn sociological, psychological, biological and economic explanations for individual crime as well as differences in crime across neighborhoods, states, countries and over time. They also learn about the history, legal issues and current practices of crime control via police agencies, the court system, prisons, probation and parole.

These topics are delivered by top-ranking research faculty who offer students hands-on research opportunities and by experienced criminal justice professionals with intimate knowledge of the daily realities of crime and those who engage in crime. Students are encouraged to take advantage of internship opportunities in more than 200 agencies, study abroad programs and flexible course scheduling offered in-person, online and across multiple campuses.

The legal issues in criminal justice certificate program focuses on the intersection of policy and its effects on the criminal justice system. Topics include a focus on law and theoretical perspectives regarding the ramifications of certain policies in the field of criminal justice.

Students seeking more specialized knowledge about legal consequences of policy on the criminal justice system or those interested in careers in the public sector, law or the criminal justice system should consider this certificate program.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or MAT 117 College Algebra
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley or Online

Career opportunities:
Graduates of the criminology and criminal justice program find a strong job market in the public and private sectors. Employment opportunities exist in:

- corrections
- courts
- federal agencies
- homeland security
- law enforcement
- legal offices
- parole offices
- private security
- probation offices
- victim advocate agencies

In addition, graduates are able to work in combating bank fraud and domestic terrorism. They also may pursue advanced degrees in law, criminology and criminal justice, and other social science disciplines.

Graduates are prepared for employment opportunities in public policy, law enforcement and corrections, law firms and social service agencies. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Criminology and Criminal Justice, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPCRIMJBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
CRJ 100 Introduction to Criminal Justice (SOBE)	C	3
CRJ 201 Criminal Justice Crime Control Policies and Practices (SOBE)	C	3
CRJ 203 Courts and Sentencing	C	3
CRJ 230 Introduction to Policing	C	3
CRJ 240 Introduction to Corrections	C	3
CRJ 302 Research Methods	C	3
CRJ 303 Statistical Analysis (QTRS)	C	3
CRJ 304 Inequality, Crime and Criminal Justice (CIVI)	C	3
CRJ 309 Criminology (SOBE)	C	3
Major Electives		
200-Level **CRJ Elective**	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division **CRJ Elective**	C	6
400-Level **CRJ Elective**	C	12

Solution-Based Learning

Solution-Based Learning (SBL) 3

- **CPP 350 Community Works**
- **CPP 353 Community Impact Lab**
- **CRD 301 Sustainable Communities (SUST)**
- **CRD 435 Service Learning for Community Development**
- **CRJ 317 Inside-Out Prison Exchange Program**
- **CRJ 394 Topic: Comparative Organized Crime**
- **CRJ 394 Topic: Taking it to the Streets: Service-Based Learning**
- **CRJ 394 Topic: The British Roots of U.S. Criminal Justice**
- **CRJ 455 Police and International Terrorism**
- **CRJ 456 Etiology of Martyrdom**
- **CRJ 484 Internship**
- **CRJ 492 Honors Directed Study**
- **CRJ 493 Honors Thesis**
- **CRJ 496 Directed Research**

CRJ 499 Individualized Instruction
NLM 160 Voluntary Action and Community Leadership (CIVI)
NLM 435 Service Learning for Community Development
PRM 145 Special Events Management
PRM 203 Program Planning
PRM 315 Creating Community Through Park and Recreation Systems
PRM 370 Public Lands Management
SWU 291 Social Service Delivery Systems
SWU 394 Topic: Ending Homelessness
TDM 345 Meeting and Convention Planning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of SBL-designated coursework will satisfy this requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	

RTH Elective

TDM Elective

Area 2: Public Affairs

PAF Elective

Area 3: Social Work

SWU Elective

Area 4: Public Service and Community Solutions

CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Related Area

Upper Division Related Area	C	9

ASB 305 Poverty and Global Health (CIVI)

COM 312 Communication, Conflict, and Negotiation (CIVI)

COM 319 Persuasion and Social Influence (CIVI)

COM 414 Crisis Communication

CPP 350 Community Works

CRD 302 Inclusive Community Development (SOBE)

ENG 301 Writing for the Professions

ENG 311 Persuasive Writing (CIVI)

FMS 380 Race and Gender in U.S. Media (HUAD)

HST 325 Immigration and Ethnicity in the United States (HUAD)

HST 328 Women in U.S. History, 1880-1980 (HUAD)

HST 338 American Indian History since 1900 (HUAD)

HST 454 History of Genocide (GCSI)

IAS 300 Career Strategies and Personal Resilience

JUS 329 Domestic Violence (SOBE)

JUS 350 Immigration and Justice (SOBE)

JUS 374 The Holocaust, Genocide, and Human Rights

JUS 432 Racial Justice (CIVI)

JUS 477 Youth and Justice (SOBE)

PAF 300 Public Management and Administration

PAF 311 Leadership and Change (SOBE)

PAF 340 Contemporary Policy Challenges

PAF 410 Building Leadership Skills (SOBE)

PAF 460 Public Service Ethics

PAF 469 Terrorism Defense

PHI 306 Applied Ethics (CIVI)

PHI 307 Philosophy of Law (AMIT)

PHI 336 Social and Political Philosophy

PHI 360 Business and Professional Ethics (HUAD)

POS 310 American National Government (AMIT)

POS 325 Public Policy Development (CIVI)

POS 364 National Security, Intelligence, and Terrorism (SOBE)

POS 370 Law and Society (CIVI)

POS 442 American Political Thought (HUAD)

POS 471 Constitutional Law I (AMIT)

PSY 350 Social Psychology (SOBE)

PSY 366 Psychological Disorders (SOBE)

PUP 301 Introduction to Urban Planning

REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)

REL 381 Religion and Moral Issues (HUAD)

SOC 340 Social Deviance

SOC 352 Social Change (CIVI)

SOC 363 Men and Masculinity (SOBE)

SOC 426 Social Inequalities (CIVI)

STS 364 Science, Technology, and National Security

SWU 454 Overview of Addictions

SWU 456 Immigrants and Refugees (CIVI)

SWU 457 Southwest Borderland Immigration Issues (CIVI)

SWU 460 Legal Issues in Social Work

TCL 314 Transborder Latin American Migration to the U.S. (SOBE)

TCL 332 Mexican American History Since 1900 (GCSI)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Legal Issues in Criminal Justice, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPLCRJCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
At least 12 credit hours must be taken in residence at ASU.		

Required Courses

CRJ 203 Courts and Sentencing	C	3
CRJ 260 Criminal Law I: Introduction to Substantive Criminal Law	C	3
CRJ 410 Criminal Procedure I: The Law of Investigations	C	3
CRJ 416 Criminal Procedure II: Adjudication	C	3
CRJ 460 Criminal Law II: Advanced Substantive Criminal Law	C	3

Elective Course

Upper Division Electives	C	3
CRJ 321 Evidence: Imperatives of Proof		
CRJ 350 Law and Social Control (CIVI)		
CRJ 394 Special Topics		

Requirement	Minimum Grade	Credit Hours
CRJ 411 Legal Issues in Corrections		
CRJ 494 Special Topics		

Special Topics courses (CRJ 394 and CRJ 494) must be approved legal issues-related topics only.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Bachelor of Science in criminology and criminal justice majors who are also pursuing the Legal Issues in Criminal Justice certificate may not use CRJ 410, CRJ 416, CRJ 460, and their chosen elective (CRJ 321, CRJ 350, or CRJ 411) towards both their degree and certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Criminology and Criminal Justice (Policing) and Homeland Security (PPCRJPOLBS and PPHSLCERT)

Program description:
The concentration in policing in the Bachelor of Science program in criminology and criminal justice provides students with knowledge on policing strategies, police management, police accountability, crime analysis and procedural criminal law. This program also provides a solid foundation for those interested in pursuing a prelaw track.

Students who complete the concentration have a better understanding of how police organizations operate and are led; effective strategies for reducing crime, building trust and increasing accountability; improving police-citizen community relations (especially in communities of color); how the Constitution protects the rights of individuals in interactions with law enforcement; and techniques for analysis and mapping of crime and other police data.

After finishing the concentration in policing, students are better prepared for future employment in law enforcement and to contribute to the future of policing in the United States.

The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security.

Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or MAT 117 College Algebra
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Career opportunities for graduates of the policing program include work:

- at the local level in sworn positions in police departments and sheriff's offices
- at the state level in trooper and investigator roles in state agencies
- at the federal level in agent and officer positions in federal law enforcement agencies
- in crime and intelligence analysis
- in private security

Graduates of the criminology and criminal justice program with a concentration in policing can also continue to graduate studies in criminology, related fields or law school.

Graduates of the homeland security certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local), such as the Department of Homeland Security, U.S. Customs and Border Protection, and local- and state-level law enforcement departments. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Criminology and Criminal Justice (Policing), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPCRJPOLBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
CRJ 100 Introduction to Criminal Justice (SOBE)	C	3
CRJ 201 Criminal Justice Crime Control Policies and Practices (SOBE)	C	3
CRJ 203 Courts and Sentencing	C	3
CRJ 230 Introduction to Policing	C	3
CRJ 240 Introduction to Corrections	C	3
CRJ 302 Research Methods	C	3
CRJ 303 Statistical Analysis (QTRS)	C	3
CRJ 304 Inequality, Crime and Criminal Justice (CIVI)	C	3
CRJ 309 Criminology (SOBE)	C	3
Concentration Requirements		

Requirement	Minimum Grade	Credit Hours
CRJ 315 Police Organization and Management	C	3
CRJ 409 Police Accountability	C	3
CRJ 410 Criminal Procedure I: The Law of Investigations	C	3
CRJ 450 Crime Analysis (QTRS)	C	3
Upper Division Concentration Elective Choose one course from the list. Students enrolling in CRJ 484 should have an internship with local, state, or federal police or law enforcement agency. Students may substitute other CRJ 494 topics if they focus on policing. **CRJ 321 Evidence: Imperatives of Proof** **CRJ 403 Victims and the Criminal Justice System** **CRJ 455 Police and International Terrorism** **CRJ 484 Internship** **CRJ 494 Topic: Community Policing** **CRJ 494 Topic: Problem-Oriented Policing** **CRJ 494 Topic: Visual Media, Neighborhoods, & Policing**	C	3

Major Electives

200-Level **CRJ Elective**	C	3
Upper Division **CRJ Elective**	C	3
400-Level **CRJ Elective**	C	6

Solution Based Learning

Solution-Based Learning (SBL) 3

- CPP 350 Community Works
- CPP 353 Community Impact Lab
- CRD 301 Sustainable Communities (SUST)
- CRD 435 Service Learning for Community Development
- CRJ 317 Inside-Out Prison Exchange Program
- CRJ 394 Topic: Comparative Organized Crime
- CRJ 394 Topic: Taking it to the Streets: Service-Based Learning
- CRJ 394 Topic: The British Roots of U.S. Criminal Justice
- CRJ 455 Police and International Terrorism
- CRJ 456 Etiology of Martyrdom
- CRJ 484 Internship
- CRJ 492 Honors Directed Study
- CRJ 493 Honors Thesis
- CRJ 496 Directed Research
- CRJ 499 Individualized Instruction
- NLM 160 Voluntary Action and Community Leadership (CIVI)
- NLM 435 Service Learning for Community Development

PRM 145 Special Events Management

PRM 203 Program Planning

PRM 315 Creating Community Through Park and Recreation Systems

PRM 370 Public Lands Management

SWU 291 Social Service Delivery Systems

SWU 394 Topic: Ending Homelessness

TDM 345 Meeting and Convention Planning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of SBL-designated coursework will satisfy this requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	
RTH Elective	
TDM Elective	
Area 2: Public Affairs	
PAF Elective	

Area 3: Social Work
SWU Elective
Area 4: Public Service and Community Solutions
CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Related Area

Upper Division Related Area	C	9

ASB 305 Poverty and Global Health (CIVI)
COM 312 Communication, Conflict, and Negotiation (CIVI)
COM 319 Persuasion and Social Influence (CIVI)
COM 414 Crisis Communication
CPP 350 Community Works
CRD 302 Inclusive Community Development (SOBE)
ENG 301 Writing for the Professions
ENG 311 Persuasive Writing (CIVI)
FMS 380 Race and Gender in U.S. Media (HUAD)

HST 325 Immigration and Ethnicity in the United States (HUAD)

HST 328 Women in U.S. History, 1880-1980 (HUAD)

HST 338 American Indian History since 1900 (HUAD)

HST 454 History of Genocide (GCSI)

IAS 300 Career Strategies and Personal Resilience

JUS 329 Domestic Violence (SOBE)

JUS 350 Immigration and Justice (SOBE)

JUS 374 The Holocaust, Genocide, and Human Rights

JUS 432 Racial Justice (CIVI)

JUS 477 Youth and Justice (SOBE)

PAF 300 Public Management and Administration

PAF 311 Leadership and Change (SOBE)

PAF 340 Contemporary Policy Challenges

PAF 410 Building Leadership Skills (SOBE)

PAF 460 Public Service Ethics

PAF 469 Terrorism Defense

PHI 306 Applied Ethics (CIVI)

PHI 307 Philosophy of Law (AMIT)

PHI 336 Social and Political Philosophy

PHI 360 Business and Professional Ethics (HUAD)

POS 310 American National Government (AMIT)

POS 325 Public Policy Development (CIVI)

POS 364 National Security, Intelligence, and Terrorism (SOBE)

POS 370 Law and Society (CIVI)

POS 442 American Political Thought (HUAD)

POS 471 Constitutional Law I (AMIT)

PSY 350 Social Psychology (SOBE)

PSY 366 Psychological Disorders (SOBE)

PUP 301 Introduction to Urban Planning

REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)

REL 381 Religion and Moral Issues (HUAD)

SOC 340 Social Deviance

SOC 352 Social Change (CIVI)

SOC 363 Men and Masculinity (SOBE)

SOC 426 Social Inequalities (CIVI)

STS 364 Science, Technology, and National Security

SWU 454 Overview of Addictions

SWU 456 Immigrants and Refugees (CIVI)

SWU 457 Southwest Borderland Immigration Issues (CIVI)

SWU 460 Legal Issues in Social Work

TCL 314 Transborder Latin American Migration to the U.S. (SOBE)

TCL 332 Mexican American History Since 1900 (GCSI)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree

requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Homeland Security, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPHSLCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security. Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.		

Required Courses

CRJ 412 International Terrorism	C	3
CRJ 417 Cyber Terrorism	C	3
CRJ 419 Domestic Terrorism	C	3

Elective Courses

Upper Division Electives	C	6
CRJ 394 Special Topics		
CRJ 422 Violence in America		
CRJ 455 Police and International Terrorism		

Requirement	Minimum Grade	Credit Hours
CRJ 456 Etiology of Martyrdom		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 464 Organized Crime		
CRJ 494 Special Topics		
PAF 426 Intelligence Analysis and Homeland Security		
PAF 461 Homeland Security		

Only approved homeland security-related topics may be taken from Special Topics courses (CRJ 394 and CRJ 494).

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Bachelor of Science in criminology and criminal justice majors who are also pursuing the Homeland Security certificate may not use CRJ 412, CRJ 417, CRJ 419, CRJ 422, CRJ 455, CRJ 456, CRJ 462, CRJ 463, and CRJ 464 toward both their major and the certificate. These courses will only be used toward the certificate requirements.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Data Science and Geographic Information Science (LADATSCIBS and LAGISCERT)

Program description:
Data science professionals use sophisticated statistical, computational and mathematical tools to extract patterns from large, complex and often unordered data sets. In the Bachelor of Science program in data science, students are prepared to be critical analysts in a variety of areas, such as business, research and government.

With a mathematical core consisting of linear algebra, statistical inference and classification, data mining, machine learning and associated computer methods, the program gives students a strong background in data-related skills that are useful in understanding and solving practical issues.

This transdisciplinary program enables students to choose a focus area in:

- behavioral sciences
- biosciences
- business analytics
- chemistry and biochemistry
- computer science
- mathematics
- social sciences
- spatial sciences

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 270 - Calc w/Analytic Geometry I
or MAT 265 Calculus for Engineers I
Math intensity: Substantial

At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
U.S. News & World Report ranks data scientist at No. 8 on its list of best jobs. The U.S. Bureau of Labor Statistics projects overall employment of data science occupations to grow 36% through 2033.

Graduates of the data science program have skills related to data analysis, data prediction models and ethical uses of research data, helping them to meet the expressed needs of society. Graduates work in a variety of fields, including governmental research, education, health services, consumer behavior and business.

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Data Science, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LADATSCIBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Core

MAT 270 Calculus with Analytic Geometry I (MATH) OR **MAT 265 Calculus for Engineers I (MATH)**	C	3 - 4
MAT 271 Calculus with Analytic Geometry II (MATH) OR **MAT 266 Calculus for Engineers II (MATH)**	C	3 - 4
MAT 343 Applied Linear Algebra	C	3
CSE 110 Principles of Programming (QTRS)	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
DAT 250 Data Science and Society Data Sciences students take DAT 250 as a part of the major. DAT 250 satisfies a Science and Society requirement.	C	3
DAT 300 Mathematical Tools for Data Science	C	3
DAT 301 Exploring Data in R and Python	C	4
DAT 401 Statistical Modeling and Inference for Data Science	C	3
DAT 402 Machine Learning for Data Science OR **CSE 475 Foundations of Machine Learning**	C	3
DAT 490 Data Science Capstone OR Disciplinary Capstone from Selected Track	C	3

Track Courses

Select one of the tracks below and complete all requirements outlined for that track. Track options are Behavioral Sciences, Biosciences, Business Analytics, Chemistry and Biochemistry, Computer Science, Mathematics, Social Sciences, and Spatial Sciences.

Upper Division Behavioral Sciences Track Behavioral Sciences Track: complete six total courses as outlined below. Students must also complete three credit hours in DAT 490 or a 400-level disciplinary capstone course drawn from the CDE, FAS, or PSY subject areas. In cooperation with an assigned academic advisor, select four courses from following options:	C	12 - 13

Requirement	Minimum Grade	Credit Hours
SOC 390 Social Statistics I (QTRS)		
FAS 498 Topic: Advanced Statistics for Social Sciences or SOC 469 Multivariate Statistics for Social Sciences or PSY 330 Statistical Methods (QTRS)		
In cooperation with an assigned academic advisor, choose two elective courses from the list below:		
CDE 312 Adolescence (SOBE)		
CDE 337 Early Childhood Intervention		
CDE 418 Aging and the Life Course (SOBE)		
CDE 430 Infant and Toddler Development in the Family (SOBE)		
CDE 450 Childhood Disorders and Family Functioning		
FAS 301 Introduction to Parenting		
FAS 331 Modern Family Relationships (SOBE)		
FAS 332 Human Sexuality (SOBE)		
FAS 440 Fundamentals of Marriage and Family Therapy		
LSC 325 / PSY 325 / PTX 325 Physiological Psychology		
PSY 315 Personality Theory and Research (SOBE)		
PSY 320 Learning and Motivation		
PSY 324 Memory and Cognition		
PSY 341 Developmental Psychology (SOBE)		

Requirement	Minimum Grade	Credit Hours
PSY 350 Social Psychology (SOBE)		
OR **Upper Division Biosciences Track**		
Biological Sciences Track: complete BIO 415 and BIO 439, a Bioethics related course, three track electives (minimum of nine credit hours) and three credit hours of DAT 490 Data Science Capstone.		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 439 Computing for Research		
Choose once course from the list below:		
BIO 312 / **PHI 320 Bioethics (HUAD)**		
BIO 316 / **HPS 330 History of Biology: Conflicts and Controversies (HUAD)**		
BIO 317 / **HPS 323 History of Science II (HUAD)**		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 416 / **HPS 410 Biomedical Research Ethics (CIVI)**		
Choose three elective courses from list below:		
BIO 355 Introduction to Computational Molecular Biology		
BIO 411 Quantitative Methods in Conservation and Ecology		
BIO 440 / **MBB 440 Functional Genomics**		
BIO 494 Topic: Data Analysis in Neuroscience		

Requirement	Minimum Grade	Credit Hours
BIO 494 Topic: Microbiome Data Science		
BIO 498 Topic: Genomics Research Experience		
BIO 498 Topic: Programming for biologists		
OR **Upper Division Business Analytics Track**		
Business Analytics Track: complete all six courses listed below. Students also complete three credit hours of DAT 490 Data Science Capstone.		
CIS 407 Business Database Systems Development		
CIS 409 Business Data Warehouses and Dimensional Modeling		
CIS 412 Business Machine Learning		
CIS 415 Big Data and AI in Business		
WPC 300 Problem Solving and Actionable Analytics (QTRS)		
OR **Upper Division Chemistry and Biochemistry Track**		
Chemistry and Biochemistry Track: complete 21 total credits as outlined below. In addition, students need to complete three credit hours in DAT 490 Data Science Capstone.		
CHM 325 Analytical Chemistry		
BCH 361 Advanced Principles of Biochemistry **or** **CHM 341 Elementary Physical Chemistry**		

Requirement	Minimum Grade	Credit Hours
BCH 392 / CHM 392 Introduction to Research Techniques or DAT 490 Data Science Capstone		
BCH 494 Topic: Modern Approaches to Biochemical Data Analysis or CHM 494 Topic: Data Modeling for the Natural Sciences		
Select three credits from the list below:		
BCH 341 Physical Chemistry with a Biological Focus		
BCH 361 Advanced Principles of Biochemistry		
BCH 367 Elementary Biochemistry Laboratory		
BCH 461 General Biochemistry		
BCH 462 General Biochemistry		
BCH 463 Biophysical Chemistry		
BCH 467 Analytical Biochemistry Laboratory		
BCH 484 Internship		
BCH 494 Special Topics		
CHM 302 Environmental Chemistry		
CHM 303 Environmental Chemistry Laboratory		
CHM 326 Advanced Analytical Chemistry Laboratory		
CHM 327 Instrumental Analysis		
CHM 328 Instrumental Analysis Laboratory		
CHM 341 Elementary Physical Chemistry		

Requirement	Minimum Grade	Credit Hours
CHM 343 Elementary Physical Chemistry Laboratory		
CHM 345 Physical Chemistry I		
CHM 346 Physical Chemistry II		
CHM 348 Physical Chemistry Laboratory I		
CHM 349 Physical Chemistry Laboratory II		
CHM 385 Oceanography		
CHM 433 Bioorganic Chemistry		
CHM 435 Medicinal Chemistry		
CHM 452 Inorganic Chemistry Laboratory		
CHM 453 Inorganic Chemistry		
CHM 460 Biological Chemistry		
CHM 471 Solid-State Chemistry		
CHM 481 Geochemistry		
CHM 484 Internship		
CHM 489 Field Geochemistry		
CHM 494 Special Topics		

OR **Upper Division Computer Science Track**

Computer Science Track: complete six total courses as outlined below. In addition, students must complete three credit hours of DAT 490 Data Science Capstone.		

Requirement	Minimum Grade	Credit Hours
CSE 310 Data Structures and Algorithms		
CSE 365 Information Assurance		
In consultation with an advisor, choose two elective courses from following five options:		
CSE 450 Design and Analysis of Algorithms		
CSE 467 Data and Information Security		
CSE 471 Introduction to Artificial Intelligence		
CSE 475 Foundations of Machine Learning		
CSE 476 Introduction to Natural Language Processing		

OR **Upper Division Mathematics Track**

Mathematics Track: complete six total courses as outlined below. In addition, students need to complete three credit hours in DAT 490 Data Science Capstone.		
In cooperation with an academic advisor, choose four elective courses from the list below:		
ACT 301 Risk Management and Insurance (SOBE)		
ACT 302 Fundamentals of Enterprise Risk Management		
ACT 435 Statistics for Risk Modeling		
DAT 431 Industry Tools for Data Science		
DAT 435 Exploration and Analysis of Environmental Data		

Requirement	Minimum Grade	Credit Hours
DAT 484 Internship		
DAT 494 Topic: Bayesian Statistics		
MAT 300 Mathematical Structures		
MAT 353 Mathematics and Cancer		
MAT 419 Introduction to Linear Optimization		
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 425 Numerical Analysis II		
MAT 429 Optimization		
MAT 451 Mathematical Modeling		
MAT 452 Introduction to Chaos and Nonlinear Dynamics		
STP 310 Design and Analysis of Experiments		
STP 311 Regression and Time Series Analyses		
STP 420 Introductory Applied Statistics (QTRS) **or** STP 427 Mathematical Statistics		
STP 421 Probability		
STP 429 Applied Regression (QTRS)		
OR Upper Division Social Sciences Track		

Requirement	Minimum Grade	Credit Hours
Social Sciences Track: complete six courses for a minimum of 18 credit hours as outlined below, at least 12 credit hours of which must be upper division. In addition, students must complete three credit hours in DAT 490 Data Science Capstone or a disciplinary-specific capstone course.		
Select one course from the following options:		
ECN 425 Introduction to Econometrics		
POS 401 / **SGS 401 Political Statistics (QTRS)**		
Choose five elective courses from the list below:		
AML 441 Mathematical Concepts and Tools in Sustainability		
ASB 363 / **BIO 363 From Cells to Society: Understanding Complexity**		
ASM 494 Topic: Models in Social Evolution		
BME 301 Numerical Methods in Biomedical Engineering		
BMI 461 Advanced Topics in Biomedical Informatics I		
BMI 462 Advanced Topics In Biomedical Informatics II		
COM 308 Communication Research Strategies		
COM 407 Qualitative Data Analysis in Communication		
CRJ 303 Statistical Analysis (QTRS)		
ECN 416 Game Theory and Economic Behavior		

Requirement	Minimum Grade	Credit Hours
ECN 441 Public Economics (CIVI)		
ECN 445 Environmental Economics		
ECN 470 Mathematical Economics		
FAS 361 Applied Research Methods (SOBE)		
FAS 498 Topic: Advanced Statistics for Social Sciences		
FIS 335 Designing Knowledge		
FIS 403 Governing Emerging Technologies		
GCU 325 Geography of Europe (GCSI)		
GCU 351 Population Geography (GCSI)		
GCU 357 Social Geography		
GCU 361 Urban Geography		
GCU 364 Energy in the Global Arena		
GCU 426 Geography of Russia and Surroundings		
ISS 415 Knowledge Management		
MKT 352 Marketing Research		
PAF 471 Public Policy Analysis		
POS 331 Public Opinion		
POS 434 Media and Politics		
PUP 424 Planning Methods		
PUP 481 Fundamentals of Spatial Optimization		

Requirement	Minimum Grade	Credit Hours
SBS 302 Qualitative Methods (SOBE)		
SBS 304 Social Statistics I (QTRS)		
SBS 389 Ethnographic Field Lab		
SBS 404 Social Statistics II: Multivariate Analysis		
SGS 305 / **POS 301 Empirical Political Inquiry (SOBE)**		
SOS 424 Dynamic Modeling in Social and Ecological Systems		
SOS 441 / **AML 441 Mathematical Concepts and Tools in Sustainability**		
STP 310 Design and Analysis of Experiments		
STP 311 Regression and Time Series Analyses		
TWC 411 Principles of Visual Communication		
OR **Upper Division Spatial Sciences Track**		
Spatial Sciences Track: complete six total courses as outlined below. In addition, students will complete two credit hours of DAT 490 Data Science Capstone or a 400-level GIS capstone course chosen in consultation with an assigned academic advisor.		
GIS 311 Geographic Information Science III (QTRS)		
GIS 322 Programming Principles in GIS II		
Select one of the three courses below:		
GIS 469 Multivariate Statistics for Social Sciences		

Requirement	Minimum Grade	Credit Hours
GIS 470 Advanced Statistics for Geography and Planning (QTRS)		
GIS 471 Spatial Statistics for Geography and Planning		
Select one of the five courses below:		
GIS 451 Geodesign and Urban Planning		
GIS 494 Topic: GIS and Public Health		
GIS 494 Topic: GIS for Climate Change Science		
GIS 494 Topic: Landscape Analysis Using GIS		
Behavioral Sciences Track	C	6 - 7
Behavioral Sciences Track: complete six total courses as outlined below. Students must also complete three credit hours in DAT 490 or a 400-level disciplinary capstone course drawn from the CDE, FAS, or PSY subject areas.		
In cooperation with an assigned academic advisor, select four courses from following options:		
SOC 390 Social Statistics I (QTRS)		
CDE 232 Human Development (SOBE) **or** **FAS 101 Personal Growth and Relationships (SOBE)** **or** **PSY 101 Introduction to Psychology (SOBE)**		
FAS 498 Topic: Advanced Statistics for Social Sciences **or** **SOC 469 Multivariate Statistics for Social Sciences** **or** **PSY 330 Statistical Methods (QTRS)**		
PSY 290 Research Methods (SCIT) **or** **FAS 361 Applied**		

Requirement	Minimum Grade	Credit Hours
Research Methods (SOBE)		
In cooperation with an assigned academic advisor, choose two elective courses from the list below:		
CDE 312 Adolescence (SOBE)		
CDE 337 Early Childhood Intervention		
CDE 418 Aging and the Life Course (SOBE)		
CDE 430 Infant and Toddler Development in the Family (SOBE)		
CDE 450 Childhood Disorders and Family Functioning		
FAS 301 Introduction to Parenting		
FAS 331 Modern Family Relationships (SOBE)		
FAS 332 Human Sexuality (SOBE)		
FAS 440 Fundamentals of Marriage and Family Therapy		
LSC 325 / **PSY 325** / **PTX 325 Physiological Psychology**		
PSY 315 Personality Theory and Research (SOBE)		
PSY 320 Learning and Motivation		
PSY 324 Memory and Cognition		
PSY 341 Developmental Psychology (SOBE)		
PSY 350 Social Psychology (SOBE)		
OR **Biosciences Track**		

Requirement	Minimum Grade	Credit Hours
Biological Sciences Track: complete BIO 415 and BIO 439, a Bioethics related course, three track electives (minimum of nine credit hours) and three credit hours of DAT 490 Data Science Capstone.		
BIO 415 Statistical Models for Biology (QTRS)		
BIO 439 Computing for Research		
Choose once course from the list below:		
BIO 312 / **PHI 320 Bioethics (HUAD)**		
BIO 316 / **HPS 330 History of Biology: Conflicts and Controversies (HUAD)**		
BIO 317 / **HPS 323 History of Science II (HUAD)**		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 416 / **HPS 410 Biomedical Research Ethics (CIVI)**		
Choose three elective courses from list below:		
BIO 355 Introduction to Computational Molecular Biology		
BIO 411 Quantitative Methods in Conservation and Ecology		
BIO 440 / **MBB 440 Functional Genomics**		
BIO 494 Topic: Data Analysis in Neuroscience		
BIO 494 Topic: Microbiome Data Science		
BIO 498 Topic: Genomics Research Experience		

Requirement	Minimum Grade	Credit Hours
BIO 498 Topic: Programming for biologists		
OR **Business Analytics Track**		
Business Analytics Track: complete all six courses listed below. Students also complete three credit hours of DAT 490 Data Science Capstone.		
CIS 235 Introduction to Information Systems, Analytics and AI in Business		
CIS 407 Business Database Systems Development		
CIS 409 Business Data Warehouses and Dimensional Modeling		
CIS 412 Business Machine Learning		
CIS 415 Big Data and AI in Business		
WPC 300 Problem Solving and Actionable Analytics (QTRS)		
OR **Chemistry and Biochemistry Track**		
Chemistry and Biochemistry Track: complete 21 total credits as outlined below. In addition, students need to complete three credit hours in DAT 490 Data Science Capstone.		
CHM 114 General Chemistry for Engineers (SCIT)		
CHM 231 Elementary Organic Chemistry (SCIT)		
CHM 325 Analytical Chemistry		

Requirement	Minimum Grade	Credit Hours
BCH 361 Advanced Principles of Biochemistry or CHM 341 Elementary Physical Chemistry		
BCH 392 / CHM 392 Introduction to Research Techniques or DAT 490 Data Science Capstone		
BCH 494 Topic: Modern Approaches to Biochemical Data Analysis or CHM 494 Topic: Data Modeling for the Natural Sciences		
Select three credits from the list below:		
BCH 341 Physical Chemistry with a Biological Focus		
BCH 361 Advanced Principles of Biochemistry		
BCH 367 Elementary Biochemistry Laboratory		
BCH 461 General Biochemistry		
BCH 462 General Biochemistry		
BCH 463 Biophysical Chemistry		
BCH 467 Analytical Biochemistry Laboratory		
BCH 484 Internship		
BCH 494 Special Topics		
CHM 302 Environmental Chemistry		
CHM 303 Environmental Chemistry Laboratory		
CHM 326 Advanced Analytical Chemistry Laboratory		
CHM 327 Instrumental Analysis		

Requirement	Minimum Grade	Credit Hours
CHM 328 Instrumental Analysis Laboratory		
CHM 341 Elementary Physical Chemistry		
CHM 343 Elementary Physical Chemistry Laboratory		
CHM 345 Physical Chemistry I		
CHM 346 Physical Chemistry II		
CHM 348 Physical Chemistry Laboratory I		
CHM 349 Physical Chemistry Laboratory II		
CHM 385 Oceanography		
CHM 433 Bioorganic Chemistry		
CHM 435 Medicinal Chemistry		
CHM 452 Inorganic Chemistry Laboratory		
CHM 453 Inorganic Chemistry		
CHM 460 Biological Chemistry		
CHM 471 Solid-State Chemistry		
CHM 481 Geochemistry		
CHM 484 Internship		
CHM 489 Field Geochemistry		
CHM 494 Special Topics		

OR **Computer Science Track**

Requirement	Minimum Grade	Credit Hours
Computer Science Track: complete six total courses as outlined below. In addition, students must complete three credit hours of DAT 490 Data Science Capstone.		
CSE 220 Programming for Computer Engineering or CSE 240 Introduction to Programming Languages		
CSE 310 Data Structures and Algorithms		
CSE 365 Information Assurance		
MAT 243 Discrete Mathematical Structures		
In consultation with an advisor, choose two elective courses from following five options:		
CSE 450 Design and Analysis of Algorithms		
CSE 467 Data and Information Security		
CSE 471 Introduction to Artificial Intelligence		
CSE 475 Foundations of Machine Learning		
CSE 476 Introduction to Natural Language Processing		
OR **Mathematics Track**		
Mathematics Track: complete six total courses as outlined below. In addition, students need to complete three credit hours in DAT 490 Data Science Capstone.		
MAT 267 Calculus for Engineers III (MATH) or MAT 272 Calculus with Analytic Geometry III (MATH)		
MAT 275 Modern Differential Equations (MATH)		

Requirement	Minimum Grade	Credit Hours
In cooperation with an academic advisor, choose four elective courses from the list below:		
ACT 301 Risk Management and Insurance (SOBE)		
ACT 302 Fundamentals of Enterprise Risk Management		
ACT 435 Statistics for Risk Modeling		
DAT 431 Industry Tools for Data Science		
DAT 435 Exploration and Analysis of Environmental Data		
DAT 484 Internship		
DAT 494 Topic: Bayesian Statistics		
MAT 300 Mathematical Structures		
MAT 353 Mathematics and Cancer		
MAT 419 Introduction to Linear Optimization		
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 425 Numerical Analysis II		
MAT 429 Optimization		
MAT 451 Mathematical Modeling		
MAT 452 Introduction to Chaos and Nonlinear Dynamics		

Requirement	Minimum Grade	Credit Hours
STP 310 Design and Analysis of Experiments		
STP 311 Regression and Time Series Analyses		
STP 420 Introductory Applied Statistics (QTRS) **or** **STP 427 Mathematical Statistics**		
STP 421 Probability		
STP 429 Applied Regression (QTRS)		

OR **Spatial Sciences Track**

Spatial Sciences Track: complete six total courses as outlined below. In addition, students will complete two credit hours of DAT 490 Data Science Capstone or a 400-level GIS capstone course chosen in consultation with an assigned academic advisor.		
GIS 205 Geographic Information Science I (QTRS)		
GIS 211 Geographic Information Science II (QTRS)		
GIS 311 Geographic Information Science III (QTRS)		
GIS 322 Programming Principles in GIS II		
Select one of the three courses below:		
GIS 469 Multivariate Statistics for Social Sciences		
GIS 470 Advanced Statistics for Geography and Planning (QTRS)		
GIS 471 Spatial Statistics for Geography and Planning		
Select one of the five courses below:		

Requirement	Minimum Grade	Credit Hours
GIS 202 Drones to Satellites: Observing Earth from Above (QTRS)		
GIS 451 Geodesign and Urban Planning		
GIS 494 Topic: GIS and Public Health		
GIS 494 Topic: GIS for Climate Change Science		
GIS 494 Topic: Landscape Analysis Using GIS		

OR **Social Sciences Track**

Social Sciences Track: complete six courses for a minimum of 18 credit hours as outlined below, at least 12 credit hours of which must be upper division. In addition, students must complete three credit hours in DAT 490 Data Science Capstone or a disciplinary-specific capstone course.		
Select one course from the following options:		
ECN 425 Introduction to Econometrics		
POS 401 / **SGS 401 Political Statistics (QTRS)**		
Choose five elective courses from the list below:		
ACO 100 All About Data: Design, Query, and Visualization (QTRS)		
ALA 235 Introduction to Computer Modeling		
AML 253 Introduction to Mathematical Tools and Modeling for the Life and Social Sciences (MATH)		

Requirement	Minimum Grade	Credit Hours
AML 441 Mathematical Concepts and Tools in Sustainability		
ASB 230 Beginning Social Research (SOBE)		
ASB 230 Beginning Social Research (SOBE)		
ASB 363 / BIO 363 From Cells to Society: Understanding Complexity		
ASM 201 Epidemics and Outbreaks		
ASM 494 Topic: Models in Social Evolution		
BME 301 Numerical Methods in Biomedical Engineering		
BMI 211 Clinical Decision Analysis		
BMI 461 Advanced Topics in Biomedical Informatics I		
BMI 462 Advanced Topics In Biomedical Informatics II		
COM 308 Communication Research Strategies		
COM 407 Qualitative Data Analysis in Communication		
CRJ 303 Statistical Analysis (QTRS)		
ECN 416 Game Theory and Economic Behavior		
ECN 441 Public Economics (CIVI)		
ECN 445 Environmental Economics		
ECN 470 Mathematical Economics		
FAS 361 Applied Research Methods (SOBE)		

Requirement	Minimum Grade	Credit Hours
FAS 498 Topic: Advanced Statistics for Social Sciences		
FIS 335 Designing Knowledge		
FIS 403 Governing Emerging Technologies		
GCU 325 Geography of Europe (GCSI)		
GCU 351 Population Geography (GCSI)		
GCU 357 Social Geography		
GCU 361 Urban Geography		
GCU 364 Energy in the Global Arena		
GCU 426 Geography of Russia and Surroundings		
ISS 415 Knowledge Management		
MKT 352 Marketing Research		
PAF 471 Public Policy Analysis		
POS 331 Public Opinion		
POS 434 Media and Politics		
PUP 424 Planning Methods		
PUP 481 Fundamentals of Spatial Optimization		
SBS 302 Qualitative Methods (SOBE)		
SBS 304 Social Statistics I (QTRS)		
SBS 389 Ethnographic Field Lab		
SBS 404 Social Statistics II: Multivariate Analysis		

Requirement	Minimum Grade	Credit Hours
SGS 305 / **POS 301 Empirical Political Inquiry (SOBE)**		
SOS 212 Systems, Dynamics and Sustainability (QTRS)		
SOS 424 Dynamic Modeling in Social and Ecological Systems		
SOS 441 / **AML 441 Mathematical Concepts and Tools in Sustainability**		
STP 310 Design and Analysis of Experiments		
STP 311 Regression and Time Series Analyses		
TWC 411 Principles of Visual Communication		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Upper Division Science and Society Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq		
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr		
Mathematics Placement Assessment score determines placement in first mathematics course.		
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree		

requirements in four years.

Some upper-division track courses require prerequisites. It is recommended that students consult with their advisors and use electives to complete appropriate course prerequisites.

Please consult with your academic advisor regarding the number of credits required for your DAT 490 capstone experience. It is a variable credit hour class.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Digital Audiences and Applied Business Data Analytics (CSDIGABS and BABDACERT)

Program description:
Virtually all companies and organizations seek professionals who know how to grow and engage audiences online. The Bachelor of Science program in digital audiences prepares students to reach audiences strategically with digital content and demonstrate measurable growth.

The program features high-value, hands-on courses in which students develop strategies and tactics to grow audiences through search engine optimization, search engine marketing, paid and organic social media campaigns, and digital content creation. Through elective courses, students develop additional expertise in areas such as management, audience data and media creation. Students may also pursue internships for credit.

Students graduate from the program ready to drive audience growth, execute digital marketing and advance businesses in the digital age.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BS At a Glance:
College/school: Walter Cronkite School of Journalism and Mass Communication
Location: Downtown Phoenix, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 114 - College Mathematics
or any math course that meets the MATH designation
Math intensity: General

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Professionals with expertise in digital content strategy are in high demand across sectors and industries. Many career opportunities are available, including these positions:

- community organizer
- corporate branding specialist
- digital marketer
- digital news editor
- digital strategist
- engagement manager
- political campaign strategist
- public relations specialist
- social media manager

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Digital Audiences, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Walter Cronkite School of Journalism and Mass Comm
Plan Code: CSDIGABS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Core		
JMC 101 Grammar for Journalists OR **MCO 101 Everyday Grammar** Students must earn a grade of 80% or higher in JMC 101 or MCO 101.	Y	1
MCO 102 Fundamentals of Coding	C	1
MCO 120 Media and Society (HUAD)	C	3
JMC 115 Civility and Community at Cronkite	C	1
MCO 307 The Digital Audience	C	3
JMC 366 Media Ethics OR **MCO 366 Mass Communication Ethics**	C	3
MCO 403 Media Law	C	3
MCO 433 Social Media Campaigns, Engagement and Research	C	3
MCO 434 Search Engine Research and Strategy	C	3

Requirement	Minimum Grade	Credit Hours
MCO 438 Digital Audience Analysis	C	3
MCO 439 Digital Audience Growth	C	3
Upper Division Mass Communication Electives	C	3
MCO 302 Media Research Methods		
MCO 335 Social Media Foundations		
MCO 375 Podcasting		
MCO 394 Topic: American Futures and Media		
MCO 394 Topic: Interview and Inquiry		
MCO 394 Topic: Photography for Mass Media		
MCO 394 Topic: Videography for Mass Media		
MCO 418 History of Mass Communication (SOBE)		
MCO 420 Strategic Sports Communication		
MCO 423 Media Project Management		
MCO 425 Digital Media Literacy I		
MCO 426 Digital Media Literacy II		
MCO 427 Misinformation and Society		
MCO 428 Digital Media and Freedom of Expression in the 21st Century		
MCO 430 International Mass Communication (GCSI)		
MCO 431 Media Entrepreneurship		

Requirement	Minimum Grade	Credit Hours
MCO 450 Visual Communication (HUAD)		
MCO 456 Political Communication (CIVI)		
MCO 460 Race, Gender, and Media (SOBE)		
MCO 465 Sports and Media		
MCO 470 Exploring the Business of Journalism		
MCO 473 Sex, Love, and Romance in the Mass Media		
MCO 484 Internship		
MCO 494 Topic: Advanced Media Entrepreneurship		
MCO 494 Topic: Data in Sports		
MCO 494 Topic: Media Products, Sales and Solutions		
MCO 494 Topic: The Evolution of TV		

Students may discuss additional MCO elective options with their academic advisor.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CS The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition	AND	ENG 102 First-Year Composition	C	6

OR **ENG 105 Advanced First-Year Composition**

OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

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All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

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Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Digital Audiences and Sales and Marketing Essentials (CSDIGABS and BASMECERT)

Program description:
Virtually all companies and organizations seek professionals who know how to grow and engage audiences online. The Bachelor of Science program in digital audiences prepares students to reach audiences strategically with digital content and demonstrate measurable growth.

The program features high-value, hands-on courses in which students develop strategies and tactics to grow audiences through search engine optimization, search engine marketing, paid and organic social media campaigns, and digital content creation. Through elective courses, students develop additional expertise in areas such as management, audience data and media creation. Students may also pursue internships for credit.

Students graduate from the program ready to drive audience growth, execute digital marketing and advance businesses in the digital age.

Designed for undergraduate nonbusiness majors, the certificate program in sales and marketing essentials offers a set of courses that cover indispensable marketing knowledge in a wide variety of marketing application domains.

Students are required to enroll in two fundamental courses in marketing and choose three additional courses from a larger set (services marketing, business marketing, global marketing, sports business and advertising) to tailor the certificate to their particular interests.

While some courses are offered in a face-to-face setting, the entire certificate is offered via iCourse for flexibility and convenience.

BS At a Glance:
College/school: Walter Cronkite School of Journalism and Mass Communication
Location: Downtown Phoenix, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 114 - College Mathematics
or any math course that meets the MATH designation
Math intensity: General

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe

Career opportunities:
Professionals with expertise in digital content strategy are in high demand across sectors and industries. Many career opportunities are available, including these positions:

- community organizer
- corporate branding specialist
- digital marketer
- digital news editor
- digital strategist
- engagement manager
- political campaign strategist
- public relations specialist
- social media manager

Graduates who have combined the certificate in sales and marketing essentials with their major program of study may become more marketable to employers, and they often decide to pursue employment in sales or marketing.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Digital Audiences, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Walter Cronkite School of Journalism and Mass Comm
Plan Code: CSDIGABS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Core		
JMC 101 Grammar for Journalists OR **MCO 101 Everyday Grammar** Students must earn a grade of 80% or higher in JMC 101 or MCO 101.	Y	1
MCO 102 Fundamentals of Coding	C	1
MCO 120 Media and Society (HUAD)	C	3
JMC 115 Civility and Community at Cronkite	C	1
MCO 307 The Digital Audience	C	3
JMC 366 Media Ethics OR **MCO 366 Mass Communication Ethics**	C	3
MCO 403 Media Law	C	3
MCO 433 Social Media Campaigns, Engagement and Research	C	3
MCO 434 Search Engine Research and Strategy	C	3

Requirement	Minimum Grade	Credit Hours
MCO 438 Digital Audience Analysis	C	3
MCO 439 Digital Audience Growth	C	3
Upper Division Mass Communication Electives	C	3
MCO 302 Media Research Methods		
MCO 335 Social Media Foundations		
MCO 375 Podcasting		
MCO 394 Topic: American Futures and Media		
MCO 394 Topic: Interview and Inquiry		
MCO 394 Topic: Photography for Mass Media		
MCO 394 Topic: Videography for Mass Media		
MCO 418 History of Mass Communication (SOBE)		
MCO 420 Strategic Sports Communication		
MCO 423 Media Project Management		
MCO 425 Digital Media Literacy I		
MCO 426 Digital Media Literacy II		
MCO 427 Misinformation and Society		
MCO 428 Digital Media and Freedom of Expression in the 21st Century		
MCO 430 International Mass Communication (GCSI)		
MCO 431 Media Entrepreneurship		

Requirement	Minimum Grade	Credit Hours
MCO 450 Visual Communication (HUAD)		
MCO 456 Political Communication (CIVI)		
MCO 460 Race, Gender, and Media (SOBE)		
MCO 465 Sports and Media		
MCO 470 Exploring the Business of Journalism		
MCO 473 Sex, Love, and Romance in the Mass Media		
MCO 484 Internship		
MCO 494 Topic: Advanced Media Entrepreneurship		
MCO 494 Topic: Data in Sports		
MCO 494 Topic: Media Products, Sales and Solutions		
MCO 494 Topic: The Evolution of TV		

Students may discuss additional MCO elective options with their academic advisor.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CS The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition	AND	ENG 102 First-Year Composition	C	6

OR **ENG 105 Advanced First-Year Composition**

OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Sales and Marketing Essentials, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BASMECERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in sales and marketing essentials requires 15 credit hours with at least 12 upper division credits. To receive the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.		
Required Courses		
MKT 390 Essentials of Marketing	C	3
MKT 391 Essentials of Selling	C	3
Certificate Electives		
Upper Division Sales and Marketing Essentials Certificate Electives	C	9
Select three courses		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		

Requirement	Minimum Grade	Credit Hours
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BAE/CERT Early Childhood Education and Early Childhood Special Education (TEECDEDBAE and TEECSCERT)

Program description:
The Bachelor of Arts in Education program in early childhood education prepares students to meet the educational, behavioral and social-emotional needs of children, ages birth to age 8 or grade 3. This program focuses on child development and best practices in early childhood education, including the skills to create inclusive learning environments; conduct instructional design, planning and facilitation; and assess, monitor and report the progress of young children.

Mary Lou Fulton Teachers College has developed a team-based approach to teacher preparation, allowing students to participate in professional experiences (internships and student teaching) with a team of peers while receiving guidance and support from ASU faculty members and highly qualified certified teachers. Team-based professional experiences are designed to prepare students to work with mutually supportive colleagues to address the academic and social-emotional needs of learners. Clinically embedded courses and professional experiences provide students with multiple opportunities to apply knowledge learned in coursework to practice in the classroom.

Students complete a series of internships before a semester-long full-time student teaching experience. With the support of a certified mentor teacher and ASU faculty, students are able to apply what they learn during coursework in learning environments.

Graduates are eligible to earn an institutional recommendation from ASU for Arizona teacher certification in Early Childhood Education, Birth-Age 8/Grade 3, as well as a Structured English Immersion, PreK-12, endorsement from the Arizona Department of Education. To teach in an Arizona public school, graduates must pass the appropriate Arizona educator exams: National Evaluation Series or Arizona Educator Proficiency Assessments.

The certificate program in early childhood special education prepares students to work with young children, birth through age 8 or grade 3, who have a disability or are at risk of developing one.

Students develop foundational knowledge of child development, including child development theories and best practices. They learn how to:

- assess, monitor and report the progress of young children
- build effective practices for engaging families
- create enriched, inclusive learning environments
- design coherent instruction
- plan and facilitate learning

This certificate program allows students to be eligible for dual teaching certificates upon completion of an undergraduate Bachelor of Arts in Education degree. This certificate can be added to the following programs:

- BAE in early childhood education
- BAE in elementary education
- BAE in elementary multilingual education
- BAE in special education

Students who add this certificate to a bachelor's degree listed above are eligible to earn an institutional recommendation from ASU for Arizona teacher certification in Early Childhood Special Education, birth through grade 3, from the Arizona Department of Education. To teach in an Arizona public school, graduates must pass the appropriate Arizona educator exams: National Evaluation Series or Arizona Educator Proficiency Assessments.

BAE At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, ASU Sync
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, ASU Sync

Career opportunities:
There is a strong demand for early childhood educators in Arizona and nationwide. Many graduates with a degree in early childhood education hold leadership positions in Head Start, private nonprofit and private for-profit center-based programs, and public school early childhood environments.

There is a strong demand for both early childhood educators and special educators in Arizona and nationwide. Earning a credential that prepares graduates for both early childhood and special education can lead to many opportunities. Many graduates with early childhood education credentials hold leadership positions in Head Start, private nonprofit and private for-profit center-based programs, and public school early childhood environments.

Curriculum - Early Childhood Education, BAE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts in Education, BAE
College/School: Mary Lou Fulton College for Teaching & Learning In
Plan Code: TEECDEDBAE
Minimum credit hours: 120
Upper division minimum credit hours: 60

Requirement	Minimum Grade	Credit Hours
Upper Division Core		
TEL 310 Instructional Design and Planning: Instructional Thought and Action	C	4
TEL 317 Instructional Thought and Action: Learning Environment and Management	C	3
TEL 318 Instructional Thought and Action: Assessment for Learning	C	3
TEL 331 Foundations of Literacy: The Science of Reading	C	3
TEL 340 Families, Communities and Cultures: Cultivating Networks of Culturally Responsive Relationships (SOBE)	C	3
TEL 370 Professional Educator Series: Building a Professional Network		1
TEL 371 Professional Educator Series: Educational Policies		1
TEL 470 Professional Educator Series: Career Growth and Planning		1

Requirement	Minimum Grade	Credit Hours
TEL 487 Student Teaching: Dual Certification OR TEL 488 Student Teaching	C	12

Major Core

ECD 321 Foundations in Language, Literacy and Culture in Early Childhood (SOBE)	C	3
ECD 417 Arts Integration for Young Children	C	4
ECS 310 Foundations in Typical / Atypical Child Development	C	3
ECS 312 Social and Emotional Development of the Young Child (SOBE)	C	3
ECS 411 Instructional Methodologies for Young Children: STEM	C	3
ECS 412 Mathematics Curriculum, Instruction and Assessment	C	4
ECS 430 Systems, Policy, and Advocacy in Early Childhood/Special Education	C	3
EED 432 Literacy Methods of Instruction and Assessment for Diverse Learners	C	3
MTE 280 Numbers, Operations and Proportional Reasoning for K-8 Teaching	C	3
MTE 310 Number Sense, Spatial Relationships, and Measurement and Data for Early Childhood Education Teaching	C	3

College Core

BLE 220 Foundations of Structured English Immersion (HUAD)	C	3
GCU 113 United States and Arizona Social Studies (AMIT)		3
MAT 114 College Mathematics (MATH)	C	3
SPE 222 Orientation to Education of Exceptional Children (CIVI)	C	3
TEL 111 Exploration of Education (HUAD)	C	3
TEL 171 Professional Educator Series: Excellence in Education		1
TEL 203 Collaborating, Planning and Implementing Instruction in Diverse Contexts	C	3
TEL 208 Education in a Changing World (GCSI)	C	3
TEL 212 Cultural Diversity in Education (HUAD)	C	3
TEL 215 Introduction to Child and Adolescent Development (SOBE)	C	3
TEL 270 Professional Educator Series: Connecting Research to Practice		1
TEL 271 Professional Educator Series: Inclusivity in Practice		1

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

TEL 101 Professional Educator Series: The Student Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Undergraduate students in teacher preparation programs must achieve and maintain a minimum 2.25 cumulative GPA.
An Arizona DPS IVP fingerprint clearance card is required for any courses that include professional classroom experiences.
Students are encouraged to meet with their academic advisor to discuss options for elective courses, such as certificates,

minors or personalized interest areas.

Students seeking teacher certification must pass required educator exams. More information can be found on the college's Certification and Compliance website. https://sites.google.com/asu.edu/mlftc-certification-and-compli/home

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Early Childhood Special Education, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Mary Lou Fulton College for Teaching & Learning In

Plan Code: TEECSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 18

Requirement	Minimum Grade	Credit Hours
Required Courses		
ECD 321 Foundations in Language, Literacy and Culture in Early Childhood (SOBE)	C	3
ECS 310 Foundations in Typical / Atypical Child Development	C	3
ECS 312 Social and Emotional Development of the Young Child (SOBE)	C	3
ECS 411 Instructional Methodologies for Young Children: STEM	C	3
ECS 420 Evaluation and Intervention Strategies for Infants, Toddlers and Preschoolers with Disabilities	C	3
ECS 430 Systems, Policy, and Advocacy in Early Childhood/Special Education	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

This certificate is only open to students majoring in Early Childhood Education, Elementary Education, Special Education, and Elementary Education (Emerging Multilingual Education) undergraduate teacher

preparation programs in the Mary Lou Fulton Teachers College. In addition to completing this certificate and a teacher certification program major, students will be required to earn a passing score on the professional knowledge portion of the AEPA/NES exam and a passing score on the subject knowledge portion of the AEPA/NES exam in each area an Arizona teaching credential is sought. Subject knowledge exam waivers may apply. Students should contact the Mary Lou Fulton Teachers College for more information.

Students should have a valid Arizona DPS Identity Verified Print fingerprint clearance card.

A GPA of 2.25 is required for continued good standing. Students should contact the Mary Lou Fulton Teachers College for more information.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Earth and Space Exploration (Astrophysics) and Planetary Science (LASESABS and LAPLSCERT)

Program description:
The Bachelor of Science program in Earth and space exploration with a concentration in astrophysics offers students a fundamental grounding in astronomy and astrophysics, with exposure to the related fields of geology, planetary science and engineering.

Students develop a background in theoretical modeling and observational techniques of galactic and stellar astronomy, extragalactic astronomy and cosmology. They engage in rigorous coursework in engineering and computer programming, and they learn to think critically about scientific problems. Through a capstone project, students gain valuable experience in translating science drivers into engineering solutions.

In addition to reviewing the guidelines in the Concurrent Program Options section below, students interested in pursuing concurrent or second baccalaureate degrees in The College of Liberal Arts and Sciences are advised to visit The College's website for more information and requirements.

The certificate program in planetary science prepares undergraduate students in topics related to the formation and evolution of planetary bodies and associated remote sensing technologies employed in these studies. The program includes specific training in the origins of planetary systems, tectonics, volcanism, geomorphology and remote mapping of surficial geology using spacecraft and land-based observational data. Additional skills may include understanding of planetary atmospheres, astrobiology, geodynamics and cosmochemistry.

This interdisciplinary program prepares students for technical career paths and helps prepare them to best engage with exciting opportunities at the frontier of planetary exploration.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 270 - Calc w/Analytic Geometry I
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates have the skills required for a career in astrophysics, physics and related fields, opening up diverse opportunities for employment in industry, government, education and other settings. They also are prepared to pursue graduate school in astrophysics or to perform laboratory research or data-intensive analyses that enable scientific progress or inform public policy.

Career opportunities include:
- analytical lab technician
- astronomer
- data analyst
- instrumentation specialist
- museum director
- planetary scientist
- research scientist
- science teacher
- science writer
- telescope operator

Career settings include:
- aerospace industry organizations
- educational institutions
- federal, state and local government agencies
- manufacturing centers

- museums or planetariums
- NASA facilities
- national laboratories
- National Science Foundation facilities
- observatories
- space industry organizations

The rigor of this degree makes it excellent preparation for graduate study in the field of astrophysics, especially when combined with a physics minor. Interested students can find more information on the career opportunities page on the School of Earth and Space Exploration website.

The employment prospects for graduates who complete the planetary science certificate are enhanced by the potential for opportunities at the intersection of these fields. Opportunities include these positions:

- community college or university educator teaching earth science or astronomy classes
- docent at a science museum or planetarium
- faculty member or researcher at a university, working on federally funded planetary science research, instruments or missions
- K--12 educator for a program with an earth science or astronomy curriculum
- researcher at an aerospace company contracted to build subsystems, instruments or missions for federally funded planetary science research

In Arizona, such opportunities are offered at institutions that include the public universities, Mesa Community College, the United States Geological Survey, Lowell Observatory and the Planetary Science Institute. Arizona companies that employ people in these fields include World View, Paragon, FreeFall Aerospace, General Dynamics, Qwaltec and KinetX. National companies include Lockheed Martin, Honeywell, Ball, SpaceX, Blue Origin, Virgin Galactic, Intuitive Machines, Firefly Aerospace, Northrop Grumman, Axiom, Planet Labs, Blue Canyon Technologies, Astrobotic and ispace.

Graduates may also find employment in federal labs or as congressional staff.

Curriculum - Earth and Space Exploration (Astrophysics), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LASESABS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
SES 121 Earth, Solar System and Universe (SCIT) **AND** **SES 123 Earth, Solar System and Universe Laboratory (SCIT)**	C	4
SES 126 Exploration of the Universe **AND** **SES 128 Exploration of the Universe Lab**	C	4
SES 230 Coding for Exploration (QTRS)	C	3
AST 321 Stellar and Planetary Astrophysics	C	3
AST 322 Introduction to Galactic and Extragalactic Astrophysics	C	3
AST 421 Astrophysics I	C	3

Requirement	Minimum Grade	Credit Hours
AST 422 Astrophysics II	C	3
AST 498 Topic: Astrophysics Seminar OR **AST 394 Topic: Astrophysics Research Seminar**	C	1
PHY 314 Quantum Physics I	C	3
SES 410 Senior Exploration Project I	C	3
SES 411 Senior Exploration Project II	C	3
Upper Division Astrophysics Major Elective **GLG 404 Fundamentals of Planetary Geology** **PHY 302 Mathematical Methods in Physics II** **PHY 310 Classical Particles, Fields, and Matter I** **PHY 311 Classical Particles, Fields, and Matter II** **PHY 312 Mechanics and Electromagnetism** **PHY 315 Quantum Physics II** **PHY 361 Introductory Modern Physics** **PHY 441 Statistical and Thermal Physics** **SES 311 Essentials of Astrobiology: Exploration for Life in the Universe** **SES 350 Engineering Systems and Experimental Problem Solving (QTRS)** **SES 421 Foundations of Planetary Science** Upper Division AST Elective	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division GLG Elective		
Upper Division MAT Elective		
Upper Division PHY Elective		
Upper Division SES Elective		
Upper Division Note: A minimum of one 3-credit lecture or research course is required to fulfill this requirement. Students may not use multiple 1-credit seminar/mentoring courses to meet the 3 credits needed to satisfy this requirement.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

PHY 150 Physics I (SCIT) **OR PHY 121 University Physics I: Mechanics (SCIT)** **AND PHY 122 University Physics Laboratory I (SCIT)**	C	4
PHY 151 Physics II (SCIT) **OR PHY 131 University Physics II: Electricity and Magnetism (SCIT) AND PHY 132 University Physics Laboratory II (SCIT)**	C	4
PHY 201 Mathematical Methods in Physics I (MATH)	C	3
PHY 252 Physics III (SCIT)	C	4
MAT 270 Calculus with Analytic Geometry I (MATH) **OR MAT 265 Calculus for Engineers I (MATH)**	C	3 - 4
MAT 271 Calculus with Analytic Geometry II (MATH) **OR MAT 266 Calculus for Engineers II (MATH)**	C	3 - 4
MAT 272 Calculus with Analytic Geometry III (MATH) **OR MAT 267 Calculus for Engineers III (MATH)**	C	3 - 4
SESE will accept Calculus for Engineers I, II, and III (MAT 265, 266, and 267) although MAT 270, 271 and 272 are encouraged.		
MAT 275 Modern Differential Equations (MATH) Students who complete PHY 302 with a grade of "C" or better may use PHY 302 in place of the MAT 275 requirement. May not double-count PHY 302 as an upper-division major elective and related area course.	C	3

Additional prerequisite math courses may be needed.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree

requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Planetary Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAPLSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires a minimum of 18 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. At least six upper-division hours in the certificate must be completed in courses offered by The College of Liberal Arts and Sciences. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		
AST 111 Introduction to Solar Systems Astronomy (SCIT) or GLG 101 Introduction to Geology I (Physical) (SCIT) or SES 100 Introduction to Exploration (QTRS) or SES 106 Habitable Worlds (SCIT) or SES 107 A Solar System Journey (SCIT) or SES 121 Earth, Solar System and Universe (SCIT)	C	3 - 4
GLG 404 Fundamentals of Planetary Geology	C	3
SES 421 Foundations of Planetary Science	C	3
Upper Division Planetary Science Electives	C	6
AST 494 Topic: Exoplanets		
GLG 321 Mineralogy or GLG 424 Petrology		
GLG 362 Geomorphology		
GLG 406 Geology of Mars		

Requirement	Minimum Grade	Credit Hours
GLG 418 Geophysics or GLG 419 Geodynamics		
GLG 420 Volcanology or GLG 422 Planetary Volcanology		
GLG 485 Meteorites and Cosmochemistry		
GLG 490 Topic: Remote Sensing		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe or GLG 460 Astrobiology		
SES 494 Topic: Geology of Venus		
SES 494 Topic: Planetary Interiors		
Planetary Science Electives		
AST 494 Topic: Exoplanets		
GLG 321 Mineralogy or GLG 424 Petrology		
GLG 362 Geomorphology		
GLG 406 Geology of Mars		
GLG 418 Geophysics or GLG 419 Geodynamics		
GLG 420 Volcanology or GLG 422 Planetary Volcanology	C	3
GLG 485 Meteorites and Cosmochemistry		
GLG 490 Topic: Remote Sensing		
SES 294 Topic: Introduction to Space Weather		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe or GLG 460 Astrobiology		
SES 494 Topic: Geology of Venus		
SES 494 Topic: Planetary Interiors		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Earth and Space Exploration (Geological and Planetary Sciences) and Geographic Information Science (LASESGSBS and LAGISCERT)

Program description:
The Bachelor of Science program in Earth and space exploration with an emphasis in geological and planetary sciences uncovers the processes that have shaped Earth and other planets since the origin of the solar system. Students explore the coevolution of Earth's life, oceans, atmosphere and climate system and how their evolution is recorded in rocks, soil, ice and isotopes.

Students learn traditional and modern field methods, data analysis and more to effectively study the natural environment. This knowledge empowers graduates to work for the benefit of local, national and global communities. They also have the opportunity to study the potential for extraterrestrial life and the possibilities for the colonization of space.

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I or higher
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates are well prepared for a wide variety of careers in growing fields such as environmental geology, hydrogeology, geographical information systems analysis, critical mineral exploration, environmental consulting and natural resource management.

Career opportunities include:
- environmental monitoring and exposure assessor
- environmental or sustainability consultant
- geologist
- geophysicist
- hydrogeologist
- mineral exploration geologist or project manager
- natural hazards assessment, mitigation and recovery specialist
- natural resource manager
- science teacher (K--12)
- water resources scientist

Possible career settings include:
- educational institutions
- environmental consulting firms
- environmental engineering firms
- environmental industry organizations
- federal, state and local government agencies
- geotechnical industry organizations
- museums
- nonprofit organizations
- petroleum industry companies
- small exploration companies and large mining companies

Graduates are also prepared for graduate school in numerous disciplines within geoscience, planetary science, biogeoscience, science education or science communication.

For more information, students can visit the career opportunities page on the School of Earth and Space Exploration

website.

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Earth and Space Exploration (Geological and Planetary Sciences), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LASESGSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
SES 121 Earth, Solar System and Universe (SCIT) AND SES 123 Earth, Solar System and Universe Laboratory (SCIT)	C	4
SES 122 History of the Earth and Solar System AND SES 124 History of the Earth and Solar System Laboratory	C	4
SES 230 Coding for Exploration (QTRS)	C	3
GLG 305 Dynamic Earth	C	3
GLG 310 Structural Geology	C	3
GLG 321 Mineralogy	C	3
GLG 451 Field Geology I	C	3

Requirement	Minimum Grade	Credit Hours
GLG 452 Field Geology II	C	3
SES 401 Earth and Space Exploration Colloquium	C	1
Upper Division GLG or SES Elective		
Upper Division GLG Elective		
Upper Division SES Elective		
Upper Division Elective Note: 1-credit seminar/mentoring courses do not count towards fulfilling the upper-division major elective requirements in this area. However, they will count as general upper-division elective credits toward the university's 45-credit minimum required for graduation.	C	9

GLG Branch Courses

Students must complete a minimum of four GLG Branch courses (12 credits), including at least one of the following: GLG 424: Petrology or GLG 435: Sedimentology and Stratigraphy. If students take both GLG 424 and GLG 435, one will count toward the Tier 1 requirement, while the other will satisfy a Tier 2 branch course requirement. Branch courses may not double count as GLG or SES electives; however, students who take more than four branch courses can apply additional courses toward GLG or SES Upper-Division Electives.

Upper Division GLG Branch Course: Tier 1		
GLG 424 Petrology	C	3
GLG 435 Sedimentology and Stratigraphy		

Requirement	Minimum Grade	Credit Hours
Upper Division GLG Branch Course: Tier 2		
GLG 362 Geomorphology	C	9
GLG 404 Fundamentals of Planetary Geology		
GLG 418 Geophysics		
GLG 424 Petrology		
GLG 430 Paleontology		
GLG 435 Sedimentology and Stratigraphy		
GLG 470 Hydrogeology		
GLG 481 Geochemistry		
SES 421 Foundations of Planetary Science		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

CHM 114 General Chemistry for Engineers (SCIT) For students who complete both CHM 113 and CHM 116 with a grade of "C" or better, we will accept CHM 116 in place of CHM 114.	C	4
PHY 121 University Physics I: Mechanics (SCIT) **AND** **PHY 122 University Physics Laboratory I (SCIT)**	C	4
MAT 265 Calculus for Engineers I (MATH) **OR** **MAT 270 Calculus with Analytic Geometry I (MATH)**	C	3
MAT 266 Calculus for Engineers II (MATH) **OR** **MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3

Additional prerequisite math courses may be needed.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Earth and Space Exploration (Geological and Planetary Sciences) and Water Resources (LASESGSBS and LAWATRCERT)

Program description:
The Bachelor of Science program in Earth and space exploration with an emphasis in geological and planetary sciences uncovers the processes that have shaped Earth and other planets since the origin of the solar system. Students explore the coevolution of Earth's life, oceans, atmosphere and climate system and how their evolution is recorded in rocks, soil, ice and isotopes.

Students learn traditional and modern field methods, data analysis and more to effectively study the natural environment. This knowledge empowers graduates to work for the benefit of local, national and global communities. They also have the opportunity to study the potential for extraterrestrial life and the possibilities for the colonization of space.

The certificate program in water resources covers topics related to hydrologic science and their application to water resources management. The sequence of classes offered through the certificate program builds from a foundation in geological sciences up to water policy and design aspects of hydrology, as selected by the student.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I or higher
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates are well prepared for a wide variety of careers in growing fields such as environmental geology, hydrogeology, geographical information systems analysis, critical mineral exploration, environmental consulting and natural resource management.

Career opportunities include:
- environmental monitoring and exposure assessor
- environmental or sustainability consultant
- geologist
- geophysicist
- hydrogeologist
- mineral exploration geologist or project manager
- natural hazards assessment, mitigation and recovery specialist
- natural resource manager
- science teacher (K--12)
- water resources scientist

Possible career settings include:
- educational institutions
- environmental consulting firms
- environmental engineering firms
- environmental industry organizations
- federal, state and local government agencies
- geotechnical industry organizations
- museums
- nonprofit organizations
- petroleum industry companies
- small exploration companies and large mining companies

Graduates are also prepared for graduate school in numerous disciplines within geoscience, planetary science, biogeoscience, science education or science communication.

For more information, students can visit the career opportunities page on the School of Earth and Space Exploration website.

With water resources jobs increasing at a rate faster than other job outlooks (up to 6% growth between 2022 and 2032, well above the national average of 2.8%, according to the U.S. Bureau of Labor Statistics), the demand for individuals with industry-specific skills is clear.

Students who earn a certificate in water resources can advance their career and become more marketable to employers. Exciting career opportunities in this field exist within government agencies, private sector consulting, engineering firms and nonprofit organizations, though most career areas require more training than a certificate alone can provide.

Career opportunities include:

- Hydrologist
- soil and water conservationist
- water or wastewater engineer
- water resources technician

Sample career settings include:

- environmental industry
- governmental agencies
- nonprofit organizations
- private voluntary organizations
- regulatory agencies
- utilities

Curriculum - Earth and Space Exploration (Geological and Planetary Sciences), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LASESGSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
SES 121 Earth, Solar System and Universe (SCIT) AND SES 123 Earth, Solar System and Universe Laboratory (SCIT)	C	4
SES 122 History of the Earth and Solar System AND SES 124 History of the Earth and Solar System Laboratory	C	4
SES 230 Coding for Exploration (QTRS)	C	3
GLG 305 Dynamic Earth	C	3
GLG 310 Structural Geology	C	3
GLG 321 Mineralogy	C	3
GLG 451 Field Geology I	C	3

Requirement	Minimum Grade	Credit Hours
GLG 452 Field Geology II	C	3
SES 401 Earth and Space Exploration Colloquium	C	1
Upper Division GLG or SES Elective		
Upper Division GLG Elective		
Upper Division SES Elective		
Upper Division Elective Note: 1-credit seminar/mentoring courses do not count towards fulfilling the upper-division major elective requirements in this area. However, they will count as general upper-division elective credits toward the university's 45-credit minimum required for graduation.	C	9

GLG Branch Courses

Students must complete a minimum of four GLG Branch courses (12 credits), including at least one of the following: GLG 424: Petrology or GLG 435: Sedimentology and Stratigraphy. If students take both GLG 424 and GLG 435, one will count toward the Tier 1 requirement, while the other will satisfy a Tier 2 branch course requirement. Branch courses may not double count as GLG or SES electives; however, students who take more than four branch courses can apply additional courses toward GLG or SES Upper-Division Electives.

Upper Division GLG Branch Course: Tier 1		
GLG 424 Petrology	C	3
GLG 435 Sedimentology and Stratigraphy		

Requirement	Minimum Grade	Credit Hours
Upper Division GLG Branch Course: Tier 2		
GLG 362 Geomorphology	C	9
GLG 404 Fundamentals of Planetary Geology		
GLG 418 Geophysics		
GLG 424 Petrology		
GLG 430 Paleontology		
GLG 435 Sedimentology and Stratigraphy		
GLG 470 Hydrogeology		
GLG 481 Geochemistry		
SES 421 Foundations of Planetary Science		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

CHM 114 General Chemistry for Engineers (SCIT) For students who complete both CHM 113 and CHM 116 with a grade of "C" or better, we will accept CHM 116 in place of CHM 114.	C	4
PHY 121 University Physics I: Mechanics (SCIT) AND PHY 122 University Physics Laboratory I (SCIT)	C	4
MAT 265 Calculus for Engineers I (MATH) **OR MAT 270 Calculus with Analytic Geometry I (MATH)**	C	3
MAT 266 Calculus for Engineers II (MATH) **OR MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3

Additional prerequisite math courses may be needed.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Water Resources, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAWATRCERT

Minimum credit hours: 16

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires 16 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. At least six upper-division hours in the certificate must be completed in courses offered by The College of Liberal Arts and Sciences. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		
GLG 108 Water Planet (SCIT) **or** **SOS 182 Water Planet (SCIT)**	C	4
GLG 327 Earth's Critical Zone **or** **SOS 374 Earth's Critical Zone**	C	3
GLG 470 Hydrogeology	C	3
Upper Division Water Resources Electives	C	6
CEE 441 Water Resources Engineering		
GLG 325 / **BIO 325** / **CHM 385 Oceanography**		
GLG 362 Geomorphology		
GLG 471 Hydrology		
GLG 481 Geochemistry		
GLG 489 Field Geochemistry		
SEA 330 Digital Blue Planet (QTRS)		

Requirement	Minimum Grade	Credit Hours
SEA 394 Topic: Fluid Dynamics		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Economics and Applied Business Data Analytics (LAECNBS and BABDACERT)

Program description:
The Department of Economics at ASU provides the highest quality instruction to students, conducts innovative research and provides leadership and service to its professional communities. ASU is ranked No. 35 among global universities for economics and business (U.S. News & World Report, 2023--2024).

The Bachelor of Science in economics degree is built on a strong core of micro- and macroeconomic theory supplemented by mathematics, statistics and data analysis. The flexibility of the BS degree enables students to supplement their study of economics with elective coursework offered by The College of Liberal Arts and Sciences to broaden their knowledge and customize their program to suit individual goals and interests.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Any math course that meets the MATH designation, except MAT 114 College Mathematics.
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates possess the analytical tools and critical-thinking skills that have led some to placements with top private companies and consulting firms as well as within government. Others have landed research assistantships with the Federal Reserve and other nonprofit research institutions.

Those choosing to continue their studies have earned admission to top master's degree and doctoral programs in the U.S. and abroad. Economics is considered one of the best majors as preparation for law school, and some graduates have gone on to the best law schools in the country.

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Economics, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAECNBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 312 Intermediate Microeconomic Theory (SOBE)	C	3
ECN 313 Intermediate Macroeconomic Theory (SOBE)	C	3
ECN 310 Applied Regression and Data Analytics OR **ECN 425 Introduction to Econometrics**	C	3
ECN 475 Capstone in Economics	C	3
Economics electives		
400-Level **ECN Elective**	C	6
Upper Division **ECN Elective**	C	6
The College Requirements		

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

Economics Related Area	C	6
ACC Elective		
Upper Division AGB Elective		
Upper Division ASB Elective		
Upper Division ASB Elective		
CIS Elective		
Upper Division DAT Elective		
ENG 301 Writing for the Professions		
Upper Division FIN Elective		
Upper Division GCU Elective		

Upper Division GIS Elective

Upper Division GPH Elective

Upper Division HPS Elective

Upper Division HST Elective

Upper Division LES Elective

LIA 484 Internship

Upper Division MAT Elective

Upper Division MKT Elective

Upper Division NLM Elective

PAF Elective

Upper Division PHI Elective

Upper Division POS Elective

PSY 304 Effective Thinking

PSY 350 Social Psychology (SOBE)

400-Level PSY Elective

Upper Division PUP Elective

Upper Division REA Elective

Upper Division SCM Elective

Upper Division SGS Elective

Upper Division SOC Elective

Upper Division STP Elective

USL 410 Service Learning: Diverse Community Issues		

Math and Statistics

Students considering graduate work in economics should choose MAT 270 or MAT 265, and MAT 271 or MAT 266, instead of MAT 210 and MAT 211.

MAT 210 Brief Calculus (MATH) OR **MAT 270 Calculus with Analytic Geometry I (MATH)** OR **MAT 265 Calculus for Engineers I (MATH)** Students who do not place into MAT 210, MAT 265 or MAT 270 should enroll in the appropriate prerequisite course, MAT 117 or MAT 170. Do not enroll in MAT 114.	C	3
MAT 211 Mathematics for Business Analysis OR **MAT 271 Calculus with Analytic Geometry II (MATH)** OR **MAT 266 Calculus for Engineers II (MATH)**	C	3
ECN 221 Business Statistics (QTRS) **or** **ECN 231 Honors Business Statistics (QTRS)** OR **STP 226 Elements of Statistics (QTRS)** OR **STP 420 Introductory Applied Statistics (QTRS)**	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-		1

LA.

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BAE/CERT Educational Studies and Geographic Information Science (EDSLSTBAE and LAGISCERT)

Program description:
Learning happens everywhere and at all ages. The Bachelor of Arts in Education program in educational studies provides a flexible pathway to a bachelor's degree for students who want to work with children, youth and adults within nonprofit settings, community-based organizations, civic organizations and businesses. Students develop practical skills aligned with workforce demands, including facilitating learning experiences with, and for, diverse people in different contexts. They also develop skills for effective communication, collaboration, critical thinking, leadership, advocacy and innovation --- all of which are essential to educators working across professional contexts.

The educational studies curriculum prepares graduates to serve in a variety of roles in educational settings. Additional benefits include:

- Applied learning experiences, including a two-semester internship, provide opportunities for developing creative problem-solving, effective communication, collaboration and leadership skills that can be leveraged to secure employment after graduation.
- Flexible learning options are offered that accommodate diverse schedules and preferences, supported by engaged faculty and knowledgeable advisors.
- Students develop relationships with prospective employers during the program through embedded learning experiences and partnerships.
- The program can be a pathway to one of three accelerated bachelor's to master's degree programs, which provide students with the opportunity to secure a master's degree in a single year. Two of the programs lead to teacher certification.
- While a shared set of learning objectives unites educational studies students, each student also has the ability to curate a unique educational experience tailored to their professional interests and the opportunity to explore new areas of interest.

An educational studies minor is also available to ASU students in other degree programs.

This program does not lead to teacher certification. However, students enrolled in the BAE in educational studies can secure certification by pursuing one of the accelerated master's programs that lead to certification.

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BAE At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or MAT 117 College Algebra
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates hold a versatile degree that qualifies them for a variety of career paths in education, including roles at nonprofit organizations, community institutions, civic organizations and businesses.

Nearly 90% of alumni report being employed three months after graduation in various roles across multiple sectors, including:

- education sector
- health care sector
- nonprofit sector
- private sector
- social services sector

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can

be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Educational Studies, BAE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts in Education, BAE
College/School: Mary Lou Fulton College for Teaching & Learning In
Plan Code: EDSLSTBAE
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Core Students must secure an approved work or volunteer placement for upper division coursework. The college's Community Education Services team can assist students in finding a placement at a site that teaches young children and meets the requirements of the degree.		
EDU 301 Why Education?	C	3
EDU 302 Diversity in Learning Contexts	C	3
EDU 304 The Bridge Between Coursework, Identity and Career	C	2
EDU 396 Exploring Ideas and Planning for an Internship Meet with an Educational Studies Internship Coordinator if you have questions about, or want to plan ahead for, your internship series. EDU 396 is the first internship course.	C	3
EDU 402 Partnering to Advance Educational Initiatives	C	3
EDU 404 Navigating Change in Educational Innovations	C	3
EDU 484 Internship	C	3

Requirement	Minimum Grade	Credit Hours
EDU 498 Pro-Seminar	C	4
LSE 303 Human Development: Addressing Learner Capabilities (SOBE)	C	3
LSE 305 Conceptualizing Learning: Theories in Practice	C	3
LSE 401 Designing Learning Environments for Inclusion (SOBE)	C	3

College Core

MAT 114 College Mathematics (MATH)	C	3
SPE 223 Intersection of Society, Disabilities and Inclusion (CIVI)	C	3
TEL 200 Social Embeddedness of Educational Endeavors	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

TEL 101 Professional Educator Series: The Student Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** ENG 102 First-Year Composition **OR** ENG 105 Advanced First-Year Composition	C	6

OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

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All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

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Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students are encouraged to meet with their academic advisor to discuss options for elective courses, such as certificates, minors or personalized interest areas.

Meet with your academic advisor right away if you are interested in an accelerated bachelor's plus master's degree opportunity. Educational Studies students can combine their undergraduate degree with one of five accelerated master's program options.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSE/CERT Electrical Engineering and Mathematical Concepts of Engineering (ESEEEBSE and LAMACECERT)

Program description:
The Bachelor of Science in Engineering program in electrical engineering prepares students for positions as electrical engineers.

Following initial coursework in mathematics and sciences, the foundation courses enable students to build a solid base of engineering knowledge. The electrical engineering curriculum includes a number of required upper-division electrical engineering and technical elective courses in such areas as circuits, communication, signal processing, control systems, computer engineering, electromagnetics, electric power, energy systems, physical electronics, photonics, photovoltaics and quantum engineering.

Approved technical elective courses provide students with an opportunity either to broaden their background in electrical engineering or to study in greater depth the technical subjects in which they have special interest.

Accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/, under the General Criteria and the Electrical and Electronics Engineering Program Criteria.

The certificate program in mathematical concepts of engineering is designed for students who seek a strong foundation in mathematics to support their interests in engineering. Combining a core foundation in the quantitative and analytical skills found in mathematics with related skills in engineering, the program provides students with a solid mathematical background well-suited for multiple career paths.

BSE At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates of the BSE program in electrical engineering find many exciting opportunities in industry. These include positions with:

- communication equipment and network providers
- computer and peripheral device manufacturers and defense organizations
- consulting companies
- electric power utilities
- semiconductor chip designers and manufacturers

Graduates are also prepared for continued learning experiences, either in a formal graduate program or in continuing education applications.

The certificate program in mathematical concepts of engineering complements many major programs of study. Graduates with this enhanced math background can become more marketable to employers.

Curriculum - Electrical Engineering, BSE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Engineering, BSE
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESEEEBSE
Minimum credit hours: 120
Upper division minimum credit hours: 47

Requirement	Minimum Grade	Credit Hours
Electrical Engineering, Lower Division		
CSE 100 Principles of Programming with C++ (QTRS) OR **CSE 110 Principles of Programming (QTRS)**	C	3
EEE 120 Digital Design Fundamentals	C	3
EEE 202 Circuits I		4
EEE 203 Signals and Systems I		3
EEE 241 Fundamentals of Electromagnetics		3
FSE 100 Introduction to Engineering		2
Electrical Engineering, Upper Division		
EEE 334 Circuits II		4
EEE 350 Random Signal Analysis		3
EEE 488 Senior Design Laboratory I		3
EEE 489 Senior Design Laboratory II		3

Requirement	Minimum Grade	Credit Hours
300-Level Upper Division Area Pathway		
EEE 304 Signals and Systems II		16
EEE 333 Hardware Design Languages and Programmable Logic		
EEE 335 Analog and Digital Circuits		
EEE 341 Engineering Electromagnetics		
EEE 352 Properties of Electronic Materials		
EEE 360 Energy Systems and Power Electronics		
EEE 394 Topic: Quantum Mechanics for Quantum Information Science		
EEE 394 Topic: Introduction to Machine Learning for Engineers		
Upper Division Technical Electives		15
ComSigProcCtrl		
EEE 404 Real-Time DSP Systems		
EEE 405 Machine Learning Basics with Deployment to FPGAs		
EEE 407 Digital Signal Processing		
EEE 455 Communication Systems		
EEE 459 Communication Networks		
EEE 480 Feedback Systems		

Requirement	Minimum Grade	Credit Hours
EEE 481 Computer-Controlled Systems		
EEE 498 Topic: Networking for Big Data		
EEE 498 Topic: Foundations Machine Learning: From Theory to Pract		
Elect Circuits		
EEE 425 Digital Systems and Circuits		
EEE 433 Analog Integrated Circuits		
ElectroMag		
EEE 443 Antennas for Wireless Communications		
EEE 445 Microwaves		
EEE 448 Fiber Optics		
PhyElecPhoto		
EEE 434 Quantum Mechanics for Engineers		
EEE 435 Fundamentals of CMOS and MEMS		
EEE 436 Fundamentals of Solid-State Devices		
EEE 437 Optoelectronics		
EEE 439 Semiconductor Facilities and Cleanroom Practices		
Quantum Engineering		
EEE 498 Topic: Quantum Optics and Quantum Information		

Requirement	Minimum Grade	Credit Hours
Power Systems		
EEE 460 Nuclear Power Engineering		
EEE 463 Electrical Power Plants		
EEE 465 Photovoltaic Energy Conversion		
EEE 470 Electric Power Devices		
EEE 471 Power System Analysis		
EEE 472 Power Electronics and Power Management		
EEE 473 Electrical Machinery		
EEE 498 Topic: Science and Technology of Solar Cell Fabrication		
EEE 498 Topic: Renewable Energy Technology and Systems		
EEE 498 Topic: Manufacturing Science of Solar Cells		
CompEngr		
EEE 404 Real-Time DSP Systems		
EEE 419 Python for Rapid Engineering Solutions		
Other (Honors)		
EEE 492 Honors Directed Study		
EEE 493 Honors Thesis		

Requirement	Minimum Grade	Credit Hours
Electrical Engineering Major GPA		
Check: Minimum 2.0 Major GPA		
Math, Science and Interdisciplinary Requirements		
CHM 114 General Chemistry for Engineers (SCIT) OR **CHM 116 General Chemistry II (SCIT)** Students who have credit for CHM 113 should take CHM 116.		4
ECN 211 Macroeconomic Principles (SOBE) OR **ECN 212 Microeconomic Principles (SOBE)**		3
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH)	C	3
MAT 275 Modern Differential Equations (MATH)	C	3
MAT 342 Linear Algebra OR **MAT 343 Applied Linear Algebra**	C	3
PHY 121 University Physics I: Mechanics (SCIT)	C	3
PHY 122 University Physics Laboratory I (SCIT)	C	1
PHY 131 University Physics II: Electricity and Magnetism (SCIT)	C	3
PHY 132 University Physics Laboratory II (SCIT)	C	1

PHY 241 University Physics III	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-EEE The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Mathematical Concepts of Engineering, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAMACECERT

Minimum credit hours: 21

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The mathematical concepts of engineering certificate requires a minimum of 21 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		

Required Courses

IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 266 Calculus for Engineers II (MATH) **or** **MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3
MAT 267 Calculus for Engineers III (MATH) **or** **MAT 272 Calculus with Analytic Geometry III (MATH)**	C	3
MAT 275 Modern Differential Equations (MATH) **or** **MAT 274 Elementary Differential Equations (MATH)**	C	3
MAT 343 Applied Linear Algebra **or** **MAT 342 Linear Algebra**	C	3

Requirement	Minimum Grade	Credit Hours
MAT 343 and STP 420 must be completed with courses offered by the School of Mathematical and Statistical Sciences.		
STP 420 Introductory Applied Statistics (QTRS)	C	3

Elective (choose one)

Upper Division Mathematical Concepts of Engineering Electives

DAT 301 Exploring Data in R and Python	C	3
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 470 Stochastic Operations Research		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BAE/CERT Elementary Education and Cross-Sector Leadership (TEEEDBAE and PPCSLDCERT)

Program description:
The Bachelor of Arts in Education program in elementary education prepares prospective educators to work with children in grades K--8 in an educational setting. This program leads to a K--8 elementary education credential in the state of Arizona.

Students receive a firm grounding in academic content with current research and best practices from nationally recognized faculty in their fields of expertise, accompanied by professional experiences. Students also gain experience in integrating technology into teaching practices.

The teacher certification program for elementary education is clinically embedded during the sophomore, junior and senior years. The Mary Lou Fulton College for Teaching and Learning Innovation has developed a team-based approach to teacher preparation, allowing students to participate in professional experiences (internships and student teaching) with a team of peers while receiving guidance and support from ASU faculty members and highly qualified certified teachers. Team-based professional experiences are designed to prepare students to work with mutually supportive colleagues to address the academic and social-emotional needs of learners. Clinically embedded courses and professional experiences provide students with multiple opportunities to apply knowledge learned in coursework to practice in the classroom.

Students complete a series of internships before a semester-long, full-time teaching experience. With the support of a certified mentor teacher and ASU faculty, students are able to apply in learning environments what they learn in coursework.

Graduates are recommended for grades K--8 elementary teacher certification. Those who desire to teach in a public school must pass the appropriate Arizona educator exams (National Evaluation Series or Arizona Educator Proficiency Assessments) to be credentialed to teach in Arizona.

The certificate program in cross-sector leadership provides a comprehensive overview of leading solutions to complex social challenges by integrating the public, private, nonprofit and military sectors.

Students engage in a systems-thinking approach to challenges faced by local and global communities, explore the diverse characteristics and motives of each sector in engaging in cross-sector collaborations, and master processes to formalize such partnerships. Students study values-based leadership and how individual, organizational and sector values can drive a leader's ability to act. Students gain leadership skills, such as leading change within and between organizations across multiple sectors; and they learn to use human-centered design, social entrepreneurship and other approaches when tackling community challenges.

Students end the program with a thesis or applied project that integrates the theories, procedures and concepts learned in the certificate courses with experiences from their internships in each sector.

BAE At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, West Valley, ASU Sync, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
There is a demand for highly qualified elementary teachers in Arizona. A high percentage of students from this program receive job offers during their residencies. Many graduates with a degree in elementary education work in:

- charter schools
- nontraditional settings
- private school settings
- public elementary schools

Students can advance their career options with an undergraduate certificate.

Graduates of the certificate in cross-sector leadership have acquired a beneficial knowledge of cross-sector collaboration, advanced leadership skills, and an understanding of how to use these. These transferrable skills complement students' major program of study and may make them more marketable to employers.

Curriculum - Elementary Education, BAE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts in Education, BAE
College/School: Mary Lou Fulton College for Teaching & Learning In
Plan Code: TEEEDBAE
Minimum credit hours: 120
Upper division minimum credit hours: 51

Requirement	Minimum Grade	Credit Hours
Upper Division Core		
TEL 310 Instructional Design and Planning: Instructional Thought and Action	C	4
TEL 317 Instructional Thought and Action: Learning Environment and Management	C	3
TEL 318 Instructional Thought and Action: Assessment for Learning	C	3
TEL 340 Families, Communities and Cultures: Cultivating Networks of Culturally Responsive Relationships (SOBE)	C	3
TEL 370 Professional Educator Series: Building a Professional Network		1
TEL 371 Professional Educator Series: Educational Policies		1
TEL 331 Foundations of Literacy: The Science of Reading	C	3
TEL 470 Professional Educator Series: Career Growth and Planning		1

Requirement	Minimum Grade	Credit Hours
TEL 487 Student Teaching: Dual Certification OR TEL 488 Student Teaching	C	12

Major Core

EED 324 Social Studies Methods and the Arts	C	3
EED 411 Science in Elementary Schools	C	3
EED 412 Mathematics in Elementary Schools	C	4
EED 433 Writing in the 21st Century	C	3
MTE 280 Numbers, Operations and Proportional Reasoning for K-8 Teaching	C	3
MTE 311 Geometry, Algebra, Statistics and Probability for K-8 Teaching	C	3
RDG 413 Elementary Methods for Literacy Instruction and Assessment	C	4

College Core

BLE 220 Foundations of Structured English Immersion (HUAD)	C	3
GCU 113 United States and Arizona Social Studies (AMIT)		3
MAT 114 College Mathematics (MATH)	C	3
SPE 222 Orientation to Education of Exceptional Children (CIVI)	C	3

TEL 111 Exploration of Education (HUAD)	C	3
TEL 203 Collaborating, Planning and Implementing Instruction in Diverse Contexts	C	3
TEL 208 Education in a Changing World (GCSI)	C	3
TEL 212 Cultural Diversity in Education (HUAD)	C	3
TEL 215 Introduction to Child and Adolescent Development (SOBE)	C	3
TEL 171 Professional Educator Series: Excellence in Education		1
TEL 270 Professional Educator Series: Connecting Research to Practice		1
TEL 271 Professional Educator Series: Inclusivity in Practice		1

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

TEL 101 Professional Educator Series: The Student Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Undergraduate students in teacher preparation programs must achieve and maintain a minimum 2.25 cumulative GPA.

Students are encouraged to meet with their academic advisor to discuss options for elective courses, such as certificates, minors or personalized interest areas.

An Arizona DPS IVP fingerprint clearance card is required for any courses that include professional classroom experiences.

Students seeking teacher certification must pass required educator exams. More information can be found on the college's Certification and Compliance website. https://sites.google.com/asu.edu/mlftc-certification-and-compli/home

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Cross-Sector Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPCSLDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in cross-sector leadership is a requirement for, and is limited to, participants in the Public Service Academy's Next Generation Service Corps, a four-year leadership development track that engages future civilian leaders in the public, private and nonprofit sectors to engage in collaboration and change in the context of social challenges in which they hold interest. Students are required to demonstrate forward academic progress to maintain enrollment in the certificate as well as the Next Generation Service Corps. ROTC students also may pursue the certificate.		
PAF 215 NGSC Community Impact Lab	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 315 Cross-Sector Collaboration (CIVI)	C	3
PAF 415 Social Entrepreneurship	C	3
PAF 394 Topic: NGSC Leadership Instruction **or** **PAF 421 Leadership Capstone**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BAE/CERT Elementary Education and Early Childhood Education (TEEEDBAE and TEECDCERT)

Program description:
The Bachelor of Arts in Education program in elementary education prepares prospective educators to work with children in grades K--8 in an educational setting. This program leads to a K--8 elementary education credential in the state of Arizona.

Students receive a firm grounding in academic content with current research and best practices from nationally recognized faculty in their fields of expertise, accompanied by professional experiences. Students also gain experience in integrating technology into teaching practices.

The teacher certification program for elementary education is clinically embedded during the sophomore, junior and senior years. The Mary Lou Fulton College for Teaching and Learning Innovation has developed a team-based approach to teacher preparation, allowing students to participate in professional experiences (internships and student teaching) with a team of peers while receiving guidance and support from ASU faculty members and highly qualified certified teachers. Team-based professional experiences are designed to prepare students to work with mutually supportive colleagues to address the academic and social-emotional needs of learners. Clinically embedded courses and professional experiences provide students with multiple opportunities to apply knowledge learned in coursework to practice in the classroom.

Students complete a series of internships before a semester-long, full-time teaching experience. With the support of a certified mentor teacher and ASU faculty, students are able to apply in learning environments what they learn in coursework.

Graduates are recommended for grades K--8 elementary teacher certification. Those who desire to teach in a public school must pass the appropriate Arizona educator exams (National Evaluation Series or Arizona Educator Proficiency Assessments) to be credentialed to teach in Arizona.

The certificate program in early childhood education prepares students to support the cognitive and social-emotional development of young children from birth to age 8.

Students who complete this certificate program are eligible for dual teaching certificates upon completion of an undergraduate degree or to meet requirements for an Early Childhood endorsement. This certificate can be added to the following Bachelor of Arts in Education programs:

- BAE in elementary education
- BAE in elementary multilingual education
- BAE in special education

Students develop skills in understanding and applying evidence-based practices in early childhood education. The innovative coursework is centered on child development theory, development of young children, assessment practices and instructional pedagogy. Students explore techniques and approaches to engage children's family members in the growth and development of young children.

When added to a bachelor's degree program listed above, graduates earn an institutional recommendation for teacher certification in Early Childhood Education, Birth-Grade 3, or an endorsement in Early Childhood Education, Birth-Grade 3, through the Arizona Department of Education. Those who desire to teach in public schools must pass the appropriate Arizona educator exams (National Evaluation Series or Arizona Educator Proficiency Assessments) to be certified to teach in the state of Arizona.

BAE At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, West Valley, ASU Sync, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, ASU Sync

Career opportunities:
There is a demand for highly qualified elementary teachers in Arizona. A high percentage of students from this program receive job offers during their residencies. Many graduates with a degree in elementary education work in:

- charter schools
- nontraditional settings
- private school settings
- public elementary schools

There is a strong demand for early childhood educators in Arizona and nationwide. Graduates are prepared to work in a variety of settings, such as preschools, with childcare providers and in after-school care. Many graduates with early childhood education credentials hold leadership positions in Head Start, private nonprofit and private for-profit center-based programs, and public school early childhood environments.

Curriculum - Elementary Education, BAE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts in Education, BAE
College/School: Mary Lou Fulton College for Teaching & Learning In
Plan Code: TEEEDBAE
Minimum credit hours: 120
Upper division minimum credit hours: 51

Requirement	Minimum Grade	Credit Hours
Upper Division Core		
TEL 310 Instructional Design and Planning: Instructional Thought and Action	C	4
TEL 317 Instructional Thought and Action: Learning Environment and Management	C	3
TEL 318 Instructional Thought and Action: Assessment for Learning	C	3
TEL 340 Families, Communities and Cultures: Cultivating Networks of Culturally Responsive Relationships (SOBE)	C	3
TEL 370 Professional Educator Series: Building a Professional Network		1
TEL 371 Professional Educator Series: Educational Policies		1
TEL 331 Foundations of Literacy: The Science of Reading	C	3
TEL 470 Professional Educator Series: Career Growth and Planning		1

Requirement	Minimum Grade	Credit Hours
TEL 487 Student Teaching: Dual Certification OR TEL 488 Student Teaching	C	12
Major Core		
EED 324 Social Studies Methods and the Arts	C	3
EED 411 Science in Elementary Schools	C	3
EED 412 Mathematics in Elementary Schools	C	4
EED 433 Writing in the 21st Century	C	3
MTE 280 Numbers, Operations and Proportional Reasoning for K-8 Teaching	C	3
MTE 311 Geometry, Algebra, Statistics and Probability for K-8 Teaching	C	3
RDG 413 Elementary Methods for Literacy Instruction and Assessment	C	4
College Core		
BLE 220 Foundations of Structured English Immersion (HUAD)	C	3
GCU 113 United States and Arizona Social Studies (AMIT)		3
MAT 114 College Mathematics (MATH)	C	3
SPE 222 Orientation to Education of Exceptional Children (CIVI)	C	3

TEL 111 Exploration of Education (HUAD)	C	3
TEL 203 Collaborating, Planning and Implementing Instruction in Diverse Contexts	C	3
TEL 208 Education in a Changing World (GCSI)	C	3
TEL 212 Cultural Diversity in Education (HUAD)	C	3
TEL 215 Introduction to Child and Adolescent Development (SOBE)	C	3
TEL 171 Professional Educator Series: Excellence in Education		1
TEL 270 Professional Educator Series: Connecting Research to Practice		1
TEL 271 Professional Educator Series: Inclusivity in Practice		1

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

TEL 101 Professional Educator Series: The Student Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Undergraduate students in teacher preparation programs must achieve and maintain a minimum 2.25 cumulative GPA.

Students are encouraged to meet with their academic advisor to discuss options for elective courses, such as certificates, minors or personalized interest areas.

An Arizona DPS IVP fingerprint clearance card is required for any courses that include professional classroom experiences.

Students seeking teacher certification must pass required educator exams. More information can be found on the college's Certification and Compliance website. https://sites.google.com/asu.edu/mlftc-certification-and-compli/home

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Early Childhood Education, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Mary Lou Fulton College for Teaching & Learning In

Plan Code: TEECDCERT

Minimum credit hours: 20

Upper division minimum credit hours: 20

Requirement	Minimum Grade	Credit Hours
Required Courses		
ECD 321 Foundations in Language, Literacy and Culture in Early Childhood (SOBE)	C	3
ECS 310 Foundations in Typical / Atypical Child Development	C	3
ECS 312 Social and Emotional Development of the Young Child (SOBE)	C	3
ECS 411 Instructional Methodologies for Young Children: STEM	C	3
ECS 412 Mathematics Curriculum, Instruction and Assessment	C	4
ECD 417 Arts Integration for Young Children	C	4

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

This certificate is only open to students majoring in Elementary Education, Special Education, and Elementary Education (Emerging Multilingual Education) undergraduate teacher preparation programs in the Mary Lou Fulton Teachers College. In addition to completing this certificate and a teacher certification program major, students will be

required to earn a passing score on the professional knowledge portion of the AEPA/NES exam and a passing score on the subject knowledge portion of the AEPA/NES exam in each area an Arizona teaching credential is sought. Subject knowledge exam waivers may apply. Students should contact the Mary Lou Fulton Teachers College for more information.

Students should have a valid Arizona DPS Identity Verified Print fingerprint clearance card.

A GPA of 2.25 is required for continued good standing. Students should contact the Mary Lou Fulton Teachers College for more information.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BAE/CERT Elementary Education and Mild/Moderate Special Education (TEEEDBAE and TEMSPECERT)

Program description:
The Bachelor of Arts in Education program in elementary education prepares prospective educators to work with children in grades K--8 in an educational setting. This program leads to a K--8 elementary education credential in the state of Arizona.

Students receive a firm grounding in academic content with current research and best practices from nationally recognized faculty in their fields of expertise, accompanied by professional experiences. Students also gain experience in integrating technology into teaching practices.

The teacher certification program for elementary education is clinically embedded during the sophomore, junior and senior years. The Mary Lou Fulton College for Teaching and Learning Innovation has developed a team-based approach to teacher preparation, allowing students to participate in professional experiences (internships and student teaching) with a team of peers while receiving guidance and support from ASU faculty members and highly qualified certified teachers. Team-based professional experiences are designed to prepare students to work with mutually supportive colleagues to address the academic and social-emotional needs of learners. Clinically embedded courses and professional experiences provide students with multiple opportunities to apply knowledge learned in coursework to practice in the classroom.

Students complete a series of internships before a semester-long, full-time teaching experience. With the support of a certified mentor teacher and ASU faculty, students are able to apply in learning environments what they learn in coursework.

Graduates are recommended for grades K--8 elementary teacher certification. Those who desire to teach in a public school must pass the appropriate Arizona educator exams (National Evaluation Series or Arizona Educator Proficiency Assessments) to be credentialed to teach in Arizona.

The certificate program in mild/moderate special education prepares students to make connections and provide equitable learning environments to meet the diverse learning needs of students in kindergarten through grade 12.

This certificate program can only be added to the following programs at Mary Lou Fulton Teachers College to allow students eligibility for dual-teaching certificates at the completion of their Bachelor of Arts in Education degree:

- BAE in early childhood education
- BAE in elementary education
- BAE in elementary multilingual education
- BAE in secondary education

Students learn how to work and partner with communities and schools to co-construct and negotiate roles and responsibilities in order to deliver effective special education programming. Coursework is grounded in data; theoretical foundations; federal, state and local policies; and a sense of responsibility to student and community needs.

When students add this certificate to a bachelor's degree program listed above, they are eligible to earn an institutional recommendation from ASU for Arizona teacher certification in Mild/Moderate Disabilities, K--12, from the Arizona Department of Education. To teach in an Arizona public school, graduates must pass the appropriate Arizona educator exams: National Evaluation Series or Arizona Educator Proficiency Assessments.

Format option
This program is also offered via ASU Sync. ASU Sync enables students to attend live classes remotely via Zoom. Classes are designed to foster active collaboration and discussion in real time with faculty and peers. ASU Sync students must reside in Arizona throughout the duration of the program. Students on F-1 or J-1 immigration status are not permitted to complete courses via Sync and should speak with an advisor about other options to complete this program.

Students seeking to use GI Bill® benefits for ASU Sync programs should contact the Pat Tillman Veterans Center regarding certain limitations.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available at the official U.S. government website at www.benefits.va.gov/gibill.

BAE At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, West Valley, ASU Sync, Online, ASU Local

Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, ASU Sync

Career opportunities:
There is a demand for highly qualified elementary teachers in Arizona. A high percentage of students from this program receive job offers during their residencies. Many graduates with a degree in elementary education work in:

- charter schools
- nontraditional settings
- private school settings
- public elementary schools

Graduates of Mary Lou Fulton Teachers College are highly sought-out teachers in public, charter and private education institutions. Graduates with degrees in special education may also work in roles such as education resource specialist, interventionist or curriculum developer.

Curriculum - Elementary Education, BAE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts in Education, BAE
College/School: Mary Lou Fulton College for Teaching & Learning In
Plan Code: TEEEDBAE
Minimum credit hours: 120
Upper division minimum credit hours: 51

Requirement	Minimum Grade	Credit Hours
Upper Division Core		
TEL 310 Instructional Design and Planning: Instructional Thought and Action	C	4
TEL 317 Instructional Thought and Action: Learning Environment and Management	C	3
TEL 318 Instructional Thought and Action: Assessment for Learning	C	3
TEL 340 Families, Communities and Cultures: Cultivating Networks of Culturally Responsive Relationships (SOBE)	C	3
TEL 370 Professional Educator Series: Building a Professional Network		1
TEL 371 Professional Educator Series: Educational Policies		1
TEL 331 Foundations of Literacy: The Science of Reading	C	3
TEL 470 Professional Educator Series: Career Growth and Planning		1

Requirement	Minimum Grade	Credit Hours
TEL 487 Student Teaching: Dual Certification OR TEL 488 Student Teaching	C	12
Major Core		
EED 324 Social Studies Methods and the Arts	C	3
EED 411 Science in Elementary Schools	C	3
EED 412 Mathematics in Elementary Schools	C	4
EED 433 Writing in the 21st Century	C	3
MTE 280 Numbers, Operations and Proportional Reasoning for K-8 Teaching	C	3
MTE 311 Geometry, Algebra, Statistics and Probability for K-8 Teaching	C	3
RDG 413 Elementary Methods for Literacy Instruction and Assessment	C	4
College Core		
BLE 220 Foundations of Structured English Immersion (HUAD)	C	3
GCU 113 United States and Arizona Social Studies (AMIT)		3
MAT 114 College Mathematics (MATH)	C	3
SPE 222 Orientation to Education of Exceptional Children (CIVI)	C	3

TEL 111 Exploration of Education (HUAD)	C	3
TEL 203 Collaborating, Planning and Implementing Instruction in Diverse Contexts	C	3
TEL 208 Education in a Changing World (GCSI)	C	3
TEL 212 Cultural Diversity in Education (HUAD)	C	3
TEL 215 Introduction to Child and Adolescent Development (SOBE)	C	3
TEL 171 Professional Educator Series: Excellence in Education		1
TEL 270 Professional Educator Series: Connecting Research to Practice		1
TEL 271 Professional Educator Series: Inclusivity in Practice		1

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

TEL 101 Professional Educator Series: The Student Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Undergraduate students in teacher preparation programs must achieve and maintain a minimum 2.25 cumulative GPA.

Students are encouraged to meet with their academic advisor to discuss options for elective courses, such as certificates, minors or personalized interest areas.

An Arizona DPS IVP fingerprint clearance card is required for any courses that include professional classroom experiences.

Students seeking teacher certification must pass required educator exams. More information can be found on the college's Certification and Compliance website. https://sites.google.com/asu.edu/mlftc-certification-and-compli/home

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Mild/Moderate Special Education, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Mary Lou Fulton College for Teaching & Learning In

Plan Code: TEMSPECERT

Minimum credit hours: 23

Upper division minimum credit hours: 23

Requirement	Minimum Grade	Credit Hours
Required Courses		
EED 412 Mathematics in Elementary Schools	C	4
RDG 413 Elementary Methods for Literacy Instruction and Assessment	C	4
SPE 321 Classroom and SPE Assessment	C	3
SPE 323 Effective Practices and Behavior Interventions: Supports for Exceptional Students	C	3
SPE 411 Special Education History and Law	C	3
SPE 423 Evidence-Based Practices for Students with Exceptional Needs	C	3
TEL 331 Foundations of Literacy: The Science of Reading	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

This certificate is only open to students majoring in Early Childhood Education, Elementary Education, Elementary Education (Emerging

Multilingual Education), Special Education-Visual Impairment, and Secondary Education undergraduate teacher preparation programs in the Mary Lou Fulton Teachers College. In addition to completing this certificate and a teacher certification program major, students will be required to earn a passing score on the professional knowledge portion of the AEPA/NES exam and a passing score on the subject knowledge portion of the AEPA/NES exam in each area an Arizona teaching credential is sought. Subject knowledge exam waivers may apply. Students should contact the Mary Lou Fulton Teachers College for more information.

Students should have a valid Arizona DPS Identity Verified Print fingerprint clearance card.

A GPA of 2.25 is required for continued good standing. Students should contact the Mary Lou Fulton Teachers College for more information.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BAE/CERT Elementary Education and Secondary Education (TEEEDBAE and TESEDCERT)

Program description:
The Bachelor of Arts in Education program in elementary education prepares prospective educators to work with children in grades K--8 in an educational setting. This program leads to a K--8 elementary education credential in the state of Arizona.

Students receive a firm grounding in academic content with current research and best practices from nationally recognized faculty in their fields of expertise, accompanied by professional experiences. Students also gain experience in integrating technology into teaching practices.

The teacher certification program for elementary education is clinically embedded during the sophomore, junior and senior years. The Mary Lou Fulton College for Teaching and Learning Innovation has developed a team-based approach to teacher preparation, allowing students to participate in professional experiences (internships and student teaching) with a team of peers while receiving guidance and support from ASU faculty members and highly qualified certified teachers. Team-based professional experiences are designed to prepare students to work with mutually supportive colleagues to address the academic and social-emotional needs of learners. Clinically embedded courses and professional experiences provide students with multiple opportunities to apply knowledge learned in coursework to practice in the classroom.

Students complete a series of internships before a semester-long, full-time teaching experience. With the support of a certified mentor teacher and ASU faculty, students are able to apply in learning environments what they learn in coursework.

Graduates are recommended for grades K--8 elementary teacher certification. Those who desire to teach in a public school must pass the appropriate Arizona educator exams (National Evaluation Series or Arizona Educator Proficiency Assessments) to be credentialed to teach in Arizona.

The secondary education certificate program prepares students who wish to teach students enrolled in grades 6--12. While students develop a strong content background, the secondary education certificate program focuses on developing the requisite teaching knowledge and abilities for successfully teaching middle or high school students. To integrate teacher preparation with the academic specialization, Mary Lou Fulton Teachers College collaborates and communicates with academic departments throughout the university. A series of internships, followed by a semester-long, full-time student teaching experience, are required components of this certificate program.

Students who complete this certificate program are issued an institutional recommendation for a secondary certification in Arizona. Students who desire to teach in a public school must also pass the Arizona Educator Professional Knowledge exam (either the National Evaluation Series or the Arizona Educator Proficiency Assessments) to be certified to teach in the state of Arizona.

The secondary education undergraduate certificate is also available for students who have earned a bachelor's degree; this is considered a nondegree graduate pathway.

BAE At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, West Valley, ASU Sync, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, West Valley, ASU Sync

Career opportunities:
There is a demand for highly qualified elementary teachers in Arizona. A high percentage of students from this program receive job offers during their residencies. Many graduates with a degree in elementary education work in:

- charter schools
- nontraditional settings
- private school settings
- public elementary schools

The secondary education certificate prepares students for the high-demand, secure field of education.

Graduates who have combined the certificate in secondary education with their major program of study may become more marketable to employers. They often decide to pursue employment as a middle school teacher, a high school teacher, or an educator at a community-serving organization.

Curriculum - Elementary Education, BAE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts in Education, BAE
College/School: Mary Lou Fulton College for Teaching & Learning In
Plan Code: TEEEDBAE
Minimum credit hours: 120
Upper division minimum credit hours: 51

Requirement	Minimum Grade	Credit Hours
Upper Division Core		
TEL 310 Instructional Design and Planning: Instructional Thought and Action	C	4
TEL 317 Instructional Thought and Action: Learning Environment and Management	C	3
TEL 318 Instructional Thought and Action: Assessment for Learning	C	3
TEL 340 Families, Communities and Cultures: Cultivating Networks of Culturally Responsive Relationships (SOBE)	C	3
TEL 370 Professional Educator Series: Building a Professional Network		1
TEL 371 Professional Educator Series: Educational Policies		1
TEL 331 Foundations of Literacy: The Science of Reading	C	3
TEL 470 Professional Educator Series: Career Growth and Planning		1

Requirement	Minimum Grade	Credit Hours
TEL 487 Student Teaching: Dual Certification OR TEL 488 Student Teaching	C	12
Major Core		
EED 324 Social Studies Methods and the Arts	C	3
EED 411 Science in Elementary Schools	C	3
EED 412 Mathematics in Elementary Schools	C	4
EED 433 Writing in the 21st Century	C	3
MTE 280 Numbers, Operations and Proportional Reasoning for K-8 Teaching	C	3
MTE 311 Geometry, Algebra, Statistics and Probability for K-8 Teaching	C	3
RDG 413 Elementary Methods for Literacy Instruction and Assessment	C	4
College Core		
BLE 220 Foundations of Structured English Immersion (HUAD)	C	3
GCU 113 United States and Arizona Social Studies (AMIT)		3
MAT 114 College Mathematics (MATH)	C	3
SPE 222 Orientation to Education of Exceptional Children (CIVI)	C	3

TEL 111 Exploration of Education (HUAD)	C	3
TEL 203 Collaborating, Planning and Implementing Instruction in Diverse Contexts	C	3
TEL 208 Education in a Changing World (GCSI)	C	3
TEL 212 Cultural Diversity in Education (HUAD)	C	3
TEL 215 Introduction to Child and Adolescent Development (SOBE)	C	3
TEL 171 Professional Educator Series: Excellence in Education		1
TEL 270 Professional Educator Series: Connecting Research to Practice		1
TEL 271 Professional Educator Series: Inclusivity in Practice		1

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

TEL 101 Professional Educator Series: The Student Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Undergraduate students in teacher preparation programs must achieve and maintain a minimum 2.25 cumulative GPA.

Students are encouraged to meet with their academic advisor to discuss options for elective courses, such as certificates, minors or personalized interest areas.

An Arizona DPS IVP fingerprint clearance card is required for any courses that include professional classroom experiences.

Students seeking teacher certification must pass required educator exams. More information can be found on the college's Certification and Compliance website. https://sites.google.com/asu.edu/mlftc-certification-and-compli/home

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Secondary Education, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Mary Lou Fulton College for Teaching & Learning In

Plan Code: TESEDCERT

Minimum credit hours: 32

Upper division minimum credit hours: 26

Requirement	Minimum Grade	Credit Hours
Required Courses		
SPE 222 Orientation to Education of Exceptional Children (CIVI)	C	3
TEL 310 Instructional Design and Planning: Instructional Thought and Action	C	4
TEL 317 Instructional Thought and Action: Learning Environment and Management	C	3
TEL 318 Instructional Thought and Action: Assessment for Learning	C	3
TEL 332 Disciplinary Literacy Methods	C	4
TEL 488 Student Teaching	C	12
Content Methods (select one)	C	3
BIO 480 Methods of Teaching Biology		
ENG 480 Methods of Teaching English: Composition		
ENG 482 Methods of Teaching English: Language		
HST 480 Methods of Teaching History: Classroom Resources		
HST 481 Methods of Teaching History: Community Resources		

Requirement	Minimum Grade	Credit Hours
MTE 485 Methods of Teaching Standards-Based Middle Grades and Early Secondary Mathematics		
MTE 494 Topic: Advanced Methods of Tchng Mthmtics in Scndry Schls		
PPE 450 Physical Education for the Elementary School		
SED 480 Special Methods of Teaching Social Studies		
SED 481 English Teaching Methods for Secondary Schools		
SED 482 Science Teaching Methods for Secondary Schools I		
SED 485 Special Methods of Teaching Social Studies: Community Resources		
SED 494 Topic: Secondary English Language Art Method Comp & Ltrcy		
THE 480 Methods of Teaching Theatre		

Recommended Course

BLE 220 Foundations of Structured English Immersion (3 credit hours) is strongly encouraged for students seeking full certification from the Arizona Department of Education. This course meets the Structured English Immersion (SEI) requirement.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Emergency Management and Homeland Security and Geographic Information Science (PPEMHSBS and LAGISCERT)

Program description:
The School of Public Affairs offers the Bachelor of Science program in emergency management and homeland security. The program provides students with an understanding of the political and social implications of disasters, terrorism and national security. Students gain the skills and knowledge to understand and manage natural and human-made threats and execute complex projects in response.

Coursework covering risk assessment, cross-boundary collaboration and rapid resource mobilization paired with practical skills such as operations continuity management, oversight of emergency operations centers, and techniques and best practices for developing prevention programs provide students with the tools to analyze complex situations and provide decision-making tools important for emerging leaders in the field.

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates possess the knowledge and skills required for entry- and midlevel supervisory and managerial positions in the public sector at the local, state and federal levels, as well as other opportunities in the commercial and nonprofit sectors. Graduates have a significant advantage in the coming hiring boom within the field in response to the upcoming wave of retirees in the public sector and increasing demand for public services, especially at the federal level.

For those who already possess relevant knowledge and experience, the program provides complementary knowledge valuable for promotion in the field.

Graduates also may choose to further their education in graduate programs in emergency management, public policy, law or public administration.

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Emergency Management and Homeland Security, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPEMHSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Core Courses		
PAF 112 Public Service and American Democracy (AMIT)	C	3
PAF 160 How to Survive the 21st Century (SUST)	C	3
PAF 201 Economics and Public Policy (SOBE)	C	3
PAF 261 Hazards and Risk Management	C	3
PAF 301 Applied Statistics (QTRS)	C	3
PAF 302 Public Service Research Methods	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 360 Emergency Management I	C	3
PAF 362 Biosecurity and Biodefense	C	3
PAF 400 Senior Capstone Project	C	3
PAF 424 Emergency Management II	C	3

Requirement	Minimum Grade	Credit Hours
PAF 426 Intelligence Analysis and Homeland Security	C	3
PAF 460 Public Service Ethics	C	3
PAF 461 Homeland Security	C	3
CRJ 412 International Terrorism OR **CRJ 419 Domestic Terrorism**	C	3

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of PAF 400 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	
RTH Elective	
TDM Elective	
Area 2: Criminology and Criminal Justice	
CRJ Elective	

Area 3: Social Work:		
SWU Elective		
Area 4: Public Service and Community Solutions		
CPP Elective		

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Related Area

Social Sciences		
OGL 200 Introduction to Organizational Leadership (CIVI)	C	3
POS 112 Foundations of Democracy (CIVI)		
POS 150 Comparative Government (GCSI)		
PSY 101 Introduction to Psychology (SOBE)		
SOC 101 Introductory Sociology (SOBE)		
Professional Skills	C	3
COM 225 Public Speaking and Presentations (CIVI)		
ENG 216 Persuasive Writing on Public Issues (CIVI)		

ENG 301 Writing for the Professions	

EMHS Electives

Upper Division EMHS Electives

CRJ 412 International Terrorism or CRJ 419 Domestic Terrorism	12
CRJ 417 Cyber Terrorism	
CRJ 455 Police and International Terrorism	
CRJ 456 Etiology of Martyrdom	
PAF 300 Public Management and Administration	
PAF 363 Technology in Emergency Management	
PAF 410 Building Leadership Skills (SOBE)	
PAF 468 Planning and Exercises	
PAF 484 Internship	

Only CRJ 412 or CRJ 419 can be used as an elective, whichever is not used to satisfy the major requirement.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Emergency Management and Homeland Security and Homeland Security (PPEMHSBS and PPHSLCERT)

Program description:
The School of Public Affairs offers the Bachelor of Science program in emergency management and homeland security. The program provides students with an understanding of the political and social implications of disasters, terrorism and national security. Students gain the skills and knowledge to understand and manage natural and human-made threats and execute complex projects in response.

Coursework covering risk assessment, cross-boundary collaboration and rapid resource mobilization paired with practical skills such as operations continuity management, oversight of emergency operations centers, and techniques and best practices for developing prevention programs provide students with the tools to analyze complex situations and provide decision-making tools important for emerging leaders in the field.

The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security.

Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Graduates possess the knowledge and skills required for entry- and midlevel supervisory and managerial positions in the public sector at the local, state and federal levels, as well as other opportunities in the commercial and nonprofit sectors. Graduates have a significant advantage in the coming hiring boom within the field in response to the upcoming wave of retirees in the public sector and increasing demand for public services, especially at the federal level.

For those who already possess relevant knowledge and experience, the program provides complementary knowledge valuable for promotion in the field.

Graduates also may choose to further their education in graduate programs in emergency management, public policy, law or public administration.

Graduates of the homeland security certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local), such as the Department of Homeland Security, U.S. Customs and Border Protection, and local- and state-level law enforcement departments. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Emergency Management and Homeland Security, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPEMHSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Core Courses		
PAF 112 Public Service and American Democracy (AMIT)	C	3
PAF 160 How to Survive the 21st Century (SUST)	C	3
PAF 201 Economics and Public Policy (SOBE)	C	3
PAF 261 Hazards and Risk Management	C	3
PAF 301 Applied Statistics (QTRS)	C	3
PAF 302 Public Service Research Methods	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 360 Emergency Management I	C	3
PAF 362 Biosecurity and Biodefense	C	3
PAF 400 Senior Capstone Project	C	3
PAF 424 Emergency Management II	C	3

Requirement	Minimum Grade	Credit Hours
PAF 426 Intelligence Analysis and Homeland Security	C	3
PAF 460 Public Service Ethics	C	3
PAF 461 Homeland Security	C	3
CRJ 412 International Terrorism OR **CRJ 419 Domestic Terrorism**	C	3

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of PAF 400 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	
RTH Elective	
TDM Elective	
Area 2: Criminology and Criminal Justice	
CRJ Elective	

Area 3: Social Work:		
SWU Elective		
Area 4: Public Service and Community Solutions		
CPP Elective		

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Related Area

Social Sciences		
OGL 200 Introduction to Organizational Leadership (CIVI)	C	3
POS 112 Foundations of Democracy (CIVI)		
POS 150 Comparative Government (GCSI)		
PSY 101 Introduction to Psychology (SOBE)		
SOC 101 Introductory Sociology (SOBE)		
Professional Skills	C	3
COM 225 Public Speaking and Presentations (CIVI)		
ENG 216 Persuasive Writing on Public Issues (CIVI)		

ENG 301 Writing for the Professions	

EMHS Electives

Upper Division EMHS Electives

CRJ 412 International Terrorism or CRJ 419 Domestic Terrorism	12
CRJ 417 Cyber Terrorism	
CRJ 455 Police and International Terrorism	
CRJ 456 Etiology of Martyrdom	
PAF 300 Public Management and Administration	
PAF 363 Technology in Emergency Management	
PAF 410 Building Leadership Skills (SOBE)	
PAF 468 Planning and Exercises	
PAF 484 Internship	

Only CRJ 412 or CRJ 419 can be used as an elective, whichever is not used to satisfy the major requirement.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Homeland Security, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPHSLCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security. Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.		

Required Courses

CRJ 412 International Terrorism	C	3
CRJ 417 Cyber Terrorism	C	3
CRJ 419 Domestic Terrorism	C	3

Elective Courses

Upper Division Electives	C	6
CRJ 394 Special Topics		
CRJ 422 Violence in America		
CRJ 455 Police and International Terrorism		

Requirement	Minimum Grade	Credit Hours
CRJ 456 Etiology of Martyrdom		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 464 Organized Crime		
CRJ 494 Special Topics		
PAF 426 Intelligence Analysis and Homeland Security		
PAF 461 Homeland Security		

Only approved homeland security-related topics may be taken from Special Topics courses (CRJ 394 and CRJ 494).

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Bachelor of Science in criminology and criminal justice majors who are also pursuing the Homeland Security certificate may not use CRJ 412, CRJ 417, CRJ 419, CRJ 422, CRJ 455, CRJ 456, CRJ 462, CRJ 463, and CRJ 464 toward both their major and the certificate. These courses will only be used toward the certificate requirements.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT English (Linguistics) and Teaching English to Speakers of Other Languages (TESOL) (LAENGNBA and LATESLCERT)

Program description:
The Bachelor of Arts in English with a concentration in linguistics examines the history and structure of language. Students have the opportunity to study with distinguished faculty members actively engaged in scholarly research, and to gain practical experience through internships that prepare them for an ever-expanding variety of careers. The program also prepares students to continue their studies through programs such as ASU's accelerated Master of Teaching English to Speakers of Other Languages and accelerated Master of Arts in linguistics and applied linguistics.

The teaching English to speakers of other languages certificate program consists of key courses that provide students with the practical skills and confidence necessary to teach English as a second or other language anywhere in the world. This certificate can be added to any degree program and includes a supervised internship to gain valuable hands-on experience before graduation.

This certificate does not certify students to teach in Arizona public schools (K--12).

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Degree programs in English prepare students for graduate studies in a number of programs, including English, creative writing, education, law and business. They also lead to a variety of careers in diverse fields. Employers seek those with strong writing and communication skills and the ability to think critically. Some of the most common professions for English majors are in the fields of:

- business
- journalism
- law
- nonprofit service
- publishing

Graduates often find roles where they spend time:

- developing web content
- editing
- managing public relations
- teaching
- writing professional and technical content

The TESOL certificate is useful for graduates who are interested in careers in this increasingly important field. It also serves as excellent preparation for students who wish to pursue graduate studies in the Master of Teaching English to Speakers of Other Languages program at ASU or in a similar program at another institution.

Students who combine this TESOL certificate with their major program of study may become more marketable to employers.

Students who complete this undergraduate certificate often decide to pursue employment in teaching abroad. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - English (Linguistics), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAENGNBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in Class Search.		
Check: Minimum 2.00 Major GPA		
Core		
ENG 110 Approaching Big Problems	C	3
ENG 300 Your Degree in the World	C	1
Linguistics Core		
ENG 213 Introduction to the Study of Language (SOBE) OR **SLC 201 Introduction to Linguistics (SOBE)**	C	3
ENG 312 English in its Social Setting (SOBE)	C	3

Requirement	Minimum Grade	Credit Hours
ENG 313 Phonology and Morphology	C	3
ENG 314 Modern Grammar	C	3
ENG 403 Semantics OR **ENG 404 Studies in Second Language Acquisition** OR **ENG 414 Studies in Linguistics**	C	6
ENG 413 History of English Language	C	3

Major Electives

ENG Elective	C	3
Upper Division **ENG Elective** OR **ENG 484 Internship**	C	3

Major Language Requirement

Language Requirement	C	3

Course taught in a language other than English beyond the 202 level OR introductory course in a third language (not English) OR language course approved by academic advising.

ARB 311 Advanced Arabic Skills I

ARB 315 Advanced Arabic for Heritage Speakers

CHI 301 Third-Year Chinese I

ENG 530 Old English

Requirement	Minimum Grade	Credit Hours
FRE 311 Oral and Written Expression I		
HEB 313 Advanced Modern Hebrew I		
HEB 314 Advanced Modern Hebrew II		
ITA 311 Speak Italy: Language, People, Culture		
JPN 301 Third-Year Japanese I		
KOR 313 Third-Year Korean I		
RUS 311 Russian Society I		
RUS 312 Russian Society II		
SPA 313 Spanish Conversation and Composition		
SPA 315 Advanced Spanish I for Bilinguals (SOBE)		
VTN 321 Advanced Vietnamese and Literature I		

The College Requirements

Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a Second Language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16
Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH)	C	3

Recommended: **MAT 114**

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree will enroll in LIA 101. Students enrolled in an online degree will enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students are encouraged to explore internship opportunities. Learn more at https://english.asu.edu/students/internships.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. More information is available at: https://silc.asu.edu/student-life/academic-advising/language-testing.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Teaching English to Speakers of Other Languages (TESOL), Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LATESLCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate program in teaching English as a second language requires 18 credit hours, of which 12 must be completed at the upper-division level. At least six credit hours must be completed from courses offered by The College of Liberal Arts and Sciences. Each course must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Core

ENG 213 Introduction to the Study of Language (SOBE)	C	3
ENG 484 Topic: TESOL Internship	C	3

Theory/Methods

ENG 404 Studies in Second Language Acquisition ENG 404 is repeatable for credit and must be completed twice.	C	6

Linguistics Electives

Upper Division Group 1	C	3

Requirement	Minimum Grade	Credit Hours
ENG 403 Semantics		
ENG 404 Studies in Second Language Acquisition		
ENG 414 Studies in Linguistics		
Group 2		
ENG 214 English Grammar and Usage		
ENG 312 English in its Social Setting (SOBE)		
ENG 313 Phonology and Morphology	C	3
ENG 314 Modern Grammar		
ENG 413 History of English Language		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT English (Literature) and Writing (LAENGTBA and LSWRTCERT)

Program description:
The Bachelor of Arts program in English with a concentration in literature guides students from the earliest texts and cultures in English to contemporary expressions on paper, online and in the world. In learning to read critically, analyze narratives and understand how stories work to define the human experience, students can consider problems and find solutions while developing written and oral communication skills.

Students have the opportunity to engage with internationally renowned faculty in exploring literature, critical theories and methods from around the world. Students choose from a broad array of courses to further explore subjects such as race and ethnicity, gender and sexuality, and literary histories and traditions.

Students gain practical experience through research, writing and internships that prepare them for an ever-expanding variety of careers as well as for continuing their studies in graduate and professional programs.

In the writing certificate program offered by the College of Integrative Sciences and Arts, students write for specific purposes and consider how writing is used in careers.

In the core course, students cultivate visual and multimodal literacies, enabling them to respond to new writing situations with flexibility, creativity and resourcefulness. Students complete two electives in a focus area of their choice, such as professional writing, food and travel, science and the environment, mentoring writers, or another area of writing in support of their interests. An internship provides opportunities for students to gain practical, hands-on skills. For example, they might serve as writing mentors in the Writers' Studio or be involved with publishing a journal. Finally, in the program's capstone course, students assemble a portfolio of their best work, design and carry out a new applied project, and connect what they have learned in the program to potential careers.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic

Career opportunities:
Degree programs in English prepare students for graduate studies in a number of programs, including English, creative writing, education, law and business. They also lead to a variety of careers in diverse fields. Employers seek those with strong writing, communication and critical thinking skills. Some of the most common professions for English majors are in the fields of:

- business
- journalism
- law
- media and public relations
- nonprofit service
- publishing

Graduates often find roles where they spend time:

- developing web content
- editing
- managing public relations
- teaching
- writing professional and technical content

Students and professionals can advance their career options with an undergraduate writing certificate. Graduates who have combined the certificate in writing with their major program of study may be more marketable to employers.

Curriculum - English (Literature), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAENGTBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in Class Search.		
Check: Minimum 2.00 Major GPA		
English core		
ENG 110 Approaching Big Problems	C	3
ENG 300 Your Degree in the World	C	1
Required courses		
ENG 206 Introduction to Literary Studies (HUAD)	C	3
ENG 221 Survey of English Literature I (HUAD) OR **ENG 241 Literatures of the United States to 1860 (HUAD)**	C	3

Requirement	Minimum Grade	Credit Hours
ENG 222 Survey of English Literature II (HUAD) OR **ENG 242 Literatures of the United States, 1860 to Present (HUAD)**	C	3
ENG 304 Critical Theories and Methods	C	3
ENG 332 Studies in Race and Ethnicity in Literature and Culture OR **ENG 384 Studies in Gender and Sexuality in Literature and Culture**	C	3
ENG 349 Global Literary Studies OR **ENG 350 Studies in Literary Histories and Traditions**	C	3
ENG 444 Topics for Interdisciplinary Study of Literature and Culture	C	3
ENG 491 Topics for Advanced Research	C	3
Major Electives		
Upper Division **ENG Elective** OR **ENG 484 Internship**	C	3
ENG Elective	C	3
The College Requirements		
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a Second Language. Proficiency is demonstrated by completion of a language course at the	C	16

intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.		
Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree will enroll in LIA 101. Students enrolled in an online degree will enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit

hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students are encouraged to explore internship opportunities. Learn more at: https://english.asu.edu/students/internships.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. More information is available at: https://silc.asu.edu/student-life/academic-advising/language-testing.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Writing, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LSWRTCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
This certificate requires 15 credit hours. Students complete four upper-division writing courses (12 credit hours). At least three of the courses must be offered by the College of Integrative Sciences and Arts. In addition, students must complete a capstone course (three credit hours) at the end of their program. A grade of "C" (2.00 on a 4.00 scale) or better is required in all courses.		

Core Requirements

ENG 446 Visual Narratives (HUAD)	C	3
ENG 484 Internship	C	3

Writing Focus Electives

Upper Division Writing Focus Electives	C	6
Suggested focus pairings are below. Students may work in consultation with their advisor to develop a two-course focus area in support of their professional or personal interests in writing.		

Food and Travel Writing

Requirement	Minimum Grade	Credit Hours
ENG 379 Travel Writing		
ENG 394 Topic: Writing About Food		
Mentoring Writers		
ENG 480 Methods of Teaching English: Composition		
ENG 482 Methods of Teaching English: Language		
Professional Writing		
ENG 301 Writing for the Professions		
ENG 311 Persuasive Writing (CIVI)		
Writing about Science and the Environment		
ENG 378 Environmental Creative Nonfiction (HUAD)		
HST 482 Writing and the History of Science, Ideas and Technology		

Capstone

ENG 498 Pro-Seminar Students must complete at least three hours of ENG 498 Pro-Seminar at the end of their program. Students will work closely with faculty on their writing portfolio and applied project.	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT English (Secondary Education) and Teaching English to Speakers of Other Languages (TESOL) (LAENGSEBA and LATESLCERT)

Program description:
The Bachelor of Arts program in English with a concentration in secondary education includes rigorous content in literature, composition, linguistics and secondary teaching pedagogy. This program provides extensive preparation for meeting the needs of all student populations, including attention to levels of academic performance and cultural and linguistic diversity.

Students finish the program with Arizona Department of Education certification for middle and high school English language arts. Both a fingerprint clearance and a background check are required in the second year of the program.

The teaching English to speakers of other languages certificate program consists of key courses that provide students with the practical skills and confidence necessary to teach English as a second or other language anywhere in the world. This certificate can be added to any degree program and includes a supervised internship to gain valuable hands-on experience before graduation.

This certificate does not certify students to teach in Arizona public schools (K--12).

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Students graduating with a BA in English with a concentration in secondary education have tremendous opportunities for employment. Certified teachers continue to be in high demand in Arizona, and Arizona State University provides more of these teachers than any other institution of higher education.

After student teaching in school districts in the greater Phoenix area or within one of the 22 Native American nations in the state, graduates are often hired to teach in the same school where they completed their internship.

The TESOL certificate is useful for graduates who are interested in careers in this increasingly important field. It also serves as excellent preparation for students who wish to pursue graduate studies in the Master of Teaching English to Speakers of Other Languages program at ASU or in a similar program at another institution.

Students who combine this TESOL certificate with their major program of study may become more marketable to employers.

Students who complete this undergraduate certificate often decide to pursue employment in teaching abroad. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - English (Secondary Education), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAENGSEBA
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in Class Search.

Core

ENG 110 Approaching Big Problems	C	3
ENG 213 Introduction to the Study of Language (SOBE)	C	3
ENG 221 Survey of English Literature I (HUAD)	C	3
ENG 222 Survey of English Literature II (HUAD)	C	3
ENG 241 Literatures of the United States to 1860 (HUAD)	C	3
ENG 242 Literatures of the United States, 1860 to Present (HUAD)	C	3
ENG 300 Your Degree in the World	C	1

Requirement	Minimum Grade	Credit Hours
ENG 312 English in its Social Setting (SOBE) OR ENG 314 Modern Grammar	C	3
ENG 321 Shakespeare (HUAD) OR ENG 421 Studies in Shakespeare (HUAD) OR ENG 422 Special Topics in Shakespeare	C	3
ENG 471 Literature for Young Adults (HUAD)	C	3
ENG 486 Teaching Text	C	3
Ethnic or Women's Literature ENG 332 Studies in Race and Ethnicity in Literature and Culture ENG 333 American Ethnic Literature ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD) ENG 354 African American Literature: Harlem Renaissance to the Present (HUAD) ENG 359 Indigenous American Literature ENG 363 Transborder Mexican and Chicano/a Literature of Southwest North America (HUAD) ENG 364 Women and Literature (HUAD) ENG 384 Studies in Gender and Sexuality in Literature and Culture	C	3

Secondary Education Courses for Concentration

Requirement	Minimum Grade	Credit Hours
BLE 220 Foundations of Structured English Immersion (HUAD)	C	3
EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)	C	3
ENG 480 Methods of Teaching English: Composition	C	3
ENG 482 Methods of Teaching English: Language	C	3
SPE 222 Orientation to Education of Exceptional Children (CIVI)	C	3
TEL 310 Instructional Design and Planning: Instructional Thought and Action While enrolled in TEL 310, you will be paired with a mentor teacher in a 6-12th grade classroom. You will need to complete 45 hours over the semester. Reliable transportation is needed to get to school sites.	C	4
TEL 317 Instructional Thought and Action: Learning Environment and Management	C	3
TEL 318 Instructional Thought and Action: Assessment for Learning	C	3
TEL 332 Disciplinary Literacy Methods While enrolled in TEL 332, you will be paired with a mentor teacher in a 6-12th grade classroom. You will need to complete 60 hours over the semester. Reliable transportation is needed to get to school sites.	C	4
TEL 366 Professional Experience Internship While enrolled in TEL 366, you will be paired with a mentor teacher in a 6-12th grade classroom. You will need to complete	C	1

Requirement	Minimum Grade	Credit Hours
45 hours over the semester. Reliable transportation is needed to get to school sites.		
TEL 488 Student Teaching All degree requirements must be completed prior to student teaching. Only one course will be approved to take concurrently with student teaching.	C	12
Students seeking teacher certification must pass required educator exams. Please speak with your Teachers College advisor to plan appropriately.		

The College Requirements

Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a Second Language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16
Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
ASU 101-LA The ASU Experience OR **LIA 101 Student Success in The College of Liberal**		1

Arts and Sciences
Students enrolled in a campus immersion degree will enroll in LIA 101. Students enrolled in an online degree will enroll in ASU 101-LA.

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. More information is available at: https://silc.asu.edu/student-life/academic-advising/language-testing.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Teaching English to Speakers of Other Languages (TESOL), Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LATESLCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate program in teaching English as a second language requires 18 credit hours, of which 12 must be completed at the upper-division level. At least six credit hours must be completed from courses offered by The College of Liberal Arts and Sciences. Each course must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		
Core		
ENG 213 Introduction to the Study of Language (SOBE)	C	3
ENG 484 Topic: TESOL Internship	C	3
Theory/Methods		
ENG 404 Studies in Second Language Acquisition ENG 404 is repeatable for credit and must be completed twice.	C	6
Linguistics Electives		
Upper Division Group 1	C	3

Requirement	Minimum Grade	Credit Hours
ENG 403 Semantics		
ENG 404 Studies in Second Language Acquisition		
ENG 414 Studies in Linguistics		
Group 2		
ENG 214 English Grammar and Usage		
ENG 312 English in its Social Setting (SOBE)		
ENG 313 Phonology and Morphology	C	3
ENG 314 Modern Grammar		
ENG 413 History of English Language		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSE/CERT Environmental Engineering and Energy and Sustainability (ESEVEBSE and SUESUCERT)

Program description:
The Bachelor of Science in Engineering program in environmental engineering educates students to become tomorrow's engineers who solve complex environmental problems and design systems at the human, urban and planetary scales.

Environmental engineers are actively involved in air quality monitoring and air pollution control technology; analysis of the fate and transport of pollutants; application of sustainable design principles; design and operation of water and wastewater treatment systems; design of hazardous waste containment systems; design of solid waste management systems; remediation of contaminated soil, sediment and water; and water quality, water conservation and water reuse.

In recognition of the interdisciplinary nature of environmental engineering challenges, the degree program incorporates courses from the humanities, social sciences, natural sciences, mathematics and engineering. Environmental engineering courses build on strong foundations in chemistry, microbiology, geology, physics and mathematics. Courses cover fundamental engineering concepts applied to environmental processes and environmental engineering design. Applied learning experiences, including a required internship or research experience and a capstone design course, are also part of the program.

Accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Environmental Engineering Program Criteria.

The transdisciplinary certificate program in energy and sustainability examines current energy systems and explores what will be required to transition to a sustainable energy future.

In a world increasingly focused on climate change, renewable resources and sustainable practices, this program equips students to tackle pressing environmental challenges. They gain expertise in areas such as solar and wind energy, urban sustainability and resource management. With the ability to analyze complex energy systems and policies, certificate holders become invaluable assets in driving sustainability initiatives forward.

Students begin with an overview of how energy affects people's lives, the basic science and methods of energy production, and a full overview of energy policy options. Students may tailor the certificate around their specific interests in energy with a variety of electives representing a broad array of academic disciplines. Students broaden their energy knowledge by taking courses outside their primary area of study.

This program helps students enhance their understanding of the technology and infrastructure for generating, distributing and using energy; the associated sustainability issues; and the social and policy dimensions of energy systems.

BSE At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: College of Global Futures
Location: Downtown Phoenix, Polytechnic, Tempe

Career opportunities:
Graduates from the environmental engineering program have career opportunities in the private and public sectors.

Opportunities exist in the private sector in the consulting and manufacturing industries. The consulting industry is growing as greater environmental awareness and emerging novel pollutants require continual refinement of regulations and environmental system design standards, and the manufacturing industry employs environmental engineers to aid in environmental compliance and eco-efficiency.

In the public sector, municipalities and regulatory agencies require a knowledgeable workforce that understands how public policy can improve human health and ecosystem services through environmental engineering processes.

An understanding of energy is increasingly important for jobs related to climate change, environmental quality, urban

sustainability and sustainable development. A certificate in energy and sustainability serves as a strategic career enhancement to any major degree program. This program provides a distinct advantage, positioning graduates competitively for a variety of energy-related job opportunities across sectors.

Government agencies, utilities, nonprofit organizations and private businesses all require professionals with the specialized knowledge and transdisciplinary skills acquired through this program. The combination of skills and knowledge graduates have attained makes them indispensable in shaping a greener and more sustainable future.

Curriculum - Environmental Engineering, BSE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Engineering, BSE
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESEVEBSE
Minimum credit hours: 120
Upper division minimum credit hours: 49

Requirement	Minimum Grade	Credit Hours
Environmental Upper Division		
CEE 300 Engineering Business Practice		3
CEE 341 Fluid Mechanics for Civil Engineers		3
CEE 384 Numerical Methods for Engineers (QTRS)		3
EVE 302 Environmental Engineering Fundamentals: Physical and Chemical Processes		3
EVE 303 Environmental Engineering Fundamentals: Microbiological Processes		3
EVE 304 Environmental Engineering Processes Lab		3
EVE 314 Data Science for Environmental and Civil Engineers		3
EVE 354 Materials in the Environment		4
EVE 465 Unit Operations in Wastewater Treatment		3
EVE 487 Integrated Civil, Construction, and Environmental Engineering Design I		2

Requirement	Minimum Grade	Credit Hours
EVE 488 Integrated Civil, Construction, and Environmental Engineering Design II		2
EVE 452 Environmental Investigation and Remediation Design		3
EVE 484 Internship		1
EVE 498 Pro-Seminar		1

Major Electives

CEE 440 Hydrology		3
CEE 441 Water Resources Engineering OR ERM 401 Hazardous Waste Management OR CHE 469 Air Quality Engineering OR EVE 411 Sustainable Energy, Materials and Technology		3
EVE 461 Unit Operations in Drinking Water Treatment		3
CEE 467 Environmental Microbiology		3
Environmental Elective		3

ASB 326 Human Impacts on Ancient Environments (SUST)

ASB 370 Ethics of Eating (SUST) or BIO 324 Environmental Ethics (SUST) or CEE 351 Geotechnical Engineering or CEE 372 Transportation Engineering or CEE 466 Urban Water System Design or CEE 470 Sustainable Environmental

Requirement	Minimum Grade	Credit Hours
Biotechnologies or CEE 485 Sustainable Civil and Environmental Systems Engineering or CHE 469 Air Quality Engineering or CHM 231 Elementary Organic Chemistry (SCIT) or CHM 233 General Organic Chemistry I or CHM 234 General Organic Chemistry II or CHM 240 Mathematical Methods in Chemistry (QTRS) or CHM 302 Environmental Chemistry or CHM 325 Analytical Chemistry or CHM 327 Instrumental Analysis or ENG 334 The American Southwest in Literature and Film (HUAD) or ENG 363 Transborder Mexican and Chicano/a Literature of Southwest North America (HUAD) or ENG 367 Environmental Issues in Literature and Film or ENG 371 Rhetoric of the Environmental Movement or ENG 378 Environmental Creative Nonfiction (HUAD) or ENG 468 Environmental Literary Criticism (HUAD) or EVE 411 Sustainable Energy, Materials and Technology or EVE 492 Honors Directed Study or EVE 493 Honors Thesis or EVE 494 Special Topics or EVE 498 Pro-Seminar or EVE 499 Individualized Instruction or FSE 301 Entrepreneurship and Value Creation or HST 342 U.S. West 20th Century or HST 345 Environmental History (SUST) or PUP 301 Introduction to Urban Planning or PUP 442 Environmental Planning or PUP 485 International Field Studies		

Environmental Engineering Major GPA

Requirement	Minimum Grade	Credit Hours
Check: Minimum 2.0 Major GPA		

Interdisciplinary Requirements

GLG 101 Introduction to Geology I (Physical) (SCIT) OR **GLG 108 Water Planet (SCIT)** OR **GLG 110 Dangerous World (SCIT)**		3
CHM 113 General Chemistry I (SCIT)		4
CHM 116 General Chemistry II (SCIT)		4
MAT 242 Elementary Linear Algebra	C	2
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH)	C	3
MAT 275 Modern Differential Equations (MATH)	C	3
PHY 121 University Physics I: Mechanics (SCIT)	C	3
PHY 122 University Physics Laboratory I (SCIT)	C	1

Environmental Lower Division

CEE 181 Technological, Social, and Sustainable Systems (SUST)		3
EVE 290 Statistics and Probability for Environmental Data (QTRS)		3

EVE 214 Environmental Engineering Mechanics	C	3
EVE 261 Introduction to Environmental Processes	C	3
FSE 100 Introduction to Engineering	C	2

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CEE The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Energy and Sustainability, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Global Futures

Plan Code: SUESUCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Required Core Courses		
SOS 171 The Thread of Energy (SUST)	C	3
SOS 314 Basic Energy Science or SOS 324 Sustainable Energy Technology and Systems	C	3
SOS 315 Energy Policy	C	3
Upper Division Energy Elective Courses		
Upper Division Energy Elective Courses	C	6
BME 494 Topic: Bioenergy and Microbial Biotechnology		
CEE 361 Introduction to Environmental Engineering		
CHE 469 Air Quality Engineering		
CHE 473 Fuel Cells and Biofuel Cells		
CHE 478 Biomass Energy Conversion Technology		
CHM 494 Topic: Solar Energy Conversion		
CON 448 Sustainable Construction		

Requirement	Minimum Grade	Credit Hours
EEE 465 Photovoltaic Energy Conversion		
EEE 471 Power System Analysis		
EEE 498 Topic: Lithium-Ion Battery Technlgy Automtve Electrifictn		
EGR 476 Microgrid Design and Operation		
EVE 354 Materials in the Environment		
GCU 364 Energy in the Global Arena		
GCU 442 Geographical Analysis of Transportation		
GLG 304 Minerals, Energy, and Society		
JUS 332 Politics of Energy Policy and Justice		
JUS 444 Environment and Justice		
MAE 494 Topic: Energy Efficiency		
PHY 498 Topic: The Science of Sustainable Energy		
PUP 430 Transportation Planning and the Environment		
SOS 323 Sustainable Urban Dynamics		
SOS 373 Minerals, Energy, and Society		
STS 317 Science, Technology, and Global Engagement		
STS 332 Global Issues in Science and Technology		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Some energy elective courses are more technical in nature, which may require additional math and science knowledge or prerequisites.

494 and 498 courses must be taken with the specific topic title indicated above.

Energy elective courses are not limited to courses from this list only. Other courses on energy may be offered (special topics, etc.). Students may request to have those approved as an elective for this certificate by submitting a College of Global Futures Undergraduate Standards petition: https://students.asu.edu/College_Standards_Petitions. Completed petitions may be submitted directly to cgfadvising@asu.edu.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Family and Human Development and Working with Military Families (LAFASBS and LAWWMFCERT)

Program description:
The Bachelor of Science program in family and human development focuses on helping children and families thrive in the modern world by encouraging healthy relationships and tackling contemporary societal issues.

Students study the stages of human development throughout the life span and gain a deep understanding of the complex dynamics of human relationships in families, workplaces and communities. They also become proficient in written communication, research methodology and data analysis.

Elective courses provide a specialized skill set in areas such as infancy, adolescence and aging. Students may also participate in learning experiences outside the classroom, such as working in the Child Development Lab, working as a research assistant and completing an internship.

Students in the working with military families certificate program complete academic coursework to enhance their knowledge of human development, marital and familial relationships, and family dynamics in the context of military culture.

Students learn about the complex challenges that military personnel, military families and veterans face, such as dealing with multiple deployments, war, combat, trauma and death. They study normative family processes, stress and coping with military culture.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates with a BS degree in family and human development are prepared for a rewarding career in:

- business
- child and family advocacy
- education
- government
- social services

This program also provides excellent preparation for future graduate work in:

- counseling
- health-related professions
- law
- social work

Graduates may be more marketable to employers and advance their career options when they complement their major with this undergraduate certificate specialization in working with military families.

Graduates understand and appreciate the similarities and differences between civilian and military culture, making them more inclusive coworkers, managers and community members with regard to the military community. Students who complete this undergraduate certificate often decide to pursue employment in health care, counseling, social work, sociology or education.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Family and Human Development, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAFASBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Major Core

CDE 232 Human Development (SOBE)	C	3
FAS 101 Personal Growth and Relationships (SOBE)	C	3
FAS 201 Careers in Family and Human Development	C	1
FAS 290 Introduction to Social Science Research	C	3
FAS 331 Modern Family Relationships (SOBE)	C	3
FAS 370 Family Ethnic and Cultural Diversity (CIVI)	C	3

Statistics

Requirement	Minimum Grade	Credit Hours
SOC 390 Social Statistics I (QTRS) OR **STP 226 Elements of Statistics (QTRS)**	C	3
Developmental Course		
CDE 312 Adolescence (SOBE) OR **CDE 414 The School-Aged Child: Development in the Elementary Years** OR **CDE 418 Aging and the Life Course (SOBE)** OR **CDE 430 Infant and Toddler Development in the Family (SOBE)**	C	3
Capstone		
CDE 450 Childhood Disorders and Family Functioning OR **FAS 361 Applied Research Methods (SOBE)** OR **FAS 435 Advanced Topics in Modern Family Relationships (SOBE)**	C	3
Major Electives		
Upper Division **CDE Elective** OR Upper Division **FAS Elective** A maximum of six credits combined of CDE 484, CDE 499, FAS 390, FAS 484 and FAS 499 may apply to major electives.	C	9
CDE Elective OR **FAS Elective**	C	3
The College Requirements		

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

Related Area Subjects	C	9
CAP Elective		
COM Elective		
DST Elective		
ECS Elective		
NLM Elective		
OGL Elective		
PRM Elective		

PSY Elective

RTH Elective

SHS Elective

SOC Elective

SPE Elective

SWU Elective

Complete 9 credits from the related area subjects list.

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

An internship is recommended but not required.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Working with Military Families, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAWWMFCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires 18 credit hours. At least 12 credit hours must be completed at the upper-division level and a grade of "C" (2.00 on a 4.00 scale) or higher is required in all courses.		

Required Courses

CDE 232 Human Development (SOBE)	C	3
FAS 101 Personal Growth and Relationships (SOBE)	C	3
FAS 331 Modern Family Relationships (SOBE)	C	3
FAS 410 Military Family Systems in a Democracy	C	3
SOC 415 Families and Social Policy	C	3

Internship Requirement

FAS 484 Internship Students are required to complete a capstone internship project that includes a field work experience, a written integrative paper and an oral presentation.	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BFA/CERT Film and Media Production and Sales and Marketing Essentials (HIFMPBFA and BASMECERT)

Program description:
In the Bachelor of Fine Arts program in film and media production at The Sidney Poitier New American Film School, students are empowered with the critical thinking skills to navigate new, complex and changing environments in the film industry. With a foundation in ethical and collaborative practices and project-based learning using state-of-the art technology, this inclusive, high-impact film school empowers the next generation of cinematic storytellers with programs that emphasize the interdisciplinarity of filmmaking, the evolving landscape of the screen, and the journey of a story from idea to intended audience.

This degree program takes aspiring filmmakers beyond theory and teaches them how to communicate a vision and manage resources to take a story from page to screen.

The BFA program in film and media production provides students with a deep dive into film production, highly encouraging them to choose two areas of focus within production or postproduction. Students can choose to complete the general degree or pursue focus areas in screenwriting, directing, cinematography, postproduction and sound.

Designed for undergraduate nonbusiness majors, the certificate program in sales and marketing essentials offers a set of courses that cover indispensable marketing knowledge in a wide variety of marketing application domains.

Students are required to enroll in two fundamental courses in marketing and choose three additional courses from a larger set (services marketing, business marketing, global marketing, sports business and advertising) to tailor the certificate to their particular interests.

While some courses are offered in a face-to-face setting, the entire certificate is offered via iCourse for flexibility and convenience.

BFA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe, ASU at Los Angeles
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe

Career opportunities:
Graduates are equipped with the technical know-how and critical thinking skills to thrive in a quickly changing media industry and to pioneer new media careers that require advanced production skills and a strong creative voice.

Graduates are prepared to pursue a wide array of skilled professions, including:

- cinematographer or director of photography
- editor
- film, television and documentary writer or director
- producer
- sound designer or sound recording engineer
- visual effects artist

Graduates who have combined the certificate in sales and marketing essentials with their major program of study may become more marketable to employers, and they often decide to pursue employment in sales or marketing.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Film and Media Production, BFA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Fine Arts, BFA
College/School: Herberger Institute for Design and the Arts
Plan Code: HIFMPBFA
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours
Major Courses		
FMP 180 Principles of Production Technology	C	3
FMP 205 Introduction to Post-Production	C	2
FMP 210 Principles of Creative Producing	C	3
FMP 245 Concepts of Cinematography	C	2
FMP 261 Principles of Screenwriting	C	3
FMP 280 Introduction to Film and Media Production	C	3
FMP 285 Portfolio Preparation and Review I	C	1
FMP 288 Understanding Ethics in Filmmaking	C	3
FMP 300 Short Film Production	C	3
FMP 360 The Filmmaker's Voice	C	3
FMP 380 Film Practicum OR **FMP 484 Internship**	C	1

Requirement	Minimum Grade	Credit Hours
FMP 385 Development of an Artist's Portfolio	C	2
FMP 388 Application of Ethical Filmmaking	C	3
FMP 398 Capstone I: Development	C	3
FMP 480 Capstone II: Production	C	3
FMP 481 Capstone III: Post-Production	C	3
FMP 485 Portfolio Preparation and Review II	C	1
FMS 100 Introduction to Film and Media Studies (HUAD)	C	3
THF 160 Introduction to Storytelling (HUAD)	C	3
Upper Division Entertainment Industry Elective **FMP 330 Professional and Technical Writing for Film/TV Industry** **FMP 335 Careers in Film and Media Industry** **FMP 411 Welcome to Hollywood** **FMP 417 Business and Legal Practices in Entertainment**	C	3
Film Elective Film Electives may be taken from any of the course lists below. Choose electives that will build skills for your desired career path. Cinematography Electives: **FMP 345 Cinematography I**	C	6

Requirement	Minimum Grade	Credit Hours
FMP 445 Cinematography II		
FMP 494 Topic: Advanced Camera Workshop		
Directing Electives:		
FMP 294 Topic: Directing for Television		
FMP 318 Directing for Film and Media I		
FMP 350 Directing for Documentary Media		
FMP 394 Topic: Acting and Directing in the Sound Studio		
FMP 418 Directing for Film and Media II		
FMP 494 Topic: Directing the Personal Documentary		
FMP 494 Topic: Film Director: Actor Collaboration Lab		
FMP 494 Topic: Performing in the Virtual		
THF 101 Acting Introduction		
Entertainment Industry Electives:		
FMP 330 Professional and Technical Writing for Film/TV Industry		
FMP 335 Careers in Film and Media Industry		
FMP 411 Welcome to Hollywood		
FMP 417 Business and Legal Practices in Entertainment		
General Film Electives:		

Requirement	Minimum Grade	Credit Hours
FMP 403 Independent Film (HUAD)		
FMP 405 Topic: Arnaz to Rodriguez: The Evolution of Storytelling		
FMP 405 Topic: Great Comedy Films		
FMP 405 Topic: Hitchcock		
FMP 405 Topic: Hollywood Rebels		
FMP 405 Topic: Sidney Poitier		
FMP 405 Topic: Spielberg/Lucas		
FMP 405 Topic: The Oscars		
FMP 405 Topic: Social Movements in Black Cinema		
Producing Electives:		
FMP 370 Producing for Film and Media		
FMP 475 Producing Series		
Production Electives:		
FMP 294 Topic: Youth Media Production		
FMP 394 Topic: Intermediate Documentary Production		
FMP 400 Advanced Short Film Production		
FMP 494 Topic: Commercial Media Production		
FMP 494 Topic: Video Production Lab		
Post-Production Electives:		

Requirement	Minimum Grade	Credit Hours
FMP 215 Beginning Post-Production for Film and Television: Adobe Premiere Pro		
FMP 225 Principles of Visual Effects Compositing		
FMP 320 Film and Media Post-Production I		
FMP 325 Intermediate Visual Effects Compositing		
FMP 420 Film and Media Post-Production II		
FMP 494 Topic: Advanced VFX		
Screenwriting Electives:		
FMP 361 Writing the Short Film		
FMP 365 Developing a Series		
FMP 460 Feature Writing Workshop I		
FMP 462 Feature Writing Workshop II		
FMP 465 Series Writers Workshop		
Sound Electives:		
FMP 194 Topic: Sound Aesthetics in Film and Media		
FMP 294 Topic: Production Sound: On Set Audio		
FMP 294 Topic: Recordings in Post (ADR, Foley and Field)		
FMP 294 Topic: Pro Tools: Production		
FMP 315 Sound Design for Film and Media I		
FMP 394 Topic: Pro Tools: Mixing Techniques		

Requirement	Minimum Grade	Credit Hours
FMP 415 Sound Design for Film and Media II		
FMP 494 Topic: Sound Mixing for Film and Media		
Upper Division Film Elective	C	21
Film Electives may be taken from any of the course lists below. Choose electives that will build skills for your desired career path.		
Cinematography Electives:		
FMP 345 Cinematography I		
FMP 445 Cinematography II		
FMP 494 Topic: Advanced Camera Workshop		
Directing Electives:		
FMP 318 Directing for Film and Media I		
FMP 350 Directing for Documentary Media		
FMP 394 Topic: Acting and Directing in the Sound Studio		
FMP 418 Directing for Film and Media II		
FMP 494 Topic: Directing the Personal Documentary		
FMP 494 Topic: Film Director: Actor Collaboration Lab		
FMP 494 Topic: Performing in the Virtual		
Entertainment Industry Electives:		

Requirement	Minimum Grade	Credit Hours
FMP 330 Professional and Technical Writing for Film/TV Industry		
FMP 335 Careers in Film and Media Industry		
FMP 411 Welcome to Hollywood		
FMP 417 Business and Legal Practices in Entertainment		
General Film Electives:		
FMP 403 Independent Film (HUAD)		
FMP 405 Topic: Arnaz to Rodriguez: The Evolution of Storytelling		
FMP 405 Topic: Great Comedy Films		
FMP 405 Topic: Hitchcock		
FMP 405 Topic: Hollywood Rebels		
FMP 405 Topic: Sidney Poitier		
FMP 405 Topic: Spielberg/Lucas		
FMP 405 Topic: The Oscars		
FMP 405 Topic: Social Movements in Black Cinema		
Producing Electives:		
FMP 370 Producing for Film and Media		
FMP 475 Producing Series		
Production Electives:		

Requirement	Minimum Grade	Credit Hours
FMP 394 Topic: Intermediate Documentary Production		
FMP 400 Advanced Short Film Production		
FMP 494 Topic: Commercial Media Production		
FMP 494 Topic: Video Production Lab		
Post-Production Electives:		
FMP 320 Film and Media Post-Production I		
FMP 325 Intermediate Visual Effects Compositing		
FMP 420 Film and Media Post-Production II		
FMP 494 Topic: Advanced VFX		
Screenwriting Electives:		
FMP 361 Writing the Short Film		
FMP 365 Developing a Series		
FMP 460 Feature Writing Workshop I		
FMP 462 Feature Writing Workshop II		
FMP 465 Series Writers Workshop		
Sound Electives:		
FMP 315 Sound Design for Film and Media I		
FMP 394 Topic: Pro Tools: Mixing Techniques		
FMP 415 Sound Design for Film and Media II		
FMP 494 Topic: Sound Mixing for Film and Media		

Requirement	Minimum Grade	Credit Hours
ASU 101 or College-Specific First-Year Seminar		
ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
FMP 101 Orientation to Film	C	1
First-Year Composition		
ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Sales and Marketing Essentials, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BASMECERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in sales and marketing essentials requires 15 credit hours with at least 12 upper division credits. To receive the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.		
Required Courses		
MKT 390 Essentials of Marketing	C	3
MKT 391 Essentials of Selling	C	3
Certificate Electives		
Upper Division Sales and Marketing Essentials Certificate Electives	C	9
Select three courses		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		

Requirement	Minimum Grade	Credit Hours
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BFA/CERT Film and Media Production (Directing) and Environmental Education (HIFMPDBFA and TEEVEDCERT)

Program description:
A Bachelor of Fine Arts degree from The Sidney Poitier New American Film School empowers students with the critical thinking skills to navigate new, complex and changing environments in the film industry. Programs nurture the next generation of creatives, emphasizing the interconnectivity of filmmaking, the evolving landscape of the screen and the journey of a story from idea to intended audience. With a foundation in ethical and collaborative practices and project-based learning using state-of-the-art technology, the school offers the most inclusive, affordable and innovative film programs in the country.

The BFA program in film and media production takes aspiring filmmakers beyond theory and teaches them how to communicate a vision and manage resources to take a story from page to screen. It provides a deep dive into film production, and students can choose to complete the general degree or pursue a concentration in cinematography, directing, post-production or screenwriting.

Directing concentration
The concentration program in directing focuses on guiding students through the creative and technical processes of directing. Students learn to realize their vision and translate written scripts into visually compelling pieces, honing their unique voices while gaining skills to lead collaborative, innovative productions.

The certificate program in environmental education is for students in all majors and for nontraditional educators. The program is designed to establish standards for professional excellence in environmental education, as outlined by the North American Association for Environmental Education.

Environmental education is taught in traditional classrooms and in community-serving organizations such as nature centers, museums, parks and zoos. The program's required coursework increases the environmental literacy of future educators, fosters community leadership strategies, and provides students with opportunities to practice environmental education teaching methods.

Students who complete the certificate program are eligible to apply for the state-level environmental education certification recognized by the North American Association for Environmental Education.

BFA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Mary Lou Fulton College for Teaching and Learning Innovation
Location: Tempe, West Valley or Online

Career opportunities:
Graduates are equipped with the technical know-how and critical thinking skills to thrive in a quickly changing media industry and to pioneer new media careers that require advanced production skills and a strong creative voice.

Graduates who earn this degree are prepared to pursue a wide array of skilled professions, including:

- cinematographer or director of photography
- editor
- film, television and documentary writer or director
- producer
- sound designer or sound recording engineer
- visual effects artist

Graduates who combine the certificate in environmental education with their major program of study may become more marketable to employers. They often decide to pursue employment in educational settings such as nonprofit organizations, nature centers, museums, parks and zoos.

The environmental education certificate does not lead to teacher certification.

Curriculum - Film and Media Production (Directing), BFA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Fine Arts, BFA
College/School: Herberger Institute for Design and the Arts
Plan Code: HIFMPDBFA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Film Major		
FMP 180 Principles of Production Technology	C	3
FMP 205 Introduction to Post-Production	C	2
FMP 210 Principles of Creative Producing	C	3
FMP 245 Concepts of Cinematography	C	2
FMP 261 Principles of Screenwriting	C	3
FMP 280 Introduction to Film and Media Production	C	3
FMP 285 Portfolio Preparation and Review I	C	1
FMP 288 Understanding Ethics in Filmmaking	C	3
FMP 300 Short Film Production	C	3
FMP 360 The Filmmaker's Voice	C	3
FMP 380 Film Practicum	C	1

Requirement	Minimum Grade	Credit Hours
OR **FMP 484 Internship**		
FMP 385 Development of an Artist's Portfolio	C	2
FMP 388 Application of Ethical Filmmaking	C	3
Capstone requires three semesters to complete (FMP 398, FMP 480, and FMP 481). It cannot be condensed into two semesters.		
FMP 398 Capstone I: Development	C	3
FMP 480 Capstone II: Production	C	3
FMP 481 Capstone III: Post-Production	C	3
FMP 485 Portfolio Preparation and Review II	C	1
FMS 100 Introduction to Film and Media Studies (HUAD)	C	3
THF 160 Introduction to Storytelling (HUAD)	C	3
Entertainment Industry Elective **FMP 330 Professional and Technical Writing for Film/TV Industry** **FMP 335 Careers in Film and Media Industry** **FMP 411 Welcome to Hollywood** **FMP 417 Business and Legal Practices in Entertainment**	C	6
Upper Division Entertainment Industry Elective	C	3

Requirement	Minimum Grade	Credit Hours
FMP 330 Professional and Technical Writing for Film/TV Industry		
FMP 335 Careers in Film and Media Industry		
FMP 411 Welcome to Hollywood		
FMP 417 Business and Legal Practices in Entertainment		

Directing Concentration Courses

FMP 318 Directing for Film and Media I	C	3
FMP 345 Cinematography I	C	3
FMP 350 Directing for Documentary Media OR FMP 494 Topic: Directing the Personal Documentary	C	3
FMP 361 Writing the Short Film	C	3
FMP 418 Directing for Film and Media II	C	3
FMP 468 Directing for Film and Media III	C	3
THF 101 Acting Introduction	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

FMP 101 Orientation to Film	C	1

FMP 101 is not required for transfer students. Transfer students will complete one additional hour of elective credit instead.

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Directing students are recommended to take a post-production, sound, cinematography, or screenwriting course to continue rounding out their expertise as directors.

It is suggested to complete at least one semester in Los Angeles. See your advisor for more information.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Environmental Education, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Mary Lou Fulton College for Teaching & Learning In

Plan Code: TEEVEDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires a minimum of 15 credit hours, 12 of which must be upper division. A "C" or better is required in all coursework.		

Required Courses

Required Core Courses

SCN 208 Nature and Society: An Introduction to Environmental Studies (SCIT)		
SCN 301 Ecology and Natural History of the Sonoran Desert (SCIT)		
SCN 302 Environmental Education: A Global Perspective (GCSI)	C	3
SCN 307 Biomimicry: Nature's Sustainable Solutions (SUST)		
SCN 308 Urban Sustainability and Environmental Education (SUST)		
SCN 310 Race to Save Biodiversity		

Upper Division Required Core Courses

	C	6

Requirement	Minimum Grade	Credit Hours
SCN 301 Ecology and Natural History of the Sonoran Desert (SCIT)		
SCN 302 Environmental Education: A Global Perspective (GCSI)		
SCN 307 Biomimicry: Nature's Sustainable Solutions (SUST)		
SCN 308 Urban Sustainability and Environmental Education (SUST)		
SCN 310 Race to Save Biodiversity		

Elective Courses

Upper Division Elective Courses

SCN 303 Environmental Education Internship		
SCN 304 Sonoran Desert Flora		
SCN 305 Tropical Ecology and Sustainability	C	6
SCN 309 Environmental Education Project		
SCN 311 Nature Mindfully		

Any course not taken to satisfy the core requirements may be used to satisfy electives.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Finance and Applied Business Data Analytics (BAFINBS and BABDACERT)

Program description:
The Department of Finance has a rich tradition of educating leaders who excel in all aspects of the discipline of finance. Whether they aspire to ascend to the top ranks of the venture capital industry, execute multimillion-dollar real estate deals or become successful entrepreneurs with their own ideas and drive, students in the Bachelor of Science program in finance are equipped to succeed.

In particular, the Investment Banking Industry Scholars program mentors students interested in going to Wall Street. The student investment management fund provides undergraduates with the opportunity to manage an actual investment portfolio worth hundreds of thousands of dollars.

Finance department faculty members are considered among the top researchers in the world due to their scholarly publications. The professional advisory board, comprising leading professionals from the financial services, manufacturing, energy, investment banking and real estate sectors, provides a sounding board for new ideas and is a job resource for top graduates.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates are prepared for careers in:

- consulting
- corporate financial management
- depository institutions
- financial services
- investment banking
- investment management
- portfolio analysis

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Finance, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BAFINBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core Courses		
LES 305 Business Law and Ethics for Managers	C	3
MKT 300 Marketing and Business Performance	C	3
MGT 300 Principles of Management and Leadership	C	3
SCM 300 Global Supply Operations (SUST)	C	3

Requirement	Minimum Grade	Credit Hours
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

ACC 340 External Reporting I	C	3
FIN 302 Managerial Finance OR FIN 303 Honors Finance	C	3
FIN 361 Advanced Managerial Finance	C	3
FIN 421 Security Analysis and Portfolio Management	C	3
FIN 461 Financial Cases and Modeling	C	3
Upper Division Finance Major Elective Select two courses ACC 350 Internal Reporting ACC 440 External Reporting II	C	6

Requirement	Minimum Grade	Credit Hours
FIN 331 Financial Markets and Institutions		
FIN 427 Derivative Financial Securities		
FIN 431 Management of Financial Institutions		
FIN 455 Entrepreneurial Finance		
FIN 456 International Financial Management		
FIN 471 SIM Fund		
FIN 472 Investment Banking Industry Scholars		
FIN 494 Special Topics		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 232 Financial Accounting I OR **ACC 231 Uses of Accounting Information I**	C	3
ACC 242 Managerial Accounting I OR **ACC 241 Uses of Accounting Information II**	C	3

ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must earn a 2.0 GPA in major courses.

Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Finance and International Business Studies (BAFINBS and BAIBSCERT)

Program description:
The Department of Finance has a rich tradition of educating leaders who excel in all aspects of the discipline of finance. Whether they aspire to ascend to the top ranks of the venture capital industry, execute multimillion-dollar real estate deals or become successful entrepreneurs with their own ideas and drive, students in the Bachelor of Science program in finance are equipped to succeed.

In particular, the Investment Banking Industry Scholars program mentors students interested in going to Wall Street. The student investment management fund provides undergraduates with the opportunity to manage an actual investment portfolio worth hundreds of thousands of dollars.

Finance department faculty members are considered among the top researchers in the world due to their scholarly publications. The professional advisory board, comprising leading professionals from the financial services, manufacturing, energy, investment banking and real estate sectors, provides a sounding board for new ideas and is a job resource for top graduates.

The certificate program in international business studies helps students develop competence in a foreign language and a sensitivity to foreign cultures. Students gain an awareness of global social processes and an understanding of international business environments, principles and operations.

The W. P. Carey School of Business has partnerships with universities all over the world, so students can experience new cultures, visit new places and build intercultural and language skills. International internships also are offered in conjunction with the ASU Global Education Office.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates are prepared for careers in:

- consulting
- corporate financial management
- depository institutions
- financial services
- investment banking
- investment management
- portfolio analysis

Students can advance their career options with an undergraduate certificate. The certificate program in international business enables students to develop additional competencies that complement the marketable knowledge and skills they acquire in their majors.

Graduates who have completed this undergraduate certificate often decide to pursue employment in management, sales, marketing and communication. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Finance, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BAFINBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core Courses		
LES 305 Business Law and Ethics for Managers	C	3
MKT 300 Marketing and Business Performance	C	3
MGT 300 Principles of Management and Leadership	C	3
SCM 300 Global Supply Operations (SUST)	C	3

Requirement	Minimum Grade	Credit Hours
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

ACC 340 External Reporting I	C	3
FIN 302 Managerial Finance OR FIN 303 Honors Finance	C	3
FIN 361 Advanced Managerial Finance	C	3
FIN 421 Security Analysis and Portfolio Management	C	3
FIN 461 Financial Cases and Modeling	C	3
Upper Division Finance Major Elective Select two courses ACC 350 Internal Reporting ACC 440 External Reporting II	C	6

Requirement	Minimum Grade	Credit Hours
FIN 331 Financial Markets and Institutions		
FIN 427 Derivative Financial Securities		
FIN 431 Management of Financial Institutions		
FIN 455 Entrepreneurial Finance		
FIN 456 International Financial Management		
FIN 471 SIM Fund		
FIN 472 Investment Banking Industry Scholars		
FIN 494 Special Topics		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 232 Financial Accounting I OR **ACC 231 Uses of Accounting Information I**	C	3
ACC 242 Managerial Accounting I OR **ACC 241 Uses of Accounting Information II**	C	3

ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must earn a 2.0 GPA in major courses.

Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - International Business Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAIBSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate program requires a minimum of 18 credit hours (at least 12 credit hours must be upper division). All business coursework must be completed through the W. P. Carey School of Business or through an approved ASU international study program.		
International Business Core Course		
MGT 302 Principles of International Business (GCSI) **or** **ECN 306 Survey of International Economics (GCSI)**	C	3
International Business Elective		
Upper Division International Business Certificate Elective	C	6
Select two courses		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
ECN 331 Economics of the European Economic Union (GCSI)		
ECN 335 South Asia and the World Economy		

Requirement	Minimum Grade	Credit Hours
ECN 360 Economic Development (GCSI)		
ECN 365 Economics of Russia and Eastern Europe		
ECN 436 International Trade Theory		
ECN 438 International Monetary Economics		
FIN 456 International Financial Management		
MGT 302 Principles of International Business (GCSI)		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 425 Global Human Resources		
MGT 459 International Management (GCSI)		
MGT 425 Global Human Resources		
SCM 463 Global Supply Chain Management (GCSI)		
300+ level WPC subject courses earned on a sponsored ASU study abroad program may be applied toward the elective area, per approval of the international programs coordinator. Courses applied toward the W. P. Carey business core cannot be used toward the elective area.		

Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies and Individuals Coursework	C	6
Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		

Requirement	Minimum Grade	Credit Hours
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.		
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Upper Division Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.	C	3
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Foreign Language Proficiency

Foreign Language Proficiency

Requirement	Minimum Grade	Credit Hours
The certificate program requires students to meet a foreign language proficiency by meeting one of the following:		
1) Completion of one year (two semesters) of the same foreign language at the college level.		
2) Completion of one semester of the equivalent of 101- and 102-level coursework.		
3) Completion of two years of the same foreign language in high school with a minimum grade of "C" (2.00 on a 4.00 scale).		
4) Documentation of a proficiency or placement test confirming preparedness to start at least the second year of a foreign language (201 level or above).		
A student whose native language is not English may have this requirement waived.		

International Study Experience

International Study Experience

The certificate program requires students to participate in an ASU Global Education Office sponsored program.		
Students cannot use independent non-sponsored programs to fulfill this requirement. Sponsored programs can be found on the Global Education Office website.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Only courses in which a student receives a grade of "C" (2.00 on a 4.00 scale) or better may be used to meet the certificate requirements, and an overall certificate GPA of at least 2.50 must be earned.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Finance and Mathematical Concepts of Engineering (BAFINBS and LAMACECERT)

Program description:
The Department of Finance has a rich tradition of educating leaders who excel in all aspects of the discipline of finance. Whether they aspire to ascend to the top ranks of the venture capital industry, execute multimillion-dollar real estate deals or become successful entrepreneurs with their own ideas and drive, students in the Bachelor of Science program in finance are equipped to succeed.

In particular, the Investment Banking Industry Scholars program mentors students interested in going to Wall Street. The student investment management fund provides undergraduates with the opportunity to manage an actual investment portfolio worth hundreds of thousands of dollars.

Finance department faculty members are considered among the top researchers in the world due to their scholarly publications. The professional advisory board, comprising leading professionals from the financial services, manufacturing, energy, investment banking and real estate sectors, provides a sounding board for new ideas and is a job resource for top graduates.

The certificate program in mathematical concepts of engineering is designed for students who seek a strong foundation in mathematics to support their interests in engineering. Combining a core foundation in the quantitative and analytical skills found in mathematics with related skills in engineering, the program provides students with a solid mathematical background well-suited for multiple career paths.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates are prepared for careers in:

- consulting
- corporate financial management
- depository institutions
- financial services
- investment banking
- investment management
- portfolio analysis

The certificate program in mathematical concepts of engineering complements many major programs of study. Graduates with this enhanced math background can become more marketable to employers.

Curriculum - Finance, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BAFINBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core Courses		
LES 305 Business Law and Ethics for Managers	C	3
MKT 300 Marketing and Business Performance	C	3
MGT 300 Principles of Management and Leadership	C	3
SCM 300 Global Supply Operations (SUST)	C	3

Requirement	Minimum Grade	Credit Hours
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

ACC 340 External Reporting I	C	3
FIN 302 Managerial Finance OR FIN 303 Honors Finance	C	3
FIN 361 Advanced Managerial Finance	C	3
FIN 421 Security Analysis and Portfolio Management	C	3
FIN 461 Financial Cases and Modeling	C	3
Upper Division Finance Major Elective Select two courses ACC 350 Internal Reporting ACC 440 External Reporting II	C	6

Requirement	Minimum Grade	Credit Hours
FIN 331 Financial Markets and Institutions		
FIN 427 Derivative Financial Securities		
FIN 431 Management of Financial Institutions		
FIN 455 Entrepreneurial Finance		
FIN 456 International Financial Management		
FIN 471 SIM Fund		
FIN 472 Investment Banking Industry Scholars		
FIN 494 Special Topics		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 232 Financial Accounting I OR **ACC 231 Uses of Accounting Information I**	C	3
ACC 242 Managerial Accounting I OR **ACC 241 Uses of Accounting Information II**	C	3

ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must earn a 2.0 GPA in major courses.

Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Mathematical Concepts of Engineering, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAMACECERT

Minimum credit hours: 21

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The mathematical concepts of engineering certificate requires a minimum of 21 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		

Required Courses

IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 266 Calculus for Engineers II (MATH) **or** **MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3
MAT 267 Calculus for Engineers III (MATH) **or** **MAT 272 Calculus with Analytic Geometry III (MATH)**	C	3
MAT 275 Modern Differential Equations (MATH) **or** **MAT 274 Elementary Differential Equations (MATH)**	C	3
MAT 343 Applied Linear Algebra **or** **MAT 342 Linear Algebra**	C	3

Requirement	Minimum Grade	Credit Hours
MAT 343 and STP 420 must be completed with courses offered by the School of Mathematical and Statistical Sciences.		
STP 420 Introductory Applied Statistics (QTRS)	C	3

Elective (choose one)

Upper Division Mathematical Concepts of Engineering Electives

DAT 301 Exploring Data in R and Python	C	3
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 470 Stochastic Operations Research		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Finance and Sports Business (BAFINBS and BASPBCERT)

Program description:
The Department of Finance has a rich tradition of educating leaders who excel in all aspects of the discipline of finance. Whether they aspire to ascend to the top ranks of the venture capital industry, execute multimillion-dollar real estate deals or become successful entrepreneurs with their own ideas and drive, students in the Bachelor of Science program in finance are equipped to succeed.

In particular, the Investment Banking Industry Scholars program mentors students interested in going to Wall Street. The student investment management fund provides undergraduates with the opportunity to manage an actual investment portfolio worth hundreds of thousands of dollars.

Finance department faculty members are considered among the top researchers in the world due to their scholarly publications. The professional advisory board, comprising leading professionals from the financial services, manufacturing, energy, investment banking and real estate sectors, provides a sounding board for new ideas and is a job resource for top graduates.

The certificate program in sports business has an innovative curriculum designed for students seeking a Bachler of Science degree in the W. P. Carey School of Business who are interested in deepening their knowledge in the sports business domain.

Particular attention is given to providing a foundation in marketing and sales as applied to the sports business discipline. The certificate program prepares students for success by complementing coursework from a degree program with specialized business knowledge in the sports business area of interest.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe

Career opportunities:
Graduates are prepared for careers in:

- consulting
- corporate financial management
- depository institutions
- financial services
- investment banking
- investment management
- portfolio analysis

Graduates who have combined the certificate in sports business with their major program of study may become more marketable to employers.

Those who complete this undergraduate certificate often decide to pursue employment in marketing, sales or management. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Finance, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BAFINBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core Courses		
LES 305 Business Law and Ethics for Managers	C	3
MKT 300 Marketing and Business Performance	C	3
MGT 300 Principles of Management and Leadership	C	3
SCM 300 Global Supply Operations (SUST)	C	3

Requirement	Minimum Grade	Credit Hours
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

ACC 340 External Reporting I	C	3
FIN 302 Managerial Finance OR FIN 303 Honors Finance	C	3
FIN 361 Advanced Managerial Finance	C	3
FIN 421 Security Analysis and Portfolio Management	C	3
FIN 461 Financial Cases and Modeling	C	3
Upper Division Finance Major Elective Select two courses ACC 350 Internal Reporting ACC 440 External Reporting II	C	6

Requirement	Minimum Grade	Credit Hours
FIN 331 Financial Markets and Institutions		
FIN 427 Derivative Financial Securities		
FIN 431 Management of Financial Institutions		
FIN 455 Entrepreneurial Finance		
FIN 456 International Financial Management		
FIN 471 SIM Fund		
FIN 472 Investment Banking Industry Scholars		
FIN 494 Special Topics		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 232 Financial Accounting I OR **ACC 231 Uses of Accounting Information I**	C	3
ACC 242 Managerial Accounting I OR **ACC 241 Uses of Accounting Information II**	C	3

ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must earn a 2.0 GPA in major courses.

Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Sports Business, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BASPBCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in sports business requires 15 credit hours with at least 12 upper division credits. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.		

Required Course

MKT 311 Sports Business	C	3

Certificate Elective Group 1

Upper Division Sports Business Certificate Elective: Revenue and Analytics

Select two courses

MKT 441 Sports Revenue Generation	C	6
MKT 451 Sports Business Analytics		
MKT 484 Internship or **MKT 493 Honors Thesis**		

Certificate Elective Group 2

Requirement	Minimum Grade	Credit Hours
Upper Division Sports Business Certificate Elective		
Select two courses		
MKT 370 Professional Sales and Relationship Management		
MKT 375 Services Marketing		
MKT 410 Sales Management	C	6
MKT 431 Sports Experiences		
MKT 435 Entrepreneurial Marketing		
MKT 465 Projects in Sports Business		
MKT 484 Internship **or** **MKT 493 Honors Thesis**		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Geography and Geographic Information Science (LAGCUBS and LAGISCERT)

Program description:
Geographers have a distinct spatial perspective in understanding the world, from global to local, through the twin lenses of space and place.

Students in the Bachelor of Science program in geography learn about natural features of the world, including landforms, plants, water and weather, as well as the impact humans have on the world. This degree program also emphasizes social science or environmental science dynamics involving economic patterns, human populations and transportation.

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Having gained skills in geospatial techniques, geographers with a BS degree in geography go on to careers such as:

- computer cartographer
- environmental impact assessment analyst
- geographic information science specialist or analyst
- geomorphologist
- hydrology and water resource specialist
- location analyst for businesses
- photogrammetry specialist
- remote sensing analyst

Graduates also are presented with a host of other geospatial career options in the burgeoning fields of geographic information science, mapping and navigation systems.

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Geography, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAGCUBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
GCU 102 Introduction to Human Geography (GCSI)	C	3
GCU 496 Geographic Research Methods	C	3
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 270 Statistics for Geography and Planning	C	3
GPH 111 Introduction to Physical Geography (SCIT) **AND** **GPH 112 Introduction to Physical Geography Lab (SCIT)**	C	4
Upper Division **GIS Elective**	C	3
Upper Division **GPH Elective** OR **GPH 484 Internship**	C	6

Requirement	Minimum Grade	Credit Hours
Upper Division **GCU Elective** **OR** Upper Division **GIS Elective** **OR** Upper Division **GPH Elective**	C	6
Limit of six total hours of Internship (484), Thesis (493), Individualized Instruction (499), or Directed Study (492) can be applied to the major.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Mathematics (MATH) Recommended: **MAT 114**	C	3
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

Geography Major Related

ASM Elective	C	9
GCU Elective		
GIS Elective		
GPH Elective		
POS Elective		
PUP Elective		
SGS Elective		
SOC Elective		
SOS Elective		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition**	C	6

OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

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All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

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Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Campus immersion students are encouraged to take GPH 191 to fulfill one credit hour of electives.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Geography (Meteorology-Climatology) and Atmospheric Sciences (LAGCUMBS and LAATMSCERT)

Program description:
The meteorology-climatology concentration under the Bachelor of Science program in geography is designed to enable students to meet the requirements for certification as a meteorologist by the National Weather Service. It covers dynamic as well as synoptic meteorology.

Students gain a focused understanding of weather, climate and the various related methods of measurement and instrumentation. Required courses include atmospheric physics, operational weather forecasting, three semesters of calculus and two semesters of calculus-based physics.

Students in the atmospheric sciences certificate program gain a focused understanding of weather, climate and the various related methods of measurement and instrumentation. The coursework is designed to give students the knowledge and skill set necessary to approach meteorology-related programs through the lens of their primary field of study.

The certificate program's curriculum is also associated with the requirements for certification as a meteorologist by the National Weather Service. By completing the atmospheric sciences certificate and the Bachelor of Science program in geography with a concentration in meteorology-climatology, students acquire geographic information systems expertise and the meteorological instrumentation skills required for national-level certification with the National Weather Service.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 270 - Calc w/Analytic Geometry I
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Program graduates have found employment with:

- airlines
- energy power companies
- government agencies
- military (meteorology and pilot training)
- National Weather Service

This program also provides suitable preparation for graduate study in either meteorology or climatology.

A certificate in atmospheric sciences is a valuable addition to a degree for graduates seeking a career in which understanding weather systems is beneficial, including fields related to sustainability and resource management.

Graduates who have earned both the certificate in atmospheric sciences and the BS degree in geography with a concentration in meteorology-climatology are prepared for careers as meteorologists, such as broadcast meteorologists with the National Weather Service. They are also prepared to continue their studies for an advanced degree.

Curriculum - Geography (Meteorology-Climatology), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAGCUMBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GPH 111 Introduction to Physical Geography (SCIT) **AND** **GPH 112 Introduction to Physical Geography Lab (SCIT)**	C	4
GCU 102 Introduction to Human Geography (GCSI)	C	3
GIS 270 Statistics for Geography and Planning	C	3
Upper Division **GIS Elective**	C	3
GPH 212 Introduction to Meteorology (SCIT) **AND** **GPH 214 Introduction to Meteorology Laboratory (SCIT)**	C	4
GPH 409 Synoptic Meteorology I	C	4

Requirement	Minimum Grade	Credit Hours
GPH 410 Synoptic Meteorology II	C	4
GPH 412 Physical Meteorology	C	3
GPH 474 Dynamic Meteorology I	C	3
GPH 475 Dynamic Meteorology II	C	3
GCU 496 Geographic Research Methods	C	3
Course availability will vary by term. Students should reference the schedule of classes and check with an academic advisor for more information.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective Recommended: **GPH 213**	C	3
Upper Division Science and Society Elective Recommended: **GPH 314**	C	3

Additional Requirements

MAT 270 Calculus with Analytic Geometry I (MATH) MAT 270 is the first required math course for this major. If a student does not qualify for MAT 270, they should enroll in the prerequisite, MAT 170.	C	4
MAT 271 Calculus with Analytic Geometry II (MATH)	C	4
MAT 272 Calculus with Analytic Geometry III (MATH)	C	4
PHY 121 University Physics I: Mechanics (SCIT) **AND** **PHY 122 University Physics Laboratory I (SCIT)**	C	4
PHY 131 University Physics II: Electricity and Magnetism (SCIT) **AND** **PHY 132 University Physics Laboratory II (SCIT)**	C	4

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition**	C	6

OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

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All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

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Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

It is recommended that campus immersion students enroll in GPH 191 to fulfill one credit hour of electives.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Atmospheric Sciences, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAATMSCERT

Minimum credit hours: 19

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires 19 credit hours with a "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 19 credit hours must be upper-division coursework.		
GPH 213 Climate and Weather (SCIT) **AND** **GPH 215 Climate and Weather Laboratory (SCIT)**	C	4
GPH 412 Physical Meteorology	C	3
GPH 413 Meteorological Instruments and Measurement	C	3
GPH 414 Climate Change (SUST)	C	3
MAT 275 Modern Differential Equations (MATH)	C	3
Upper Division Atmospheric Sciences Elective **GIS 311 Geographic Information Science III (QTRS)** **GIS 341 Cartography and Georepresentation (QTRS)** **GIS 351 Air Photo Interpretation** **GPH 314 Global Change (SUST)**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Global Asia Studies and Political History and Leadership (LAASIABA and LAPTLCERT)

Program description:
The Bachelor of Arts program in global Asia studies offers students an in-depth and comprehensive study of Asia --- China, Japan, Korea, Indonesia, India and other countries --- through a number of disciplines that are combined into a coherent plan of academic study. The program provides students with a variety of intellectual tools that enable them to address languages, religions and cultures, artistic traditions, political and social issues, and global networks of Asia as well as diasporic experiences of Asians, and to apply that knowledge in many academic and professional settings.

The certificate program in political history and leadership provides students with a strong foundation in the history of politics and political thought, with a special emphasis on the role of leadership and citizenship. Students come to understand the complexities of real decision-making beyond the abstractions. The program prepares students for leadership in their careers.

Required courses combine academic study and mentoring contact with political, media and business leaders from the wider Phoenix area and Arizona communities, while electives drawn from a variety of disciplines are used to broaden the scope of emphasis.

The program offers scholarship and internship or job placement opportunities.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
People knowledgeable about Asia are needed in virtually every arena in which the U.S. interacts with the rest of the world, including:

- communication and journalism
- environmental studies
- government services and diplomacy
- higher education
- international business
- natural resource management
- popular art and culture
- supply chain management
- translation and editing
- transportation and tourism

Graduates become more marketable to employers and advance their career options when they have complemented their major program of study with this specialization in political history and leadership.

Graduates with this certificate often pursue employment as military officers, governor's office staff, members of congress, city council officials, county prosecutors, financial advisors and campaign strategists. Advanced degrees or certifications may be required for academic, clinical or other positions.

Curriculum - Global Asia Studies, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAASIABA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
HST 111 Introduction to Asia (GCSI) OR **REL 111 Introduction to Asia (GCSI)**	C	3
HST 303 Studies in Asian History All students must complete at least three credits of HST 303 (any topic). Additional topics of HST 303 may be used to fulfill Across Asia or Global Asia Elective requirements.	C	3
Across Asia Courses	C	6
ARS 201 Art of Asia (GCSI)		
CEL 494 Topic: Political Thought: Islam, Hinduism, Confucianism		
GCU 326 Geography of Asia		
HST 303 Topic: ASIA: Women in Asia		

Requirement	Minimum Grade	Credit Hours
HST 303 Topic: Cold War Asia		
HST 303 Topic: Democracy in Asia		
HST 303 Topic: Empires in Asia		
HST 303 Topic: Film and Politics in Colonial Asia		
HST 303 Topic: WWII in Asia: Cultures of War		
POS 468 Comparative Asian Foreign Policies		
REL 345 Asian Religious Traditions		
REL 350 Hinduism (GCSI)		
REL 351 Buddhism (GCSI)		
REL 363 / AFR 373 Islam and World Affairs		
REL 365 / HST 336 Islamic Civilization (HUAD)		
REL 366 / HST 339 Islam in the Modern World (GCSI)		
REL 396 / HST 396 Islam and Politics (CIVI)		
REL 494 Topic: Rituals in History, Politics and Religion		
Upper Division Across Asia Courses	C	3
CEL 494 Topic: Political Thought: Islam, Hinduism, Confucianism		
GCU 326 Geography of Asia		
HST 303 Topic: ASIA: Women in Asia		
HST 303 Topic: Cold War Asia		

Requirement	Minimum Grade	Credit Hours
HST 303 Topic: Democracy in Asia		
HST 303 Topic: Empires in Asia		
HST 303 Topic: Film and Politics in Colonial Asia		
HST 303 Topic: WWII in Asia: Cultures of War		
POS 468 Comparative Asian Foreign Policies		
REL 345 Asian Religious Traditions		
REL 350 Hinduism (GCSI)		
REL 351 Buddhism (GCSI)		
REL 363 / **AFR 373 Islam and World Affairs**		
REL 365 / **HST 336 Islamic Civilization (HUAD)**		
REL 366 / **HST 339 Islam in the Modern World (GCSI)**		
REL 396 / **HST 396 Islam and Politics (CIVI)**		
REL 494 Topic: Rituals in History, Politics and Religion		
Global Asia Electives	C	6
Global Asia Electives: choose any combination of courses from six different focus areas, with at least 24 hours from upper-division courses. Students who wish to specialize in a particular country or region are strongly encouraged to complete at least 12 credits from that focus area. The six focus areas are: Asia in a Global World (intended for generalists who do not wish to focus on one particular country or region), China, Japan, Korea, Southeast Asia,		

Requirement	Minimum Grade	Credit Hours
and South Asia (intended for those who wish to specialize).		
CHINA FOCUS AREA		
ARS 394 Topic: Modern and Contemporary Chinese Art		
ARS 472 Art of China (HUAD)		
ARS 475 Chinese Painting		
CHI 120 / SLC 120 Introduction to Chinese Culture (HUAD)		
CHI 294 / SLC 294 Topic: Chinese Ghost Stories		
CHI 307 Introduction to Literary Chinese I		
CHI 308 Introduction to Literary Chinese II		
CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)		
CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation		
CHI 345 Chinese Film and Civilization		
CHI 348 Pathways into Chinese Culture		
CHI 394 / SLC 394 Topic: I Know Kung-fu: Chinese Martial Arts, Lit and Film		
CHI 394 / SLC 394 Topic: Labor & the Environment in Chinese Writing		
CHI 451 / SLC 451 Chinese Cultural History I		
CHI 452 / SLC 452 Chinese Cultural History II		

Requirement	Minimum Grade	Credit Hours
CHI 470 Modern Chinese Literature and Culture		
DCE 116 T'ai Chi Chuan I		
DCE 194 Topic: Intro to Chinese Classical Dance		
DCE 216 T'ai Chi Ch'uan II		
GCU 432 Geography of China		
HST 303 Topic: China,Japan & East Asia in World History		
HST 303 Topic: The Family in Modern China		
HST 303 Topic: History of Modern China: From Taiping to Tiananmen		
HST 303 Topic: Modern China: Personal Narratives and Histories		
HST 303 Topic: Modern China: Violence		
HST 383 / CHI 333 / SLC 333 China		
HST 384 / SLC 334 Modern China: 1700 to the Present		
HST 386 / CHI 336 / SLC 336 Interpreting China's Classics		
POS 452 China		
REL 338 / CHI 338 Daode Jing: Way to the West		
REL 343 / CHI 343 Daoism (HUAD)		
REL 346 / CHI 346 Chinese Religions (GCSI)		
REL 396 / HST 396 Islam and Politics (CIVI)		

Requirement	Minimum Grade	Credit Hours
SLC 498 Topic: Chinese Flagship		
JAPAN FOCUS AREA		
ARS 394 Topic: Anime		
ARS 473 Art of Japan (HUAD)		
ENG 466 Topic: Studio Ghibli Films		
HST 108 Introduction to Japan		
HST 303 Topic: China,Japan & East Asia in World History		
HST 303 Topic: Postwar Japan Through Film		
HST 303 Topic: Premodern Japan		
HST 303 Topic: The Rise of Modern Japan		
HST 303 Topic: WWII in Asia: Cultures of War		
HST 387 Japan		
HST 388 Japan		
JPN 115 / SLC 115 Japanese Popular Culture: Anime, Manga and Film (GCSI)		
JPN 315 The Language of Japanese Popular Culture I: Gender and Onomatopoeia/Mimesis		
JPN 316 The Language of Japanese Popular Culture II: Honorifics and Dialects		
JPN 333 Japanese Civilization from the Ice Age to Last Thursday		

Requirement	Minimum Grade	Credit Hours
JPN 354 / REL 353 / SLC 354 Zen and Japanese Culture		
JPN 355 / SLC 355 Religious Practice of People in Modern Japan (GCSI)		
JPN 367 / REL 367 / SLC 367 Religion, Philosophy and Culture in Japan (GCSI)		
JPN 370 / SLC 370 Japanese Aesthetics: Art and Beauty in Japan		
JPN 394 / SLC 394 Topic: Anime, Manga, and Religion in Japan		
JPN 401 Reading Modern Japanese Texts (GCSI)		
JPN 414 Introduction to Classical Japanese		
JPN 415 Advanced Classical Japanese		
JPN 421 / SLC 421 Japanese Literature in Translation		
JPN 424 / SLC 424 The Art of the Ninja (GCSI)		
JPN 430 / SLC 430 Buddhist Meditation in East Asia		
JPN 445 Readings in Modern Japanese Letters and Culture		
JPN 485 Japanese Literature and the Art of Translation		
JPN 494 / SLC 494 Topic: Film and Religion in Japan		
KOREA FOCUS AREA		
HST 303 Topic: Communism and Authoritarianism: North Korea		

Requirement	Minimum Grade	Credit Hours
HST 303 Topic: Modern Korean History through Film		
KOR 250 Korean Culture and Society		
KOR 321 / SLC 321 Modern Korean Literature		
KOR 347 Korean Film and Literature (HUAD)		
KOR 350 Women of Korea		
KOR 375 / SLC 375 Intercultural Communication in Korea (SOBE)		
KOR 415 / SLC 415 Korean Popular Culture		
KOR 420 / SLC 420 Emotions Across Languages, Cultures and History (SOBE)		
KOR 457 / SLC 457 Premodern Korea in a Global Context		
REL 354 / KOR 354 Religions of Korea		
SOUTH ASIA FOCUS AREA		
ARS 444 / FMS 426 Films of India		
CEL 395 Leadership and Service Global Intensive Experience: India		
DCE 114 Dances of India I		
HST 245 / POS 245 / REL 245 / SGS 245 / SLC 245 Introduction to India and South Asia		
HST 392 Modern India		
HST 394 Topic: Pakistan, India, and Afghanistan: Peace		

Requirement	Minimum Grade	Credit Hours
Challenges		
POS 357 South Asia Politics		
REL 347 Religions of India		
REL 350 Hinduism (GCSI)		
REL 357 Theravada Buddhism in South and Southeast Asia		
REL 394 Topic: Art & Religion in Jain Culture		
REL 396 / **HST 396 Islam and Politics (CIVI)**		
SOUTHEAST ASIA FOCUS AREA		
ASB 325 Peoples of Southeast Asia		
GCU 433 Geography of Southeast Asia		
HST 240 / **GCU 240** / **POS 240** / **REL 240** / **SGS 240 Introduction to Southeast Asia**		
HST 303 Topic: The Colonial World of Southeast Asia		
HST 303 Topic: Film and Politics in Colonial Asia		
HST 391 / **SGS 381 Modern Southeast Asia**		
HST 456 The Vietnam War (HUAD)		
MUP 489 Topic: Gamelan		
POS 358 Southeast Asia		
POS 468 Comparative Asian Foreign Policies		
REL 348 Religion and Culture in Southeast Asia		

Requirement	Minimum Grade	Credit Hours
REL 352 Modern Buddhism		
REL 357 Theravada Buddhism in South and Southeast Asia		
REL 396 / **HST 396 Islam and Politics (CIVI)**		
SLC 294 / **VTN 294 Topic: Vietnam: Beyond the War**		
SLC 494 Topic: Religions and Conflicts in Southeast Asia		
ASIA IN A GLOBAL WORLD OPTION		
This category includes all courses on the China, Japan, Korea, South Asia, and Southeast Asia Focus Area lists. Students who select Asia in a Global World do not focus on a specific region and may select a broad combination of courses across the geographical region. At least 24 hours must be upper divison.		
Upper Division Global Asia Electives	C	24
Global Asia Electives: choose any combination of courses from six different focus areas, with at least 24 hours from upper-division courses. Students who wish to specialize in a particular country or region are strongly encouraged to complete at least 12 credits from that focus area. The six focus areas are: Asia in a Global World (intended for generalists who do not wish to focus on one particular country or region), China, Japan, Korea, Southeast Asia, and South Asia (intended for those who wish to specialize).		
CHINA FOCUS AREA		
ARS 394 Topic: Modern and Contemporary Chinese Art		

Requirement	Minimum Grade	Credit Hours
ARS 472 Art of China (HUAD)		
ARS 475 Chinese Painting		
CHI 307 Introduction to Literary Chinese I		
CHI 308 Introduction to Literary Chinese II		
CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)		
CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation		
CHI 345 Chinese Film and Civilization		
CHI 348 Pathways into Chinese Culture		
CHI 394 / SLC 394 Topic: I Know Kung-fu: Chinese Martial Arts, Lit and Film		
CHI 394 / SLC 394 Topic: Labor & the Environment in Chinese Writing		
CHI 451 / SLC 451 Chinese Cultural History I		
CHI 452 / SLC 452 Chinese Cultural History II		
CHI 470 Modern Chinese Literature and Culture		
GCU 432 Geography of China		
HST 303 Topic: China,Japan & East Asia in World History		
HST 303 Topic: The Family in Modern China		
HST 303 Topic: History of Modern China: From Taiping		

Requirement	Minimum Grade	Credit Hours
to Tiananmen		
HST 303 Topic: Modern China: Personal Narratives and Histories		
HST 303 Topic: Modern China: Violence		
HST 383 / **CHI 333** / **SLC 333 China**		
HST 384 / **SLC 334 Modern China: 1700 to the Present**		
HST 386 / **CHI 336** / **SLC 336 Interpreting China's Classics**		
POS 452 China		
REL 338 / **CHI 338 Daode Jing: Way to the West**		
REL 343 / **CHI 343 Daoism (HUAD)**		
REL 346 / **CHI 346 Chinese Religions (GCSI)**		
REL 396 / **HST 396 Islam and Politics (CIVI)**		
SLC 498 Topic: Chinese Flagship		
JAPAN FOCUS AREA		
ARS 394 Topic: Anime		
ARS 473 Art of Japan (HUAD)		
ENG 466 Topic: Studio Ghibli Films		
HST 303 Topic: China,Japan & East Asia in World History		
HST 303 Topic: Postwar Japan Through Film		

Requirement	Minimum Grade	Credit Hours
HST 303 Topic: Premodern Japan		
HST 303 Topic: The Rise of Modern Japan		
HST 303 Topic: WWII in Asia: Cultures of War		
HST 387 Japan		
HST 388 Japan		
JPN 315 The Language of Japanese Popular Culture I: Gender and Onomatopoeia/Mimesis		
JPN 316 The Language of Japanese Popular Culture II: Honorifics and Dialects		
JPN 333 Japanese Civilization from the Ice Age to Last Thursday		
JPN 354 / REL 353 / SLC 354 Zen and Japanese Culture		
JPN 355 / SLC 355 Religious Practice of People in Modern Japan (GCSI)		
JPN 367 / REL 367 / SLC 367 Religion, Philosophy and Culture in Japan (GCSI)		
JPN 370 / SLC 370 Japanese Aesthetics: Art and Beauty in Japan		
JPN 394 / SLC 394 Topic: Anime, Manga, and Religion in Japan		
JPN 401 Reading Modern Japanese Texts (GCSI)		
JPN 414 Introduction to Classical Japanese		
JPN 415 Advanced Classical Japanese		

Requirement	Minimum Grade	Credit Hours
JPN 421 / SLC 421 Japanese Literature in Translation		
JPN 424 / SLC 424 The Art of the Ninja (GCSI)		
JPN 430 / SLC 430 Buddhist Meditation in East Asia		
JPN 445 Readings in Modern Japanese Letters and Culture		
JPN 485 Japanese Literature and the Art of Translation		
JPN 494 / SLC 494 Topic: Film and Religion in Japan		
KOREA FOCUS AREA		
HST 303 Topic: Communism and Authoritarianism: North Korea		
HST 303 Topic: Modern Korean History through Film		
KOR 321 / SLC 321 Modern Korean Literature		
KOR 347 Korean Film and Literature (HUAD)		
KOR 350 Women of Korea		
KOR 375 / SLC 375 Intercultural Communication in Korea (SOBE)		
KOR 415 / SLC 415 Korean Popular Culture		
KOR 420 / SLC 420 Emotions Across Languages, Cultures and History (SOBE)		
KOR 457 / SLC 457 Premodern Korea in a Global Context		
REL 354 / KOR 354 Religions of Korea		

Requirement	Minimum Grade	Credit Hours
SOUTH ASIA FOCUS AREA		
ARS 444 / **FMS 426 Films of India**		
CEL 395 Leadership and Service Global Intensive Experience: India		
HST 392 Modern India		
HST 394 Topic: Pakistan, India, and Afghanistan: Peace Challenges		
POS 357 South Asia Politics		
REL 347 Religions of India		
REL 350 Hinduism (GCSI)		
REL 357 Theravada Buddhism in South and Southeast Asia		
REL 394 Topic: Art & Religion in Jain Culture		
REL 396 / **HST 396 Islam and Politics (CIVI)**		
SOUTHEAST ASIA FOCUS AREA		
ASB 325 Peoples of Southeast Asia		
GCU 433 Geography of Southeast Asia		
HST 303 Topic: The Colonial World of Southeast Asia		
HST 303 Topic: Film and Politics in Colonial Asia		
HST 391 / **SGS 381 Modern Southeast Asia**		
HST 456 The Vietnam War (HUAD)		

Requirement	Minimum Grade	Credit Hours
MUP 489 Topic: Gamelan		
POS 358 Southeast Asia		
POS 468 Comparative Asian Foreign Policies		
REL 348 Religion and Culture in Southeast Asia		
REL 352 Modern Buddhism		
REL 357 Theravada Buddhism in South and Southeast Asia		
REL 396 / **HST 396 Islam and Politics (CIVI)**		
SLC 494 Topic: Religions and Conflicts in Southeast Asia		
ASIA IN A GLOBAL WORLD OPTION		
This category includes all courses on the China, Japan, Korea, South Asia, and Southeast Asia Focus Area lists. Students who select Asia in a Global World do not focus on a specific region and may select a broad combination of courses across the geographical region. At least 24 hours must be upper divison.		

Not all courses on the course lists are available every term. Students should consult the class schedule prior to each term to confirm course availability.

Check: Minimum 2.00 Major GPA

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language requirement satisfied through completion of Arabic, Chinese, French, Hindi, Indonesian, Japanese, Korean, Portuguese, Spanish, Thai or Vietnamese language course at the intermediate level (202 or equivalent). Students who are already proficient in one of these languages, or another language relevant to the study of Asia, such as Dutch, Tagalog or Urdu, may take a proficiency exam. Credit hours for second language courses will vary depending on the language chosen.	C	16
Students choosing one of the specialized Global Asia categories are strongly encouraged to study a language that is highly relevant to that particular country or region. The following languages are encouraged for each specialized focus area: -- China: Chinese, Portuguese, Japanese, Korean, Dutch (by proficiency exam) -- Japan: Japanese, Chinese, Portuguese, Korean, Dutch (by proficiency exam) -- Korea: Korean, Chinese, Portuguese, Japanese, Indonesian, Thai, Vietnamese -- South Asia: Hindi, Arabic, Portuguese, French, Urdu (by proficiency exam), Dutch (by proficiency exam) -- Southeast Asia: Indonesian, Thai, Vietnamese, French, Spanish, Portuguese, Chinese, Japanese, Dutch (by proficiency exam), Tagalog (by proficiency exam)		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience**	1

Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Some General Studies requirements can overlap with major courses, leaving more room for electives. Consult an academic advisor to select the best courses for your personal plan of study.

Eligible students are encouraged to apply for a Foreign Language and Area Studies award. Awards include: academic

year FLAS Fellowship and summer FLAS Awards.

Consider participating in an Undergraduate Research Experience through the School of Historical, Philosophical and Religious Studies or a research opportunity in the Humanities Lab.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go to: https://silc.asu.edu/student-life/academic-advising/language-testing

Consider participating in an internship to gain valuable career experience and contacts. For help exploring internship opportunities related to your major, meet with an academic advisor.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Political History and Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAPTLCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires 15 credit hours, of which at least 12 must be upper division. At least six upper-division hours must be completed in courses offered by The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search. All courses must be completed in residence at ASU and with a grade of "C" (2.00 on a 4.00 scale) or higher.		
HST 112 Foundations of Democracy (CIVI) **or** **POS 112 Foundations of Democracy (CIVI)**	C	3
HST 414 Political History and Leadership **or** **POS 414 Political History and Leadership**	C	3
Upper Division Elective Courses	C	9
AFR 330 / **JUS 330 Survey of African American Politics**		
CEL 307 Reason and Revelation: Medieval Political Thought		
CEL 308 Liberty and Equality: Early Modern Political Thought (CIVI)		
CEL 334 Tocqueville's Democracy in America		
CEL 335 Lincoln: Rhetoric, Thought, Statesmanship (HUAD)		
CEL 345 Modern Economic Classics		

Requirement	Minimum Grade	Credit Hours
CEL 350 / PHI 350 Philosophy, Politics and Economics (SOBE)		
CEL 351 / ECN 304 Classical to Modern Economic Thought		
CEL 352 Debating Capitalism (SOBE)		
CEL 371 Classical Political Statecraft		
CEL 375 Politics and Leadership in the Age of Revolutions, 1776-1826		
HST 302 Topic: History of Money		
HST 306 Topic: American Political Conspiracy		
HST 306 Topic: Civil Rights to Black Lives Matter		
HST 306 Topic: Debating American Liberty		
HST 306 Topic: Jacksonian America: Pwer & Politics in US 1828-61		
HST 306 Topic: Liberal Revolution		
HST 306 Topic: The Civil War in Global Perspective		
HST 306 Topic: The U.S. Presidency		
HST 315 Political History of the U. S.		
HST 317 / POS 317 History of Postwar U.S. Conservatism		
HST 321 Constitutional History/US to 1865		
HST 322 Constitutional History of the United States Since 1865		
HST 323 / AFR 335 / TCL 335 Historical Studies in Race, Crime, and the Law		
HST 327 Women in U.S. History, 1600 to 1880 (HUAD)		
HST 328 Women in U.S. History, 1880-1980 (HUAD)		
HST 334 / AFR 364 African American History Since 1865 (HUAD)		

Requirement	Minimum Grade	Credit Hours
HST 354 Revolutionary Europe (GCSI)		
HST 356 Europe since 1945		
HST 370 Eastern Europe in Transition		
HST 374 / LAT 374 / SLC 374 Roman History II: The Roman Empire (GCSI)		
HST 405 Colonial American History to 1763		
HST 406 American Revolution/1763-1789		
HST 407 Early U.S. Republic/1789-1850		
HST 408 Civil War and Reconstruction (HUAD)		
HST 412 Contemporary U.S., 1973- Present		
HST 415 Debating the Constitution		
HST 426 The British Empire		
HST 427 French Revolution/Napoleonic Era		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 439 Athenian Democracy (CIVI)		
PHI 307 Philosophy of Law (AMIT)		
PHI 328 History of Ancient Philosophy (GCSI)		
PHI 329 History of Modern Philosophy (GCSI)		
PHI 335 History of Ethics (GCSI)		
PHI 336 Social and Political Philosophy		
PHI 347 Philosophical Theories of Constitutional Law		
PHI 401 Rationalism		
PHI 402 Empiricism		

Requirement	Minimum Grade	Credit Hours
POS 310 American National Government (AMIT)		
POS 313 The Congress (AMIT)		
POS 314 The American Presidency (AMIT)		
POS 315 The Supreme Court		
POS 316 American Political Institutions (AMIT)		
POS 332 American Political Parties		
POS 340 History of Political Philosophy I		
POS 341 History of Political Philosophy II		
POS 342 Political Theory		
POS 346 Problems of Democracy (HUAD)		
POS 352 European Democracies		
POS 356 European Union (GCSI)		
POS 417 Arizona Politics		
POS 435 Women and Politics (SOBE)		
POS 442 American Political Thought (HUAD)		
POS 470 Law and the Political Order		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		
POS 475 Morality and Politics		
POS 485 Political Economy (SOBE)		
REL 388 / POS 388 Religion, Ethics, and International Politics (CIVI)		
WST 440 Politics of Women's Health (CIVI)		

Requirement	Minimum Grade	Credit Hours
Additional upper-division courses with relevant content may be used with the approval of the certificate co-directors.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Not all courses for this program are available every term. Students should consult the class schedule prior to each term to confirm course availability.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BGM/CERT Global Management and Applied Business Data Analytics (TBTGMBGM and BABDACERT)

Program description:
The Bachelor of Global Management program offers two tracks: the international business, language and culture track, for which two years of foreign language is required, and the international business and culture track, with no foreign language requirement and greater emphasis on management-related courses. Students who select the foreign language track may complete coursework in a variety of languages. The international business, language and culture track is offered to on-campus students only. Online students may pursue only the international business and culture track.

Everyone in the program has the opportunity to explore the politics, cultures and economics of different countries around the world while putting the skills they have learned into practice in practical settings through a required international internship. Although students are strongly encouraged to pursue internships outside their home country, they may satisfy this requirement by doing a local internship with an international component.

Students often choose to apply their electives toward a minor or certificate offered by another department, enabling them to specialize in a second area of interest that complements their major. Electives may include areas such as communications, cybersecurity, data analytics, digital media, languages, nonprofit leadership, political science, psychology, public relations, risk management, sales and marketing, and sustainability. The minor and certificate search can be found in Degree Search.

Students also complete a senior capstone project that draws on the skills they have developed throughout the program. In the capstone project, students work together in consulting teams to provide recommendations for a global organization on a challenge it faces internationally. The internship and the capstone project enable students to demonstrate their skills and work experience for potential employers as part of their professional development plan.

The BGM program is also offered in a flexible online format. Students should visit the ASU Online website for more information.

About Thunderbird
Thunderbird School of Global Management has produced world-class leaders for more than 75 years. The ideal Thunderbird student is curious, globally minded, and eager to develop and advance their careers in leadership and management within the global and digital landscape. Upon completion of this degree, graduates join a thriving global alumni network nearly 50,000 strong, managing some of the world's largest institutions, companies, nonprofits and NGOs.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BGM At a Glance:
College/school: Thunderbird School of Global Management
Location: Downtown Phoenix, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 117 - College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
The global economy continues to face volatility and disruption as it expands, contracts and interconnects. Partly because of this, demand for specialists with a global mindset is rapidly increasing.

The BGM program prepares students to take on leadership roles in multinational corporations, government agencies or nongovernmental organizations. Students gain experience and develop skills that international companies, governments

and nonprofit entities value highly in employees.

Graduates can thrive in leadership roles in the following fields:

- consulting
- entrepreneurship
- foreign service
- global marketing
- human resources

Career opportunities include:

- chief sustainability officer
- compliance manager
- country manager
- foreign service officer
- general manager
- global entrepreneur
- international marketing manager
- international sales manager
- manager of a nonprofit organization
- regulatory affairs manager

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Global Management, BGM - Internatl Business & Culture

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Global Management, BGM
College/School: Thunderbird School of Global Management
Plan Code: TBTGMBGM
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Minimum "C" (2.00) grade is required in all course work in this major.		

Major Core

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
COM 225 Public Speaking and Presentations (CIVI)	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ENG 301 Writing for the Professions	C	3
Upper Division Ethics Course **LES 305 Business Law and Ethics for Managers** **PHI 306 Applied Ethics (CIVI)**	C	3

Requirement	Minimum Grade	Credit Hours
PHI 360 Business and Professional Ethics (HUAD) PHI 406 / IAS 406 Moral Dilemmas		
MAT 117 College Algebra (MATH)	C	3
STP 226 Elements of Statistics (QTRS)	C	3

TGM Core

TGM 101 Principles of Global Management (GCSI)	C	3
TGM 200 Principles of Accounting for Global Organizations	C	3
TGM 204 Principles of Marketing for Global Organizations	C	3
TGM 300 Principles of Finance for Global Organizations	C	3
TGM 312 Big Data in the Global Economy	C	3
TGM 353 Regional Management Environment (GCSI)	C	3
TGM 391 Global Business and Professional Development Skills	C	1
TGM 468 States and Markets in a Global Economy (GCSI)	C	3
TGM 478 Cross-Cultural Communication and Negotiation	C	3
TGM 484 Internship An internship is required. Review the "ThunderGuide" Canvas course module titled "TGM 484 Internship Information." Work with your academic advisor and Career Services to start preparing for this experience.	C	3 - 6

Requirement	Minimum Grade	Credit Hours
TGM 487 Global Entrepreneurship	C	3
TGM 489 Multinational Organizational Leadership	C	3
TGM 498 Pro-Seminar	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

TGM 191 First-Year Seminar		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Review the "ThunderGuide" located on your Canvas course page for both ASU and Thunderbird-specific resources and information. See advisor for details.
Meet with your academic advisor to begin planning for the best study abroad options for your major.

Thunderbird Proficiency Requirement

The Thunderbird proficiency requirement may be satisfied through one of the following: completion of a language course at the intermediate level (202 or equivalent); completion of an upper-division course or courses taught in a foreign language, taken in the United States or the relevant country; or, completion of six credit hours of upper-division courses that have the global communities, societies and individuals (GCSI) designation (in addition to the courses used to meet the university general studies requirements). Students must earn a grade of â Câ (2.00) or higher in the courses taken to fulfill this requirement. Most students will fulfill this requirement through the completion of TGM 353 and TGM 468. Adjustment to upper-division and elective hours may be required based on the coursework taken (see advisor).

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSD/CERT Graphic Design and Sales and Marketing Essentials (ARGRABSD and BASMECERT)

Program description:
The graphic design program in The Design School is committed to excellence in traditional and contemporary graphic design education, professionalism, research and service for the community at large. Faculty, alumni, students and visiting designers and educators constantly reinforce the link between society and nature, and they vigorously advocate quality in developing communication strategies.

The Bachelor of Science in Design curriculum acknowledges the need for creative environments that address ecological concerns, and students are encouraged to develop sustainable, transdisciplinary work sensitive to cultural aesthetic. Students develop a strong foundation of design principles through lower-division studio and lecture courses, using this to build an overall understanding of how design can shape perception and meaning using visual media. Upper-division studio courses provide opportunities for students to work in collaborative teams addressing professional projects in information design, interaction design, exhibition design, animation, motion graphics, branding, publication design, web design, interface design and the multiple contemporary facets of sensorial design.

Graphic designers are responsible for designing how information is communicated. Forms of communication include print, video, film and electronic (web). Graphic designers are concerned with appearance, choosing the appropriate mechanism for communication, clarity of information and its effectiveness, and how communication is transferred and received.

The BSD program in graphic design places an emphasis on strategic communication developed through a design process that includes research, analysis, conceptualization, planning and realization. The process leads to innovative visual communication design solutions for contemporary design problems that are local to global in scope.

Designed for undergraduate nonbusiness majors, the certificate program in sales and marketing essentials offers a set of courses that cover indispensable marketing knowledge in a wide variety of marketing application domains.

Students are required to enroll in two fundamental courses in marketing and choose three additional courses from a larger set (services marketing, business marketing, global marketing, sports business and advertising) to tailor the certificate to their particular interests.

While some courses are offered in a face-to-face setting, the entire certificate is offered via iCourse for flexibility and convenience.

BSD At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Any math course that meets the MATH designation.
Math intensity: General

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe

Career opportunities:
Based on a diversified portfolio upon graduation, those who opt for the graphic design profession gain employment in:

- advertising and marketing design
- brand and corporate identity design
- broadcast design (TV graphics)
- information design
- interaction and interface design
- museum or exhibition design
- publication design
- visual communication design
- web design

Specific examples of graphic designers' work include:

- annual reports
- books
- environmental graphics
- motion graphics
- multimedia presentations
- publications
- websites

Graduates may also pursue graduate studies that lead to careers in design education and other fields of professional endeavors in design.

Graduates who have combined the certificate in sales and marketing essentials with their major program of study may become more marketable to employers, and they often decide to pursue employment in sales or marketing.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Graphic Design, BSD

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Design, BSD
College/School: Herberger Institute for Design and the Arts
Plan Code: ARGRABSD
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
GRA 101 Designing Life	C	3
GRA 111 Graphic Design History I (HUAD)	C	3
GRA 112 Graphic Design History II	C	3
GRA 121 Principles for Graphic Design I	C	3
GRA 122 Principles for Graphic Design II	C	3
GRA 220 Design Drawing I	C	3
GRA 221 Letterform	C	3
GRA 222 Visual Communication I	C	3
GRA 223 Typography	C	3
GRA 224 Visual Communication II	C	3
GRA 225 Communication/Interaction Design Theory	C	3
GRA 321 Technology for Design I	C	3
GRA 322 Technology for Design II	C	3

Requirement	Minimum Grade	Credit Hours
GRA 361 Visual Communication III	C	5
GRA 362 Visual Communication IV	C	5
GRA 421 Exhibit Design	C	3
GRA 422 Motion Graphics and Interaction Design	C	3
GRA 424 Advanced Media	C	3
GRA 425 Regenerative Graphic Design OR GRA 494 Topic: Front-End Design and Development OR GRA 494 Topic: Cultural Relevance and Branding	C	3
GRA 461 Visual Communication V	C	5
GRA 462 Visual Communication VI	C	5
GRA 484 Internship	Y	2

Check: Minimum 3.00 ASU Cumulative GPA

PSY 101 Introduction to Psychology (SOBE)	C	3
ARS 101 Art from Prehistory Through Middle Ages (HUAD) OR ARS 102 Art from Renaissance to Modernism (HUAD)	C	3
ARS 300 Introduction to Art (HUAD)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
DSC 100 ASU Design Experience	C	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Sales and Marketing Essentials, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BASMECERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in sales and marketing essentials requires 15 credit hours with at least 12 upper division credits. To receive the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.		
Required Courses		
MKT 390 Essentials of Marketing	C	3
MKT 391 Essentials of Selling	C	3
Certificate Electives		
Upper Division Sales and Marketing Essentials Certificate Electives	C	9
Select three courses		
MKT 392 Essentials of Business Marketing		
MKT 395 Essentials of Advertising and Marketing Communication		
MKT 396 Essentials of Services Marketing		

Requirement	Minimum Grade	Credit Hours
MKT 397 Essentials of Global Marketing		
MKT 398 Essentials of Sports Business		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT History and Russian and East European Studies (LAHISBA and LAREECERT)

Program description:
Students pursuing a Bachelor of Arts in history study the growth and development of human society from political, social, economic and cultural perspectives. Students learn to craft stories from materials that other people have left behind --- constitutions, land deeds, diaries, guns and bones. They learn to make decisions about what to investigate, whom to believe, what happened first, and why things fell apart or came together.

History is a discipline that constantly adopts new techniques of analysis and new ways of gathering and presenting information. Students of history learn to use and create digital media, work on public history projects, conduct oral history interviews, perform qualitative analysis and present their findings in compelling ways to all kinds of audiences.

The certificate program in Russian and East European studies encourages students to develop competency in Russian or another East European or Eurasian language as well as the culture and politics of the region.

Coursework leading to the certificate is offered by outstanding faculty members in diverse fields of study including architecture, economics, film studies, geography, history, international business, literature, music, political science and religious studies.

A one-credit, student-led capstone course is completed in the student's junior or senior year; with the support of an advisor, students can write a research paper on the Russian and East European studies topic of their choice, prepare a writing sample or a graduate school application, or work on a creative project.

A student with a major in any school or department may pursue this certificate and develop a personalized plan of study in cooperation with an advisor at The Melikian Center: Russian, Eurasian and East European Studies.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
History majors are in demand. They know how to find and evaluate evidence, form arguments and present analysis --- skills essential to most careers, including law, business, education, medicine and government.

Three out of four employers surveyed by the Association of American Colleges and Universities say they want colleges to place more emphasis on helping students develop five key learning outcomes: critical thinking, complex problem-solving, written communication, oral communication and applied knowledge in real-world settings. These learning outcomes are integral elements of an undergraduate degree in history.

History majors seek jobs in:
- business and industry
- communications
- education
- foreign service
- law enforcement
- museums
- public administration
- social services

History is an excellent foundation for graduate and professional studies in:
- business
- history
- justice studies
- law

- medicine
- public administration
- public history
- theology

Students who complete the Russian and East European studies certificate enhance their prospects for highly competitive study abroad scholarships, including Fulbright, Boren and Critical Language Scholarship Program, and for selective graduate programs. Certificate holders may also qualify for distinct internships and entry-level government employment opportunities at agencies such as the U.S. Department of State and the National Security Agency.

Curriculum - History, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAHISBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
HST 130 The Historian's Craft OR **HST 330 Historical Thinking** Students who have completed 30 credit hours and ENG 102 may take HST 330 in place of HST 130.	C	3
HST Survey Courses **HST 100 Global History to 1500 (HUAD)** **HST 101 Global History Since 1500 (HUAD)** **HST 102 Europe and the Mediterranean: Ancient and Medieval (HUAD)** **HST 103 Early Modern Europe: Renaissance to Enlightenment (GCSI)**	C	6

Requirement	Minimum Grade	Credit Hours
HST 104 Modern Europe: French Revolution to European Union (GCSI)		
HST 109 United States to 1865 (AMIT)		
HST 110 United States Since 1865 (HUAD)		
HST 111 Introduction to Asia (GCSI)		
HST 230 Introduction to Jewish Civilization (GCSI)		
HST 260 Introduction to Islam (GCSI)		
Upper Division Comparative History Course	C	3
For HST 303, HST 304, and HST 305, only the specific topics (course titles) listed below will count for the Comparative History requirement; any other topics of these courses will NOT satisfy the requirement.		
HST 302 Studies in History		
HST 303 Topic: Empires in Asia		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		
HST 304 Topic: Stalin to Putin		
HST 305 Topic: Empire & Revolution in Cold War Latin America		
HST 309 Exploration and Empire (GCSI)		
HST 326 The Global History of the Trans-Atlantic Slave Trade (GCSI)		
HST 336 Islamic Civilization (HUAD)		

Requirement	Minimum Grade	Credit Hours
HST 339 Islam in the Modern World (GCSI)		
HST 345 Environmental History (SUST)		
HST 358 Jewish History from Antiquity to 1492		
HST 359 Jewish History from 1492 to 1948		
HST 360 Crusades and Holy Wars (HUAD)		
HST 396 Islam and Politics (CIVI)		
HST 426 The British Empire		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
HST 454 History of Genocide (GCSI)		
HST 456 The Vietnam War (HUAD)		
HST 460 World War II (HUAD)		
Upper Division History in the Wild Course	C	3
For HST 302 and HST 306, only the specific topics (course titles) listed below will count for the History in the Wild requirement; any other topics of these courses will NOT satisfy the requirement.		
HST 302 Topic: Envisioning Peace		
HST 306 Topic: Historic Preservation in the U.S.		
HST 306 Topic: Monuments and Memory		

Requirement	Minimum Grade	Credit Hours
HST 306 Topic: U.S. Urban History **HST 414 Political History and Leadership** **HST 485 History in the Wild**		
HST 303 Studies in Asian History OR **HST 305 Studies in Latin American History** OR **HST 307 Studies in African History** HST 302, 305, and 307 are variable topics courses. Students may take these courses for credit multiple times, so long as the topics are different. Some topics carry a General Studies designation. Check the class schedule to confirm any General Studies designations for the specific course topic.	C	3
HST 304 Studies in European History HST 304 is a variable topics course. Some topics carry a General Studies designation. Check the class schedule to confirm any General Studies designation for the specific course topic.	C	3
HST 306 Studies in United States History HST 306 is a variable topics course. Some topics carry a General Studies designation. Check the class schedule to confirm any General Studies designations for the specific course topic.	C	3
All students are required to take one course from HST 304 and HST 306, plus one course chosen from HST 303, HST 305, or HST 307. Students may select any topic within these course numbers for this requirement. However, for the Comparative History and History in the Wild requirements, students must choose only from the specific topics shown in the Comparative History and History in the Wild lists. Any topic under HST 302 will count as a Comparative History course. Students must complete 33 total credit hours in history (HST), so any variable		

Requirement	Minimum Grade	Credit Hours
topics courses taken for Comparative History and History in the Wild will be in addition to the standard requirement for HST 304, HST 306, and (HST 303, 305, or 307).		
HST 495 Methods of Historical Inquiry	C	3
Upper Division **HST Elective**	C	6

Check: Minimum 2.25 Major GPA

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

Additional Requirements

Students must complete 12 credits of courses in Related Areas, at least six of which must be upper division.		
Upper Division Related Area Courses AFR Elective	C	6

AIS Elective

APA Elective

APH Elective

ARS Elective

ASB Elective

ASM Elective

ECN Elective

GCU Elective

HPS Elective

HUL Elective

JUS Elective

PHI Elective

POS Elective

REL Elective

SGS Elective

SOC Elective

TCL Elective

WST Elective

ARB 331 Arabic/Islamic Culture and Literature (GCSI)

ARB 335 Arabic Culture and Islam (GCSI)

ARB 336 Introduction to the Qur'an (GCSI)

ARB 337 Hadith and Prophetic Tradition

ARB 341 Quran Text and Women (GCSI)

ARB 351 Classical Arabic Literature (HUAD)

ARB 352 Modern Arabic Literature in Translation (HUAD)

ARB 360 Islamic Philosophical Literature

ARB 427 Arabic Prose: Reading the Arabian Nights

ARB 428 / **SLC 428 Gender and Sexuality Discourse in the Middle East**

BIO 316 History of Biology: Conflicts and Controversies (HUAD)

BIO 318 History of Medicine (HUAD)

CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)

CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation

CHI 345 Chinese Film and Civilization

CHI 348 Pathways into Chinese Culture

CHI 394 / **SLC 394 Topic: I Know Kung-fu: Chinese Martial Arts, Lit and Film**

CHI 451 / **SLC 451 Chinese Cultural History I**

CHI 452 / **SLC 452 Chinese Cultural History II**

CHI 470 Modern Chinese Literature and Culture

ENG Elective (not from ENG 101-197)

FRE 305 Readings in French Literature

FRE 321 French Cultural Masterpieces I

FRE 322 French Cultural Masterpieces II

FRE 414 / ITA 414 / SLC 414 French and Italian Popular Culture (GCSI)

FRE 415 French Civilization I

FRE 416 French Civilization II

FRE 453 Theater of the 19th Century

FRE 461 Modern Narrative

GER 315 Germanic Mythology

GER 416 German Civilization

GER 421 German Literature Survey, 800-1800

GER 422 German Literature Survey, 1800-Today

GER 431 German Humor

GER 441 / SLC 441 Fairy Tales to Disney Movies (GCSI)

GRK 301 Ancient Greek Literature I

GRK 302 Ancient Greek Literature II

GRK 444 / LAT 444 / SLC 444 Heroes, Ancient and Modern

HEB 347 / SLC 347 Modern Israeli Literature in Translation (HUAD)

HEB 348 / SLC 348 Israeli Society and Culture (HUAD)

HEB 375 Contemporary Culture of Israel

HON 370 History of Ideas (GCSI)

HON 378 Culture and Society in England, Ireland, and Scotland

HON 379 Romantics, Victorians, and Moderns

HON 380 Aesthetics and Society (HUAD)

ITA 321 Italian Renaissance Culture: Politicians, Merchants, Artists and Courtesans

ITA 322 Modern Italian Culture: Explorers, Scientists, Musicians and Revolutionaries (HUAD)

ITA 420 Italian Cinema

JPN 333 Japanese Civilization from the Ice Age to Last Thursday

JPN 354 / SLC 354 Zen and Japanese Culture

JPN 355 / SLC 355 Religious Practice of People in Modern Japan (GCSI)

JPN 367 / SLC 367 Religion, Philosophy and Culture in Japan (GCSI)

JPN 370 / SLC 370 Japanese Aesthetics: Art and Beauty in Japan

JPN 394 / SLC 394 Topic: Anime, Manga, and Religion in Japan

JPN 414 Introduction to Classical Japanese

JPN 415 Advanced Classical Japanese

JPN 424 / SLC 424 The Art of the Ninja (GCSI)

JPN 445 Readings in Modern Japanese Letters and

Culture

JST Elective (not from JST 133, 233, 333, or 334)

KOR 321 / SLC 321 Modern Korean Literature

KOR 347 Korean Film and Literature (HUAD)

KOR 350 Women of Korea

KOR 375 / SLC 375 Intercultural Communication in Korea (SOBE)

KOR 415 / SLC 415 Korean Popular Culture

KOR 420 / SLC 420 Emotions Across Languages, Cultures and History (SOBE)

KOR 457 / SLC 457 Premodern Korea in a Global Context

LAT 421 Roman Literature

MCO 418 History of Mass Communication (SOBE)

MUS 354 Popular Music

MUS 355 American Music (HUAD)

MUS 356 Broadway and the American Musical (HUAD)

MUS 362 Rap Music and Hip Hop Culture (HUAD)

MUS 371 World Music (GCSI)

MUS 410 History of Women in Music (HUAD)

POR 472 Transatlantic Encounters: Brazil and Portugal (GCSI)

PSY 414 History of Psychology

PUP 412 History of the City

RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel

RUS 323 Russian Literature and Revolution: The Twentieth Century

RUS 421 Pushkin

RUS 425 / THE 425 Chekhov and Russian Drama (HUAD)

RUS 430 Russian Short Story (HUAD)

SLC 340 / FMS 341 Approaches to International Cinema (GCSI)

SLC 344 / GRK 344 / LAT 344 Classics and Comics

SLC 425 Globalization: From Colonialism to Climate Change (SUST)

SLC 439 / RUS 439 Art in Exile: VladÃmir VladÃmirovich Nabokov

SLC 442 / ROM 442 Dracula and Vampire Lore (HUAD)

SLV 440 History of Slavic Languages (SOBE)

SPA 325 Introduction to Hispanic Literature (HUAD)

SPA 425 Understanding Spain: Literature and Culture Before 1700

SPA 426 Literature and Society in Modern Spain

SPA 427 Colonial and Postcolonial Latin American Literature (HUAD)

SPA 428 Foundational Texts of Latin American Literature Since Modernismo

SPA 429 Writing Mexico: Major Texts

SPA 434 Drama of the Golden Age

SPA 456 20th-Century Spanish American Fiction

SPA 464 JaitÃ³n Works in Chicano/a Literature

SPA 471 Civilization of the Indohispanomexicano Southwest (HUAD)

SPA 472 Latin American Society: Five Case Studies

SPA 473 Old and New Spaniards: Culture and Civilization of Spain (HUAD)

SPA 485 Chicano/a Short Story: Espanglish, Barrio y Xicanismo

SPA 486 Chicano/a Novel: Ã ltima, Rafa y Lala

SPA 487 Chicano/a Drama: Pachucos, Vendidos y Cerezitas

THE 320 History of the Theatre I (GCSI)

THE 321 History of the Theatre II (HUAD)

THE 322 Theatre History and Culture (HUAD)

THE 421 Shakespeare: Stage and Film (HUAD)

THE 430 History of Fashion I (HUAD)

THE 431 History of Fashion II: 20th-Century Fashion (HUAD)

Related Area Courses C 6

AFR Elective

AIS Elective

APA Elective

APH Elective

ARS Elective

ASB Elective

ASM Elective

ECN Elective

GCU Elective

HPS Elective

HUL Elective

JUS Elective

PHI Elective

POS Elective

REL Elective

SGS Elective

SOC Elective

TCL Elective

WST Elective

ARB 250 / SLC 250 Middle East Culture in a Global Perspective (GCSI)

ARB 331 Arabic/Islamic Culture and Literature (GCSI)

ARB 335 Arabic Culture and Islam (GCSI)

ARB 336 Introduction to the Qur'an (GCSI)

ARB 337 Hadith and Prophetic Tradition

ARB 341 Quran Text and Women (GCSI)

ARB 351 Classical Arabic Literature (HUAD)

ARB 352 Modern Arabic Literature in Translation (HUAD)

ARB 360 Islamic Philosophical Literature

ARB 427 Arabic Prose: Reading the Arabian Nights

ARB 428 / SLC 428 Gender and Sexuality Discourse in the Middle East

BIO 316 History of Biology: Conflicts and Controversies (HUAD)

BIO 318 History of Medicine (HUAD)

CHI 120 / SLC 120 Introduction to Chinese Culture (HUAD)

CHI 294 / SLC 294 Topic: Chinese Ghost Stories

CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)

CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation

CHI 345 Chinese Film and Civilization

CHI 348 Pathways into Chinese Culture

CHI 394 / SLC 394 Topic: I Know Kung-fu: Chinese Martial Arts, Lit and Film

CHI 451 / SLC 451 Chinese Cultural History I

CHI 452 / SLC 452 Chinese Cultural History II

CHI 470 Modern Chinese Literature and Culture

ENG Elective (not from ENG 101-197)

FRE 305 Readings in French Literature

FRE 321 French Cultural Masterpieces I

FRE 322 French Cultural Masterpieces II

FRE 414 / ITA 414 / SLC 414 French and Italian Popular Culture (GCSI)

FRE 415 French Civilization I

FRE 416 French Civilization II

FRE 453 Theater of the 19th Century

FRE 461 Modern Narrative

GER 315 Germanic Mythology

GER 416 German Civilization

GER 421 German Literature Survey, 800-1800

GER 422 German Literature Survey, 1800-Today

GER 431 German Humor

GER 441 / SLC 441 Fairy Tales to Disney Movies (GCSI)

GRK 142 / SLC 142 Ancient Greek Civilization (HUAD)

GRK 223 / LAT 223 / SLC 223 Introduction to Greek and Roman Mythology (HUAD)

GRK 301 Ancient Greek Literature I

GRK 302 Ancient Greek Literature II

GRK 444 / LAT 444 / SLC 444 Heroes, Ancient and Modern

HEB 347 / SLC 347 Modern Israeli Literature in Translation (HUAD)

HEB 348 / SLC 348 Israeli Society and Culture (HUAD)

HEB 375 Contemporary Culture of Israel

HON 171 The Human Event (GCSI)

HON 272 The Human Event (CIVI)

HON 370 History of Ideas (GCSI)

HON 378 Culture and Society in England, Ireland, and Scotland

HON 379 Romantics, Victorians, and Moderns

HON 380 Aesthetics and Society (HUAD)

ITA 321 Italian Renaissance Culture: Politicians, Merchants, Artists and Courtesans

ITA 322 Modern Italian Culture: Explorers, Scientists, Musicians and Revolutionaries (HUAD)

ITA 420 Italian Cinema

JPN 115 / SLC 115 Japanese Popular Culture: Anime, Manga and Film (GCSI)

JPN 333 Japanese Civilization from the Ice Age to Last Thursday

JPN 354 / SLC 354 Zen and Japanese Culture

JPN 355 / SLC 355 Religious Practice of People in Modern Japan (GCSI)

JPN 367 / SLC 367 Religion, Philosophy and Culture in Japan (GCSI)

JPN 370 / SLC 370 Japanese Aesthetics: Art and Beauty in Japan

JPN 394 / SLC 394 Topic: Anime, Manga, and Religion in Japan

JPN 414 Introduction to Classical Japanese

JPN 415 Advanced Classical Japanese

JPN 424 / SLC 424 The Art of the Ninja (GCSI)

JPN 445 Readings in Modern Japanese Letters and Culture

JST Elective (not from JST 133, 233, 333, or 334)

KOR 250 Korean Culture and Society

KOR 321 / SLC 321 Modern Korean Literature

KOR 347 Korean Film and Literature (HUAD)

KOR 350 Women of Korea

KOR 375 / SLC 375 Intercultural Communication in Korea (SOBE)

KOR 415 / SLC 415 Korean Popular Culture

KOR 420 / SLC 420 Emotions Across Languages, Cultures and History (SOBE)

KOR 457 / SLC 457 Premodern Korea in a Global Context

LAT 222 / SLC 222 Survey of Roman Literature

LAT 421 Roman Literature

MCO 418 History of Mass Communication (SOBE)

MUS 354 Popular Music

MUS 355 American Music (HUAD)

MUS 356 Broadway and the American Musical (HUAD)

MUS 362 Rap Music and Hip Hop Culture (HUAD)

MUS 371 World Music (GCSI)

MUS 410 History of Women in Music (HUAD)

POR 472 Transatlantic Encounters: Brazil and Portugal (GCSI)

PSY 414 History of Psychology

PUP 412 History of the City

RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel

RUS 323 Russian Literature and Revolution: The Twentieth Century

RUS 421 Pushkin

RUS 425 / THE 425 Chekhov and Russian Drama (HUAD)

RUS 430 Russian Short Story (HUAD)

SLC 123 Gods and Monsters: Comparative Mythology (GCSI)

SLC 141 / RUS 141 Russian Civilization: From Tsars to Putin (GCSI)

SLC 144 The Ancient Mediterranean

SLC 221 Survey of Ancient Greek Literature

SLC 294 / VTN 294 Topic: Vietnam: Beyond the War

SLC 340 / FMS 341 Approaches to International Cinema (GCSI)

SLC 344 / GRK 344 / LAT 344 Classics and Comics

SLC 425 Globalization: From Colonialism to Climate Change (SUST)

SLC 439 / RUS 439 Art in Exile: VladÃmir VladÃmirovich Nabokov

SLC 442 / ROM 442 Dracula and Vampire Lore (HUAD)

SLV 440 History of Slavic Languages (SOBE)

SPA 325 Introduction to Hispanic Literature (HUAD)

SPA 425 Understanding Spain: Literature and Culture Before 1700

SPA 426 Literature and Society in Modern Spain

SPA 427 Colonial and Postcolonial Latin American Literature (HUAD)

SPA 428 Foundational Texts of Latin American Literature Since Modernismo

SPA 429 Writing Mexico: Major Texts

SPA 434 Drama of the Golden Age

- SPA 456 20th-Century Spanish American Fiction
- SPA 464 JaitÃ³n Works in Chicano/a Literature
- SPA 471 Civilization of the Indohispanomexicano Southwest (HUAD)
- SPA 472 Latin American Society: Five Case Studies
- SPA 473 Old and New Spaniards: Culture and Civilization of Spain (HUAD)
- SPA 485 Chicano/a Short Story: Espanglish, Barrio y Xicanismo
- SPA 486 Chicano/a Novel: Ã ltima, Rafa y Lala
- SPA 487 Chicano/a Drama: Pachucos, Vendidos y Cerezitas
- THE 320 History of the Theatre I (GCSI)
- THE 321 History of the Theatre II (HUAD)
- THE 322 Theatre History and Culture (HUAD)
- THE 421 Shakespeare: Stage and Film (HUAD)
- THE 430 History of Fashion I (HUAD)
- THE 431 History of Fashion II: 20th-Century Fashion (HUAD)

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go

to: https://silc.asu.edu/student-life/academic-advising/language-testing

Except where prerequisites dictate the order, consult an academic advisor to determine the best sequence of upper-division history courses for your personal plan of study.

If planning on law school, prepare to take the LSAT in your junior year.

Not all courses in the course lists are available every term or available in both on-campus and online formats. Students should consult the class schedule prior to each term to confirm course availability.

Electives: students are encouraged to take HST 394: Career Readiness with a History Degree.

Consider participating in an Undergraduate Research Experience through the School of Historical, Philosophical and Religious Studies or a research opportunity in the Humanities Lab.

Consider participating in an internship to gain valuable career experience and contacts. For help exploring internship opportunities related to your major, meet with an academic advisor.

Many General Studies requirements can overlap with major requirements, leaving more room for electives. Consult an academic advisor to select the best courses for your personal plan of study.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Russian and East European Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAREECERT

Minimum credit hours: 19

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate in Russian and East European studies requires a minimum of 19 credit hours, of which at least three must be a language course and at least 12 must be upper division. A grade of "C" (2.00 on a 4.00 scale) or higher is required in all courses used toward the certificate.		

Language Requirement

Students may complete one language course from BCS, PLC, ROM, or RUS, or they may complete the Albanian, Armenian, BCS (Bosnian/Croatian/Serbian), Kazakh, Macedonian, Persian, Polish, Russian, Tatar, Turkish, Ukrainian, and Uzbek courses offered by the Critical Languages Institute to fulfill the language requirement. See https://melikian.asu.edu/cli

Language Requirement	C	3 - 5
BCS 101 Elementary Serbo-Croatian		
BCS 102 Elementary Serbo-Croatian		
BCS 201 Intermediate Serbo-Croatian		
BCS 202 Intermediate Serbo-Croatian		

Requirement	Minimum Grade	Credit Hours
BCS 311 Bosnian/Croatian/Serbian Composition and Conversation I		
BCS 312 Bosnian/Croatian/Serbian Composition and Conversation II		
PLC 101 Elementary Polish		
PLC 102 Elementary Polish		
PLC 201 Intermediate Polish		
PLC 202 Intermediate Polish		
PLC 311 Advanced Polish I		
PLC 312 Advanced Polish II		
ROM 101 Elementary Romanian Language and Culture I		
ROM 102 Elementary Romanian Language and Culture II		
ROM 201 Intermediate Romanian Language and Culture I		
ROM 202 Intermediate Romanian Language and Culture II		
ROM 313 Romanian Composition and Conversation		
ROM 314 Romanian Composition and Conversation		
ROM 411 Advanced Spoken and Written Romanian I		
ROM 412 Advanced Spoken and Written Romanian II		
RUS 101 Elementary Russian I		
RUS 102 Elementary Russian II		
RUS 201 Intermediate Russian I		
RUS 202 Intermediate Russian II		
RUS 211 Conversational Russian I		
RUS 212 Conversational Russian II		

Requirement	Minimum Grade	Credit Hours
RUS 311 Russian Society I		
RUS 312 Russian Society II		
RUS 411 Russian Language, History and Culture I		
RUS 412 Russian Language, History and Culture II		

Native speakers of a language must complete four credit hours in a different language to fulfill this requirement.

Required Electives

Upper Division Required Electives	C	6
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 370 Eastern Europe in Transition		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
POS 352 European Democracies		

Requirement	Minimum Grade	Credit Hours
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		
RUS 323 Russian Literature and Revolution: The Twentieth Century		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		

Other HST 304 topics appropriate to the certificate's regional focus may be used with the approval of the certificate advisor. Courses shown that are not used to satisfy a Required Certificate Elective may be used as an Area-Related Elective.

Area-Related Electives

Area-Related Electives	C	3
ARC 330 World and Western Architecture for Nonmajors		
ARC 331 World and Western Architecture I		
ARC 332 World and Western Architecture II		
ASB 345 Culture and Society Transformation (GCSI)		
CEL 394 Topic: War&Culture Cntrl Europe: Empire or Lib Democracy		
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
CEL 494 Topic: Putin and Russia's Dead Souls		
COM 691 Topic: Strategic Communication and Disinformation		
ENG 332 Topic: Jewish Writers & The Cold War		
ENG 333 Topic: American Jewish Literature during the Cold War		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		

Requirement	Minimum Grade	Credit Hours
ENG 435 Literatures and Cultures of Immigration and Diaspora		
GCU 325 Geography of Europe (GCSI)		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
GSC 598 Topic: Post-Soviet Geopolitics		
HON 394 Topic: Amazons to Fighter Pilots:HistoryofWarSex&Gender		
HON 394 Topic: Archaeology of the Silk Roads		
HON 394 Topic: Dictatorship & the Twentieth Century		
HON 394 Topic: Love,Hospitality,Belonging:LivesBetweenEurope&Asia		
HON 394 Topic: Mummies and Marauders, Merchants and Monks		
HON 394 Topic: Points of Entry:Space&Place in Eurasian Borderland		
HON 394 Topic: The Cold War World:Conflict,Vitriol,&Globalization		
HST 302 Topic: War and Political Thought		
HST 302 Topic: WWII in Comparative Perspective		
HST 304 Topic: A Survey of Soviet History		
HST 304 Topic: Black Death:Pandemic Disease in the Medieval World		
HST 304 Topic: Fascism: Italy, Germany, and Beyond		
HST 304 Topic: Nazi Germany		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		

Requirement	Minimum Grade	Credit Hours
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 304 / JST 304 Topic: Exiles, Migrants, Refugees in Jewish History		
HST 350 Later Middle Ages (GCSI)		
HST 354 Revolutionary Europe (GCSI)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 356 Europe since 1945		
HST 359 Jewish History from 1492 to 1948		
HST 369 History and Memory of the Holocaust		
HST 370 Eastern Europe in Transition		
HST 429 Modern Germany		
HST 430 The Ottoman Empire in the Classical Period		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
HST 454 / REL 454 / FOR 454 History of Genocide (GCSI)		
HST 460 World War II (HUAD)		
HST 598 / WWS 598 Topic: Eastern Front: War of Annihilation		
IDS 313 Topic: Identity and Conflict in Europe		
IGD 598 Topic: Global Capitalism and Inclusive Development		

Requirement	Minimum Grade	Credit Hours
JHR 501 Proseminar in Social Justice and Human Rights		
JHR 598 Topic: Social Inequality		
JUS 374 The Holocaust, Genocide, and Human Rights		
LIA 194 Topic: DiscSem: The Law of Armed Conflict & War Crimes		
MHL 445 Music of the Silk Road (HUAD)		
MHL 598 Topic: Shostakovich, his life and times		
POS 305 Topic: Conflict and Film (HUAD) **or** POS 305 Politics and Film (HUAD)		
POS 352 European Democracies		
POS 394 Topic: Gender and Armed Conflict		
POS 394 Topic: Model UN		
POS 394 Topic: Violence and Politics		
POS 485 Political Economy (SOBE)		
POS 486 International Political Economy (GCSI)		
POS 494 / SGS 494 Topic: Democratic Erosion		
POS 598 Topic: Politics of Authoritarian Rule		
REL 301 Comparative Mysticism (HUAD)		
REL 365 Islamic Civilization (HUAD)		
REL 366 Islam in the Modern World (GCSI)		
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)		
ROM 343 Culture and Society Transformation (GCSI)		

Requirement	Minimum Grade	Credit Hours
RUS 141 / HST 141 / SLC 141 Russian Civilization: From Tsars to Putin (GCSI)		
RUS 241 / HST 241 / SLC 241 / HON 294 Topic: Russian Pop Culture: Protest and Propaganda		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		
RUS 323 Russian Literature and Revolution: The Twentieth Century		
RUS 394 Topic: Russian Grammar and Lexicology		
RUS 421 Pushkin		
RUS 423 Dostoevsky and Tolstoy (HUAD)		
RUS 425 Chekhov and Russian Drama (HUAD)		
RUS 430 Russian Short Story (HUAD)		
RUS 439 / SLC 439 Art in Exile: VladÃmir VladÃmirovich Nabokov		
RUS 440 Russian Mass Media		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		
SGS 370 Geopolitics (GCSI)		
SGS 394 Topic: Greece and Macedonia		
SGS 394 Topic: Politics of Global Justice		
SGS 494 Topic: International Criminal Tribunals & Global Security		
SLC 202 Exploring Cultures: Words, Images, Stories (HUAD)		

Requirement	Minimum Grade	Credit Hours
SLC 212 Language and Culture Clash (SOBE)		
SLC 294 / RUS 294 / SLV 294 Topic: Eastern European Science Fiction		
SLC 304 / SLV 304 Digital Humanities for Language Majors		
SLC 429 / CEL 429 Topic: Politics & Culture in European Short Fiction or SLC 598 Topic: Politics and Culture in European Short Fiction or ENG 429 Topic: Politics & Culture in European Short Fiction		
SLC 442 / ROM 442 Dracula and Vampire Lore (HUAD)		
SLC 494 Topic: Society and Culture in Modern Europe		
SLV 440 History of Slavic Languages (SOBE)		
Upper Division Area-Related Electives	C	6
ARC 330 World and Western Architecture for Nonmajors		
ARC 331 World and Western Architecture I		
ARC 332 World and Western Architecture II		
ASB 345 Culture and Society Transformation (GCSI)		
CEL 394 Topic: War&Culture Cntrl Europe: Empire or Lib Democracy		
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
CEL 494 Topic: Putin and Russia's Dead Souls		
COM 691 Topic: Strategic Communication and Disinformation		
ENG 332 Topic: Jewish Writers & The Cold War		
ENG 333 Topic: American Jewish Literature during the Cold War		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		

Requirement	Minimum Grade	Credit Hours
ENG 435 Literatures and Cultures of Immigration and Diaspora		
GCU 325 Geography of Europe (GCSI)		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
GSC 598 Topic: Post-Soviet Geopolitics		
HON 394 Topic: Amazons to Fighter Pilots:HistoryofWarSex&Gender		
HON 394 Topic: Archaeology of the Silk Roads		
HON 394 Topic: Dictatorship & the Twentieth Century		
HON 394 Topic: Love,Hospitality,Belonging:LivesBetweenEurope&Asia		
HON 394 Topic: Mummies and Marauders, Merchants and Monks		
HON 394 Topic: Points of Entry:Space&Place in Eurasian Borderland		
HON 394 Topic: The Cold War World:Conflict,Vitriol,&Globalization		
HST 302 Topic: War and Political Thought		
HST 302 Topic: WWII in Comparative Perspective		
HST 304 Topic: A Survey of Soviet History		
HST 304 Topic: Black Death:Pandemic Disease in the Medieval World		
HST 304 Topic: Fascism: Italy, Germany, and Beyond		
HST 304 Topic: Nazi Germany		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		

Requirement	Minimum Grade	Credit Hours
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 304 / JST 304 Topic: Exiles, Migrants, Refugees in Jewish History		
HST 350 Later Middle Ages (GCSI)		
HST 354 Revolutionary Europe (GCSI)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 356 Europe since 1945		
HST 359 Jewish History from 1492 to 1948		
HST 369 History and Memory of the Holocaust		
HST 370 Eastern Europe in Transition		
HST 429 Modern Germany		
HST 430 The Ottoman Empire in the Classical Period		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
HST 454 / REL 454 / FOR 454 History of Genocide (GCSI)		
HST 460 World War II (HUAD)		
HST 598 / WWS 598 Topic: Eastern Front: War of Annihilation		
IDS 313 Topic: Identity and Conflict in Europe		
IGD 598 Topic: Global Capitalism and Inclusive Development		

Requirement	Minimum Grade	Credit Hours
JHR 501 Proseminar in Social Justice and Human Rights		
JHR 598 Topic: Social Inequality		
JUS 374 The Holocaust, Genocide, and Human Rights		
MHL 445 Music of the Silk Road (HUAD)		
MHL 598 Topic: Shostakovich, his life and times		
POS 305 Topic: Conflict and Film (HUAD) **or** POS 305 Politics and Film (HUAD)		
POS 352 European Democracies		
POS 394 Topic: Gender and Armed Conflict		
POS 394 Topic: Model UN		
POS 394 Topic: Violence and Politics		
POS 485 Political Economy (SOBE)		
POS 486 International Political Economy (GCSI)		
POS 494 / SGS 494 Topic: Democratic Erosion		
POS 598 Topic: Politics of Authoritarian Rule		
REL 301 Comparative Mysticism (HUAD)		
REL 365 Islamic Civilization (HUAD)		
REL 366 Islam in the Modern World (GCSI)		
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)		
ROM 343 Culture and Society Transformation (GCSI)		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		

Requirement	Minimum Grade	Credit Hours
RUS 323 Russian Literature and Revolution: The Twentieth Century		
RUS 394 Topic: Russian Grammar and Lexicology		
RUS 421 Pushkin		
RUS 423 Dostoevsky and Tolstoy (HUAD)		
RUS 425 Chekhov and Russian Drama (HUAD)		
RUS 430 Russian Short Story (HUAD)		
RUS 439 / SLC 439 Art in Exile: VladÃmir VladÃmirovich Nabokov		
RUS 440 Russian Mass Media		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		
SGS 370 Geopolitics (GCSI)		
SGS 394 Topic: Greece and Macedonia		
SGS 394 Topic: Politics of Global Justice		
SGS 494 Topic: International Criminal Tribunals & Global Security		
SLC 304 / SLV 304 Digital Humanities for Language Majors		
SLC 429 / CEL 429 Topic: Politics & Culture in European Short Fiction **or** SLC 598 Topic: Politics and Culture in European Short Fiction **or** ENG 429 Topic: Politics & Culture in European Short Fiction		
SLC 442 / ROM 442 Dracula and Vampire Lore (HUAD)		
SLC 494 Topic: Society and Culture in Modern Europe		

Requirement	Minimum Grade	Credit Hours
SLV 440 History of Slavic Languages (SOBE)		

Arranged honors theses and upper-division colloquia with Melikian Center faculty affiliates may also be used toward this requirement.

Capstone Project

LIA 485 REES Certificate Capstone In their junior or senior year, students will complete the 1-credit REES Certificate Capstone. This can be in the form of a reading course offered by the Melikian Center OR a project chosen in cooperation with a Melikian Center faculty affiliate. The project should represent an extended, research-based focus on some dimension of the region's languages, cultures, religions, histories, and/or politics. It may take the form of an extended research paper, honors thesis, translation project, research assistantship, or internship. Other courses may be used with the approval of the certificate advisor.	C	1

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Human Systems Engineering and Project Management Essentials (ESHSEBS and LSPMGECERT)

Program description:
The Bachelor of Science program in human systems engineering provides students with an understanding of the science of human performance. Students gain experience using methods and tools to apply this understanding to design and problem-solving in a wide variety of domains, such as product usability, learning design, sports performance, and workplace and hospital safety.

Many diverse professions need experts in human factors to work on problems that involve an understanding of human performance; these areas include user experience, aviation human factors, cognitive performance, consumer psychology, transportation human factors, patient safety, effective teamwork, health psychology, learning optimization, social cognition, threat detection and sports psychology.

In the stackable undergraduate certificate program in project management essentials, students gain the skills to lead successful projects. This program covers key areas of project management including: project leadership, strategy, sustainability and organizational behavior. The program is ideal for those looking to enhance their project management expertise and drive positive change in any industry.

This certificate program can be completed as a standalone certificate, completed alongside a degree program, or it can stack into a future bachelor's degree.

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 170 - Precalculus
Math intensity: Moderate

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe or Online

Career opportunities:
Graduates of the human systems engineering program are prepared for industry and government careers. They may work as a member of a design team for a product or system in a position such as:

- game designer
- human factors engineer
- human systems integrator
- interface designer
- user experience designer
- usability engineer

This certificate in project management essentials opens doors to a wide variety of entry-level career opportunities. Graduates can pursue roles such as project coordinator, project assistant, junior project manager and project scheduler, among others. These positions offer the chance to support senior project managers, manage project schedules, assist with administrative tasks, and help ensure the smooth execution of projects.

Curriculum - Human Systems Engineering, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESHSEBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Human Systems Engineering Core		
HSE 101 Introduction to Human Systems Engineering (SOBE)	C	3
HSE 223 Applied Biology of Human Behavior (SOBE)	C	3
HSE 224 Applied Social Science (SOBE)	C	3
HSE 225 Human Systems Integration	C	3
HSE 230 Statistics for Human Systems Research I (QTRS)	C	3
HSE 290 Experimental Methods for Human Systems Research (QTRS)	C	3
HSE 323 Perceptual Systems (SOBE)	C	3
HSE 324 Applied Cognitive Science (SOBE)	C	3
HSE 325 Human-Computer Interaction	C	3
HSE 390 Qualitative Research Methods	C	3
HSE 430 Statistics for Human Systems Research II (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
HSE 477 Human Systems Engineering Capstone Experience	C	3

Human Systems Engineering Electives

HSE 484 Internship **OR** Upper Division **HSE Elective**	3
HSE Elective	3
Upper Division **HSE Elective**	12

Human Systems Engineering Major GPA

Check: Minimum 2.0 Major GPA

Math, Science, and Interdisciplinary Studies Requirements

MAT 170 Precalculus (MATH)	C	3

Related Courses

FSE 100 Introduction to Engineering	2

Technical Electives

Technical Elective	12
Upper Division Technical Elective	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-TPS The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Project Management Essentials, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LSPMGECERT

Minimum credit hours: 15

Upper division minimum credit hours: 3

Requirement	Minimum Grade	Credit Hours
OGL 220 Behavioral Dynamics in Organizations (SOBE)	C	3
PMG 101 Navigating Project Management: Successes, Failures, and Leadership Dynamics	C	3
PMG 203 Project Management for People, Planet and Prosperity	C	3
PMG 240 Introduction to Project Management	C	3
PMG 321 Project Leadership, Strategy and Scope	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Information Technology and Applied Business Data Analytics (TSIFTBS and BABDACERT)

Program description:
Technology continues to evolve each day. Every organization needs information technology professionals to protect their networks, troubleshoot computer systems, develop applications and manage IT projects.

The Bachelor of Science program in information technology covers key disciplines that incorporate emerging technologies, including agile software development, data management and analytics, network administration, cloud computing and cybersecurity.

Students have the opportunity to select technical electives in different interdisciplinary areas. Within a project-driven curriculum, students take a learn-by-doing approach that prepares them for careers in IT.

Accredited by the Computing Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Information Technology Program Criteria.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
IT careers are growing fast, according to the Bureau of Labor Statistics: https://www.bls.gov/ooh/computer-and-information-technology/home.htm. The exciting career path of an IT professional can place graduates in positions around the world, in any industry. These industries include:

- biomedical
- construction
- defense
- education
- entertainment
- geospatial
- informatics
- sports
- sustainable environments

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing.

Curriculum - Information Technology, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: TSIFTBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Information Technology Core		
IFT 101 Information Technology Programming Logic	C	3
IFT 103 Operating System Architecture	C	3
IFT 166 Introduction to Internet Networking	C	3
IFT 200 Information Modeling, Storage and Retrieval	C	3
IFT 202 Foundations of Information and Computer System Security	C	3
IFT 210 Introduction to Java Technologies	C	3
IFT 220 Managing Configurations and Active Directory	C	3
IFT 250 Introduction to UNIX Utilities	C	3
IFT 266 Network Information Communication Technology	C	3
IFT 300 Intermediate Database Management Systems	C	3
IFT 301 Web Programming for Human Computer Interface	C	3

Requirement	Minimum Grade	Credit Hours
IFT 310 Information Systems Project Development	C	3
IFT 320 Managing the Cloud	C	3
IFT 372 Wireless Fundamentals	C	3
IFT 381 Information System Security	C	3
IFT 383 Shell and Script Programming with UNIX	C	3
IFT 458 Middleware Programming and Database Security	C	3
IFT 401 Information Technology Capstone		3

Information Technology Technical Electives

Upper Division Primary Focus Area

IFT 360 Applications in Artificial Intelligence IFT 365 Applied Programming Language for Information Technology IFT 370 Mobile Computing and Applications for Information Technology IFT 410 Big Data Tools and Practices IFT 421 Data in the Cloud for Information Technology IFT 460 Managing Intelligent Devices in an Enterprise Environment IFT 494 Topic: Appl Multi Tier End to End Application Development	C	12

Information Technology Major GPA

Check: Minimum 2.0 Major GPA

Math, Science, and Interdisciplinary Studies Requirements

HSE 101 Introduction to Human Systems Engineering (SOBE)	C	3
HSE 230 Statistics for Human Systems Research I (QTRS)	C	3
HST 318 History of Engineering (HUAD)		3
MAT 210 Brief Calculus (MATH)	C	3
MAT 243 Discrete Mathematical Structures		3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-IFT The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Information Technology and Applied Cybersecurity (TSIFTBS and ASACSCERT)

Program description:
Technology continues to evolve each day. Every organization needs information technology professionals to protect their networks, troubleshoot computer systems, develop applications and manage IT projects.

The Bachelor of Science program in information technology covers key disciplines that incorporate emerging technologies, including agile software development, data management and analytics, network administration, cloud computing and cybersecurity.

Students have the opportunity to select technical electives in different interdisciplinary areas. Within a project-driven curriculum, students take a learn-by-doing approach that prepares them for careers in IT.

Accredited by the Computing Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Information Technology Program Criteria.

The applied cybersecurity certificate program enables students to build competencies in security operations, risk assessment, network security, and governmental and regulatory compliance in an interdisciplinary learning setting. Building on core skills that they bring with them from their majors, students practice dealing with cyber-threats and resolving issues from multiple perspectives.

The program is offered through a collaboration between the New College of Interdisciplinary Arts and Sciences, the Ira A. Fulton Schools of Engineering, and the W. P. Carey School of Business.

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: Polytechnic, Tempe, West Valley

Career opportunities:
IT careers are growing fast, according to the Bureau of Labor Statistics: https://www.bls.gov/ooh/computer-and-information-technology/home.htm. The exciting career path of an IT professional can place graduates in positions around the world, in any industry. These industries include:

- biomedical
- construction
- defense
- education
- entertainment
- geospatial
- informatics
- sports
- sustainable environments

This program is an ideal supplement for students interested in careers in cybersecurity in the private sector or within government agencies, such as the FBI, U.S. Department of Homeland Security, the National Security Agency and the U.S. Department of Defense. The certificate in applied cybersecurity provides a solid background for students interested in the following careers:

- chief information security officer
- cyber risk analyst
- information security engineer
- network security engineer
- security operations center analyst

Curriculum - Information Technology, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: TSIFTBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Information Technology Core		
IFT 101 Information Technology Programming Logic	C	3
IFT 103 Operating System Architecture	C	3
IFT 166 Introduction to Internet Networking	C	3
IFT 200 Information Modeling, Storage and Retrieval	C	3
IFT 202 Foundations of Information and Computer System Security	C	3
IFT 210 Introduction to Java Technologies	C	3
IFT 220 Managing Configurations and Active Directory	C	3
IFT 250 Introduction to UNIX Utilities	C	3
IFT 266 Network Information Communication Technology	C	3
IFT 300 Intermediate Database Management Systems	C	3
IFT 301 Web Programming for Human Computer Interface	C	3

Requirement	Minimum Grade	Credit Hours
IFT 310 Information Systems Project Development	C	3
IFT 320 Managing the Cloud	C	3
IFT 372 Wireless Fundamentals	C	3
IFT 381 Information System Security	C	3
IFT 383 Shell and Script Programming with UNIX	C	3
IFT 458 Middleware Programming and Database Security	C	3
IFT 401 Information Technology Capstone		3

Information Technology Technical Electives

Upper Division Primary Focus Area

IFT 360 Applications in Artificial Intelligence IFT 365 Applied Programming Language for Information Technology IFT 370 Mobile Computing and Applications for Information Technology IFT 410 Big Data Tools and Practices IFT 421 Data in the Cloud for Information Technology IFT 460 Managing Intelligent Devices in an Enterprise Environment IFT 494 Topic: Appl Multi Tier End to End Application Development	C	12

Information Technology Major GPA

Check: Minimum 2.0 Major GPA

Math, Science, and Interdisciplinary Studies Requirements

HSE 101 Introduction to Human Systems Engineering (SOBE)	C	3
HSE 230 Statistics for Human Systems Research I (QTRS)	C	3
HST 318 History of Engineering (HUAD)		3
MAT 210 Brief Calculus (MATH)	C	3
MAT 243 Discrete Mathematical Structures		3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-IFT The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Cybersecurity, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: New College of Interdisciplinary Arts and Sciences

Plan Code: ASACSCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied cybersecurity consists of 15 credit hours of coursework, of which a minimum of 12 hours must be upper division. Students must complete courses from more than one subject to fulfill the certificate requirements. All courses used to satisfy requirements for the certificate must be completed with a grade of "C" (2.00 on a 4.00 scale) or better.		
CSE 365 Information Assurance or IFT 202 Foundations of Information and Computer System Security	C	3
Upper Division Group A - Security Operations and Risk Management **ACO 401 / CIS 401 Managing Cyber Risks in Enterprise Business Processes** **ACO 461 Security Operations** **IFT 381 Information System Security**	C	3
Upper Division Group B - Systems and Network Security **ACO 431 Network Security** **CSE 466 Computer Systems Security** **CSE 468 Computer Network Security** **IFT 458 Middleware Programming and Database Security**	C	3

Requirement	Minimum Grade	Credit Hours
IFT 475 Security Analysis		
or Upper Division Group C - Forensics/Cyber Crime		
ACO 331 Network Forensics Analysis		
CSE 469 Computer and Network Forensics		
FOR 350 Digital Forensics		
IFT 482 Network Forensics		
Upper Division Group D - Policy		
ACO 351 Governance, Risk and Compliance		
ACO 402 / CIS 402 Privacy, Ethics and Compliance Issues	C	3
CSE 467 Data and Information Security		
IFT 483 Security Compliance for Information Technology		
Upper Division Group E - Project		
ACO 484 Internship **or** ACO 499 Individualized Instruction		
CIS 440 Capstone in Information Systems		
CSE 485 Computer Science Capstone Project I **or** CSE 486 Computer Science Capstone Project II	C	3
IFT 401 Information Technology Capstone		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Information Technology and Mathematical Concepts of Engineering (TSIFTBS and LAMACECERT)

Program description:
Technology continues to evolve each day. Every organization needs information technology professionals to protect their networks, troubleshoot computer systems, develop applications and manage IT projects.

The Bachelor of Science program in information technology covers key disciplines that incorporate emerging technologies, including agile software development, data management and analytics, network administration, cloud computing and cybersecurity.

Students have the opportunity to select technical electives in different interdisciplinary areas. Within a project-driven curriculum, students take a learn-by-doing approach that prepares them for careers in IT.

Accredited by the Computing Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Information Technology Program Criteria.

The certificate program in mathematical concepts of engineering is designed for students who seek a strong foundation in mathematics to support their interests in engineering. Combining a core foundation in the quantitative and analytical skills found in mathematics with related skills in engineering, the program provides students with a solid mathematical background well-suited for multiple career paths.

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
IT careers are growing fast, according to the Bureau of Labor Statistics: https://www.bls.gov/ooh/computer-and-information-technology/home.htm. The exciting career path of an IT professional can place graduates in positions around the world, in any industry. These industries include:

- biomedical
- construction
- defense
- education
- entertainment
- geospatial
- informatics
- sports
- sustainable environments

The certificate program in mathematical concepts of engineering complements many major programs of study. Graduates with this enhanced math background can become more marketable to employers.

Curriculum - Information Technology, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: TSIFTBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Information Technology Core		
IFT 101 Information Technology Programming Logic	C	3
IFT 103 Operating System Architecture	C	3
IFT 166 Introduction to Internet Networking	C	3
IFT 200 Information Modeling, Storage and Retrieval	C	3
IFT 202 Foundations of Information and Computer System Security	C	3
IFT 210 Introduction to Java Technologies	C	3
IFT 220 Managing Configurations and Active Directory	C	3
IFT 250 Introduction to UNIX Utilities	C	3
IFT 266 Network Information Communication Technology	C	3
IFT 300 Intermediate Database Management Systems	C	3
IFT 301 Web Programming for Human Computer Interface	C	3

Requirement	Minimum Grade	Credit Hours
IFT 310 Information Systems Project Development	C	3
IFT 320 Managing the Cloud	C	3
IFT 372 Wireless Fundamentals	C	3
IFT 381 Information System Security	C	3
IFT 383 Shell and Script Programming with UNIX	C	3
IFT 458 Middleware Programming and Database Security	C	3
IFT 401 Information Technology Capstone		3

Information Technology Technical Electives

Upper Division Primary Focus Area

IFT 360 Applications in Artificial Intelligence IFT 365 Applied Programming Language for Information Technology IFT 370 Mobile Computing and Applications for Information Technology IFT 410 Big Data Tools and Practices IFT 421 Data in the Cloud for Information Technology IFT 460 Managing Intelligent Devices in an Enterprise Environment IFT 494 Topic: Appl Multi Tier End to End Application Development	C	12

Information Technology Major GPA

Check: Minimum 2.0 Major GPA

Math, Science, and Interdisciplinary Studies Requirements

HSE 101 Introduction to Human Systems Engineering (SOBE)	C	3
HSE 230 Statistics for Human Systems Research I (QTRS)	C	3
HST 318 History of Engineering (HUAD)		3
MAT 210 Brief Calculus (MATH)	C	3
MAT 243 Discrete Mathematical Structures		3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-IFT The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Mathematical Concepts of Engineering, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAMACECERT

Minimum credit hours: 21

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The mathematical concepts of engineering certificate requires a minimum of 21 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		

Required Courses

IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 266 Calculus for Engineers II (MATH) **or** **MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3
MAT 267 Calculus for Engineers III (MATH) **or** **MAT 272 Calculus with Analytic Geometry III (MATH)**	C	3
MAT 275 Modern Differential Equations (MATH) **or** **MAT 274 Elementary Differential Equations (MATH)**	C	3
MAT 343 Applied Linear Algebra **or** **MAT 342 Linear Algebra**	C	3

Requirement	Minimum Grade	Credit Hours
MAT 343 and STP 420 must be completed with courses offered by the School of Mathematical and Statistical Sciences.		
STP 420 Introductory Applied Statistics (QTRS)	C	3

Elective (choose one)

Upper Division Mathematical Concepts of Engineering Electives

DAT 301 Exploring Data in R and Python	C	3
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 470 Stochastic Operations Research		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Information Technology and Project Management Essentials (TSIFTBS and LSPMGECERT)

Program description:
Technology continues to evolve each day. Every organization needs information technology professionals to protect their networks, troubleshoot computer systems, develop applications and manage IT projects.

The Bachelor of Science program in information technology covers key disciplines that incorporate emerging technologies, including agile software development, data management and analytics, network administration, cloud computing and cybersecurity.

Students have the opportunity to select technical electives in different interdisciplinary areas. Within a project-driven curriculum, students take a learn-by-doing approach that prepares them for careers in IT.

Accredited by the Computing Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Information Technology Program Criteria.

In the stackable undergraduate certificate program in project management essentials, students gain the skills to lead successful projects. This program covers key areas of project management including: project leadership, strategy, sustainability and organizational behavior. The program is ideal for those looking to enhance their project management expertise and drive positive change in any industry.

This certificate program can be completed as a standalone certificate, completed alongside a degree program, or it can stack into a future bachelor's degree.

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe or Online

Career opportunities:
IT careers are growing fast, according to the Bureau of Labor Statistics: https://www.bls.gov/ooh/computer-and-information-technology/home.htm. The exciting career path of an IT professional can place graduates in positions around the world, in any industry. These industries include:

- biomedical
- construction
- defense
- education
- entertainment
- geospatial
- informatics
- sports
- sustainable environments

This certificate in project management essentials opens doors to a wide variety of entry-level career opportunities. Graduates can pursue roles such as project coordinator, project assistant, junior project manager and project scheduler, among others. These positions offer the chance to support senior project managers, manage project schedules, assist with administrative tasks, and help ensure the smooth execution of projects.

Curriculum - Information Technology, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: TSIFTBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Information Technology Core		
IFT 101 Information Technology Programming Logic	C	3
IFT 103 Operating System Architecture	C	3
IFT 166 Introduction to Internet Networking	C	3
IFT 200 Information Modeling, Storage and Retrieval	C	3
IFT 202 Foundations of Information and Computer System Security	C	3
IFT 210 Introduction to Java Technologies	C	3
IFT 220 Managing Configurations and Active Directory	C	3
IFT 250 Introduction to UNIX Utilities	C	3
IFT 266 Network Information Communication Technology	C	3
IFT 300 Intermediate Database Management Systems	C	3
IFT 301 Web Programming for Human Computer Interface	C	3

Requirement	Minimum Grade	Credit Hours
IFT 310 Information Systems Project Development	C	3
IFT 320 Managing the Cloud	C	3
IFT 372 Wireless Fundamentals	C	3
IFT 381 Information System Security	C	3
IFT 383 Shell and Script Programming with UNIX	C	3
IFT 458 Middleware Programming and Database Security	C	3
IFT 401 Information Technology Capstone		3

Information Technology Technical Electives

Upper Division Primary Focus Area

IFT 360 Applications in Artificial Intelligence IFT 365 Applied Programming Language for Information Technology IFT 370 Mobile Computing and Applications for Information Technology IFT 410 Big Data Tools and Practices IFT 421 Data in the Cloud for Information Technology IFT 460 Managing Intelligent Devices in an Enterprise Environment IFT 494 Topic: Appl Multi Tier End to End Application Development	C	12

Information Technology Major GPA

Check: Minimum 2.0 Major GPA

Math, Science, and Interdisciplinary Studies Requirements

HSE 101 Introduction to Human Systems Engineering (SOBE)	C	3
HSE 230 Statistics for Human Systems Research I (QTRS)	C	3
HST 318 History of Engineering (HUAD)		3
MAT 210 Brief Calculus (MATH)	C	3
MAT 243 Discrete Mathematical Structures		3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-IFT The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Project Management Essentials, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LSPMGECERT

Minimum credit hours: 15

Upper division minimum credit hours: 3

Requirement	Minimum Grade	Credit Hours
OGL 220 Behavioral Dynamics in Organizations (SOBE)	C	3
PMG 101 Navigating Project Management: Successes, Failures, and Leadership Dynamics	C	3
PMG 203 Project Management for People, Planet and Prosperity	C	3
PMG 240 Introduction to Project Management	C	3
PMG 321 Project Leadership, Strategy and Scope	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Interdisciplinary Studies and Russian and East European Studies (LSBISBIS and LAREECERT)

Program description:
The Bachelor of Arts program in interdisciplinary studies, one of the top ranked in the country, offers students the freedom to select two areas of study, referred to as concentration areas, from a rich menu of almost 200 options.

The core curriculum provides students with the intellectual tools to integrate their concentration areas, engage in transdisciplinary problem-solving, and prepare for careers and graduate programs that increasingly cross disciplinary boundaries. An interdisciplinary studies student could choose to integrate concentrations such as business and project management, psychology and social welfare, communication and justice studies, public administration and ethics, digital culture and computer gaming, or many other distinct combinations.

Interdisciplinary studies is an approach to answering questions, solving problems and addressing contemporary social issues from multiple perspectives. Interdisciplinary studies students take an active role in designing their educational plans and defining their career goals. The degree program emphasizes written communication, versatility, self-assessment and critical thinking --- essential skills for today's dynamic world.

Students who are interested in the online program for interdisciplinary studies should visit the ASU Online website for more information.

The certificate program in Russian and East European studies encourages students to develop competency in Russian or another East European or Eurasian language as well as the culture and politics of the region.

Coursework leading to the certificate is offered by outstanding faculty members in diverse fields of study including architecture, economics, film studies, geography, history, international business, literature, music, political science and religious studies.

A one-credit, student-led capstone course is completed in the student's junior or senior year; with the support of an advisor, students can write a research paper on the Russian and East European studies topic of their choice, prepare a writing sample or a graduate school application, or work on a creative project.

A student with a major in any school or department may pursue this certificate and develop a personalized plan of study in cooperation with an advisor at The Melikian Center: Russian, Eurasian and East European Studies.

BA At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Downtown Phoenix, Polytechnic, Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or any math course that meets the MATH designation
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
The flexibility of the interdisciplinary studies program enables graduates to take many exciting career paths after they leave ASU. While some complete graduate or professional degrees, others immediately enter the job market. For example, one graduate combined business and communication and now owns a small business; another integrated sociology and family studies to further a career in law enforcement; another studied philosophy and economics to prepare for law school; another combined biology and chemistry in preparation to pursue a master of pharmacy degree; and yet another studied Spanish and religious studies and now works as an employee trainer for a major company.

Possible career opportunities include:
- archivist or curator
- climate change analyst
- compliance manager
- computer network support specialist
- editor or web developer

- environmental restoration planner
- general and operations manager
- regulatory affairs manager
- higher education professional
- wholesale and retail buyer (except farm products)

Students who complete the Russian and East European studies certificate enhance their prospects for highly competitive study abroad scholarships, including Fulbright, Boren and Critical Language Scholarship Program, and for selective graduate programs. Certificate holders may also qualify for distinct internships and entry-level government employment opportunities at agencies such as the U.S. Department of State and the National Security Agency.

Curriculum - Interdisciplinary Studies, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: College of Integrative Sciences and Arts
Plan Code: LSBISBIS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Interdisciplinary Studies Core		
IDS 201 Intellectual Fusion OR **IDS 301 Becoming Interdisciplinary**	C	3
IDS 401 Integration: Experiential Learning	C	3
Integrative Application Courses	C	3
IDS 140 The Nature of Knowledge Systems		
IDS 310 Integration: Cultural Contexts		
IDS 311 Integration: Global Contexts		
IDS 312 Integrative Perspectives on Change		
IDS 313 Integrative Perspectives on a Changing World		
IDS 314 Integrative Perspectives on Cultural Dynamics		
IDS 315 Integration: Social Contexts		
IDS 316 Integration: Humanities Contexts		
IDS 321 Interdisciplinary Issues		

Requirement	Minimum Grade	Credit Hours
IDS 394 Special Topics		
IDS 484 Internship		
IDS 494 Special Topics		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		
MVS 403 American Military Leadership		
STS 304 Science, Technology and Society (SOBE) **or** IDS 313 Topic: Science, Technology, and Innovation		
STS 330 Information Technology and Artificial Intelligence		
STS 331 Ethical Issues in Science and Technology		
Upper Division Integrative Application Courses	C	9
IDS 310 Integration: Cultural Contexts		
IDS 311 Integration: Global Contexts		
IDS 312 Integrative Perspectives on Change		
IDS 313 Integrative Perspectives on a Changing World		
IDS 314 Integrative Perspectives on Cultural Dynamics		
IDS 315 Integration: Social Contexts		
IDS 316 Integration: Humanities Contexts		
IDS 321 Interdisciplinary Issues		

Requirement	Minimum Grade	Credit Hours
IDS 394 Special Topics		
IDS 484 Internship		
IDS 494 Special Topics		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		
MVS 403 American Military Leadership		
STS 304 Science, Technology and Society (SOBE) **or** **IDS 313 Topic: Science, Technology, and Innovation**		
STS 330 Information Technology and Artificial Intelligence		
STS 331 Ethical Issues in Science and Technology		

Interdisciplinary Studies Concentrations

Take an active role in designing your own major by selecting two subject areas you want to study. Review the more than 200 concentrations available to choose from, then collaborate with your academic advisor to make your final selections: https://cisa.asu.edu/ids/concentrations/all

Concentration #1 Course	C	6
Upper Division Concentration #1 Course	C	9
Concentration #2 Course	C	6
Upper Division Concentration #2 Course	C	9

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CLS The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Russian and East European Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAREECERT

Minimum credit hours: 19

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate in Russian and East European studies requires a minimum of 19 credit hours, of which at least three must be a language course and at least 12 must be upper division. A grade of "C" (2.00 on a 4.00 scale) or higher is required in all courses used toward the certificate.		

Language Requirement

Students may complete one language course from BCS, PLC, ROM, or RUS, or they may complete the Albanian, Armenian, BCS (Bosnian/Croatian/Serbian), Kazakh, Macedonian, Persian, Polish, Russian, Tatar, Turkish, Ukrainian, and Uzbek courses offered by the Critical Languages Institute to fulfill the language requirement. See https://melikian.asu.edu/cli

Language Requirement	C	3 - 5
BCS 101 Elementary Serbo-Croatian		
BCS 102 Elementary Serbo-Croatian		
BCS 201 Intermediate Serbo-Croatian		
BCS 202 Intermediate Serbo-Croatian		

Requirement	Minimum Grade	Credit Hours
BCS 311 Bosnian/Croatian/Serbian Composition and Conversation I		
BCS 312 Bosnian/Croatian/Serbian Composition and Conversation II		
PLC 101 Elementary Polish		
PLC 102 Elementary Polish		
PLC 201 Intermediate Polish		
PLC 202 Intermediate Polish		
PLC 311 Advanced Polish I		
PLC 312 Advanced Polish II		
ROM 101 Elementary Romanian Language and Culture I		
ROM 102 Elementary Romanian Language and Culture II		
ROM 201 Intermediate Romanian Language and Culture I		
ROM 202 Intermediate Romanian Language and Culture II		
ROM 313 Romanian Composition and Conversation		
ROM 314 Romanian Composition and Conversation		
ROM 411 Advanced Spoken and Written Romanian I		
ROM 412 Advanced Spoken and Written Romanian II		
RUS 101 Elementary Russian I		
RUS 102 Elementary Russian II		
RUS 201 Intermediate Russian I		
RUS 202 Intermediate Russian II		
RUS 211 Conversational Russian I		
RUS 212 Conversational Russian II		

Requirement	Minimum Grade	Credit Hours
RUS 311 Russian Society I		
RUS 312 Russian Society II		
RUS 411 Russian Language, History and Culture I		
RUS 412 Russian Language, History and Culture II		

Native speakers of a language must complete four credit hours in a different language to fulfill this requirement.

Required Electives

Upper Division Required Electives	C	6
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 370 Eastern Europe in Transition		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
POS 352 European Democracies		

Requirement	Minimum Grade	Credit Hours
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		
RUS 323 Russian Literature and Revolution: The Twentieth Century		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		

Other HST 304 topics appropriate to the certificate's regional focus may be used with the approval of the certificate advisor. Courses shown that are not used to satisfy a Required Certificate Elective may be used as an Area-Related Elective.

Area-Related Electives

Area-Related Electives	C	3
ARC 330 World and Western Architecture for Nonmajors		
ARC 331 World and Western Architecture I		
ARC 332 World and Western Architecture II		
ASB 345 Culture and Society Transformation (GCSI)		
CEL 394 Topic: War&Culture Cntrl Europe: Empire or Lib Democracy		
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
CEL 494 Topic: Putin and Russia's Dead Souls		
COM 691 Topic: Strategic Communication and Disinformation		
ENG 332 Topic: Jewish Writers & The Cold War		
ENG 333 Topic: American Jewish Literature during the Cold War		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		

Requirement	Minimum Grade	Credit Hours
ENG 435 Literatures and Cultures of Immigration and Diaspora		
GCU 325 Geography of Europe (GCSI)		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
GSC 598 Topic: Post-Soviet Geopolitics		
HON 394 Topic: Amazons to Fighter Pilots:HistoryofWarSex&Gender		
HON 394 Topic: Archaeology of the Silk Roads		
HON 394 Topic: Dictatorship & the Twentieth Century		
HON 394 Topic: Love,Hospitality,Belonging:LivesBetweenEurope&Asia		
HON 394 Topic: Mummies and Marauders, Merchants and Monks		
HON 394 Topic: Points of Entry:Space&Place in Eurasian Borderland		
HON 394 Topic: The Cold War World:Conflict,Vitriol,&Globalization		
HST 302 Topic: War and Political Thought		
HST 302 Topic: WWII in Comparative Perspective		
HST 304 Topic: A Survey of Soviet History		
HST 304 Topic: Black Death:Pandemic Disease in the Medieval World		
HST 304 Topic: Fascism: Italy, Germany, and Beyond		
HST 304 Topic: Nazi Germany		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		

Requirement	Minimum Grade	Credit Hours
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 304 / JST 304 Topic: Exiles, Migrants, Refugees in Jewish History		
HST 350 Later Middle Ages (GCSI)		
HST 354 Revolutionary Europe (GCSI)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 356 Europe since 1945		
HST 359 Jewish History from 1492 to 1948		
HST 369 History and Memory of the Holocaust		
HST 370 Eastern Europe in Transition		
HST 429 Modern Germany		
HST 430 The Ottoman Empire in the Classical Period		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
HST 454 / REL 454 / FOR 454 History of Genocide (GCSI)		
HST 460 World War II (HUAD)		
HST 598 / WWS 598 Topic: Eastern Front: War of Annihilation		
IDS 313 Topic: Identity and Conflict in Europe		
IGD 598 Topic: Global Capitalism and Inclusive Development		

Requirement	Minimum Grade	Credit Hours
JHR 501 Proseminar in Social Justice and Human Rights		
JHR 598 Topic: Social Inequality		
JUS 374 The Holocaust, Genocide, and Human Rights		
LIA 194 Topic: DiscSem: The Law of Armed Conflict & War Crimes		
MHL 445 Music of the Silk Road (HUAD)		
MHL 598 Topic: Shostakovich, his life and times		
POS 305 Topic: Conflict and Film (HUAD) **or** POS 305 Politics and Film (HUAD)		
POS 352 European Democracies		
POS 394 Topic: Gender and Armed Conflict		
POS 394 Topic: Model UN		
POS 394 Topic: Violence and Politics		
POS 485 Political Economy (SOBE)		
POS 486 International Political Economy (GCSI)		
POS 494 / SGS 494 Topic: Democratic Erosion		
POS 598 Topic: Politics of Authoritarian Rule		
REL 301 Comparative Mysticism (HUAD)		
REL 365 Islamic Civilization (HUAD)		
REL 366 Islam in the Modern World (GCSI)		
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)		
ROM 343 Culture and Society Transformation (GCSI)		

Requirement	Minimum Grade	Credit Hours
RUS 141 / HST 141 / SLC 141 Russian Civilization: From Tsars to Putin (GCSI)		
RUS 241 / HST 241 / SLC 241 / HON 294 Topic: Russian Pop Culture: Protest and Propaganda		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		
RUS 323 Russian Literature and Revolution: The Twentieth Century		
RUS 394 Topic: Russian Grammar and Lexicology		
RUS 421 Pushkin		
RUS 423 Dostoevsky and Tolstoy (HUAD)		
RUS 425 Chekhov and Russian Drama (HUAD)		
RUS 430 Russian Short Story (HUAD)		
RUS 439 / SLC 439 Art in Exile: VladÃmir VladÃmirovich Nabokov		
RUS 440 Russian Mass Media		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		
SGS 370 Geopolitics (GCSI)		
SGS 394 Topic: Greece and Macedonia		
SGS 394 Topic: Politics of Global Justice		
SGS 494 Topic: International Criminal Tribunals & Global Security		
SLC 202 Exploring Cultures: Words, Images, Stories (HUAD)		

Requirement	Minimum Grade	Credit Hours
SLC 212 Language and Culture Clash (SOBE)		
SLC 294 / RUS 294 / SLV 294 Topic: Eastern European Science Fiction		
SLC 304 / SLV 304 Digital Humanities for Language Majors		
SLC 429 / CEL 429 Topic: Politics & Culture in European Short Fiction or SLC 598 Topic: Politics and Culture in European Short Fiction or ENG 429 Topic: Politics & Culture in European Short Fiction		
SLC 442 / ROM 442 Dracula and Vampire Lore (HUAD)		
SLC 494 Topic: Society and Culture in Modern Europe		
SLV 440 History of Slavic Languages (SOBE)		
Upper Division Area-Related Electives	C	6
ARC 330 World and Western Architecture for Nonmajors		
ARC 331 World and Western Architecture I		
ARC 332 World and Western Architecture II		
ASB 345 Culture and Society Transformation (GCSI)		
CEL 394 Topic: War&Culture Cntrl Europe: Empire or Lib Democracy		
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
CEL 494 Topic: Putin and Russia's Dead Souls		
COM 691 Topic: Strategic Communication and Disinformation		
ENG 332 Topic: Jewish Writers & The Cold War		
ENG 333 Topic: American Jewish Literature during the Cold War		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		

Requirement	Minimum Grade	Credit Hours
ENG 435 Literatures and Cultures of Immigration and Diaspora		
GCU 325 Geography of Europe (GCSI)		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
GSC 598 Topic: Post-Soviet Geopolitics		
HON 394 Topic: Amazons to Fighter Pilots:HistoryofWarSex&Gender		
HON 394 Topic: Archaeology of the Silk Roads		
HON 394 Topic: Dictatorship & the Twentieth Century		
HON 394 Topic: Love,Hospitality,Belonging:LivesBetweenEurope&Asia		
HON 394 Topic: Mummies and Marauders, Merchants and Monks		
HON 394 Topic: Points of Entry:Space&Place in Eurasian Borderland		
HON 394 Topic: The Cold War World:Conflict,Vitriol,&Globalization		
HST 302 Topic: War and Political Thought		
HST 302 Topic: WWII in Comparative Perspective		
HST 304 Topic: A Survey of Soviet History		
HST 304 Topic: Black Death:Pandemic Disease in the Medieval World		
HST 304 Topic: Fascism: Italy, Germany, and Beyond		
HST 304 Topic: Nazi Germany		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		

Requirement	Minimum Grade	Credit Hours
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 304 / JST 304 Topic: Exiles, Migrants, Refugees in Jewish History		
HST 350 Later Middle Ages (GCSI)		
HST 354 Revolutionary Europe (GCSI)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 356 Europe since 1945		
HST 359 Jewish History from 1492 to 1948		
HST 369 History and Memory of the Holocaust		
HST 370 Eastern Europe in Transition		
HST 429 Modern Germany		
HST 430 The Ottoman Empire in the Classical Period		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
HST 454 / REL 454 / FOR 454 History of Genocide (GCSI)		
HST 460 World War II (HUAD)		
HST 598 / WWS 598 Topic: Eastern Front: War of Annihilation		
IDS 313 Topic: Identity and Conflict in Europe		
IGD 598 Topic: Global Capitalism and Inclusive Development		

Requirement	Minimum Grade	Credit Hours
JHR 501 Proseminar in Social Justice and Human Rights		
JHR 598 Topic: Social Inequality		
JUS 374 The Holocaust, Genocide, and Human Rights		
MHL 445 Music of the Silk Road (HUAD)		
MHL 598 Topic: Shostakovich, his life and times		
POS 305 Topic: Conflict and Film (HUAD) **or** POS 305 Politics and Film (HUAD)		
POS 352 European Democracies		
POS 394 Topic: Gender and Armed Conflict		
POS 394 Topic: Model UN		
POS 394 Topic: Violence and Politics		
POS 485 Political Economy (SOBE)		
POS 486 International Political Economy (GCSI)		
POS 494 / SGS 494 Topic: Democratic Erosion		
POS 598 Topic: Politics of Authoritarian Rule		
REL 301 Comparative Mysticism (HUAD)		
REL 365 Islamic Civilization (HUAD)		
REL 366 Islam in the Modern World (GCSI)		
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)		
ROM 343 Culture and Society Transformation (GCSI)		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		

Requirement	Minimum Grade	Credit Hours
RUS 323 Russian Literature and Revolution: The Twentieth Century		
RUS 394 Topic: Russian Grammar and Lexicology		
RUS 421 Pushkin		
RUS 423 Dostoevsky and Tolstoy (HUAD)		
RUS 425 Chekhov and Russian Drama (HUAD)		
RUS 430 Russian Short Story (HUAD)		
RUS 439 / SLC 439 Art in Exile: VladÃmir VladÃmirovich Nabokov		
RUS 440 Russian Mass Media		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		
SGS 370 Geopolitics (GCSI)		
SGS 394 Topic: Greece and Macedonia		
SGS 394 Topic: Politics of Global Justice		
SGS 494 Topic: International Criminal Tribunals & Global Security		
SLC 304 / SLV 304 Digital Humanities for Language Majors		
SLC 429 / CEL 429 Topic: Politics & Culture in European Short Fiction **or** SLC 598 Topic: Politics and Culture in European Short Fiction **or** ENG 429 Topic: Politics & Culture in European Short Fiction		
SLC 442 / ROM 442 Dracula and Vampire Lore (HUAD)		
SLC 494 Topic: Society and Culture in Modern Europe		

Requirement	Minimum Grade	Credit Hours
SLV 440 History of Slavic Languages (SOBE)		

Arranged honors theses and upper-division colloquia with Melikian Center faculty affiliates may also be used toward this requirement.

Capstone Project

LIA 485 REES Certificate Capstone In their junior or senior year, students will complete the 1-credit REES Certificate Capstone. This can be in the form of a reading course offered by the Melikian Center OR a project chosen in cooperation with a Melikian Center faculty affiliate. The project should represent an extended, research-based focus on some dimension of the region's languages, cultures, religions, histories, and/or politics. It may take the form of an extended research paper, honors thesis, translation project, research assistantship, or internship. Other courses may be used with the approval of the certificate advisor.	C	1

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT International Relations and Homeland Security (LAINRBS and PPHSLCERT)

Program description:
In a globalized world with increasing political, economic, demographic and climatic challenges, studies in international relations are all the more prized by the public and private sectors.

Students in the Bachelor of Science program in international relations develop analytic and quantitative skill sets and mastery of forward-thinking content areas through rigorous curriculum, distinct internships and research. Students gain valuable practical knowledge about national security, cybersecurity, AI-intelligence strategies, conflict processes, diplomacy, international trade, and both international organizations and countries across the globe.

The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security.

Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
International relations graduates leverage their analytic, statistical and communication skills to pursue careers in intelligence, security, international trade and public policy, and other data-driven forecasting fields. They are prepared for a variety of employment opportunities in:

- data analytics
- foreign service
- intelligence and security
- journalism
- law
- political science
- politics
- public relations

Program graduates are prepared for positions in the following types of establishments:

- federal and international civil service
- foreign service organizations
- intelligence and security agencies and contractors
- international agencies and organizations
- international development institutions
- law firms specializing in international law
- lobbying and advocacy groups
- local, national and global nonprofit organizations
- local and national media organizations
- multinational corporations
- political consulting firms
- research institutions

In addition, graduates are well positioned to attend top-tier graduate, law and professional schools in global trade, public policy, diplomacy and leadership, political science and data analytics.

Graduates of the homeland security certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and

local), such as the Department of Homeland Security, U.S. Customs and Border Protection, and local- and state-level law enforcement departments. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - International Relations, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAINRBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.		
INR 205 Perspectives on International Relations	C	3
POS 160 Global Politics (GCSI) OR **SGS 101 Thinking Globally (GCSI)** POS 360 and SGS 301 can substitute for POS 160 and SGS 101 and are recommended for transfer students.	C	6
POS 301 Empirical Political Inquiry (SOBE)	C	3
POS 401 Political Statistics (QTRS)	C	3
For the International Relations Track Electives, students may choose any combination of courses from the three different track lists. 15 of the 21 credit hours must be upper division.		
Upper Division International Relations Track Electives	C	15

Requirement	Minimum Grade	Credit Hours
INTELLIGENCE, DIPLOMACY, AND SECURITY		
POS 348 Do You Want to Build a Nation? (CIVI)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 394 Topic: Democratic Resilience in the Digital Age		
POS 394 Topic: The Politics of Cyberspace		
POS 466 Migration, Environment and Global Security		
POS 467 International Security (GCSI)		
POS 494 / **SGS 494 Topic: Diplomacy/PolicyDesignStudio I**		
POS 494 Topic: Spies, Intelligence, & National Security		
SGS 494 Topic: International Criminal Tribunals & Global Security		
INTERNATIONAL LAW, ECONOMY AND INSTITUTIONS		
POS 351 Democratization (GCSI)		
POS 356 European Union (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 367 World Politics and Global Inequalities (GCSI)		
POS 465 International Organization and Law (GCSI)		
POS 480 Global Justice (GCSI)		
POS 486 International Political Economy (GCSI)		

Requirement	Minimum Grade	Credit Hours
SGS 303 Global Trends (GCSI)		
SGS 321 International Institutions and Global Governance		
SGS 323 International Development		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SGS 340 Violence, Conflict and Human Rights (GCSI)		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 350 Economic Development and Globalization		
SGS 379 The Resource Curse		
CULTURE, POLITICS AND IDENTITY		
POS 300 Contemporary Global Controversies (GCSI)		
POS 352 European Democracies		
POS 353 Comparative Politics of the Middle East (GCSI)		
POS 359 African Politics and Society		
POS 368 Ethics and Human Rights (GCSI)		
POS 378 Religion, War and Peace (CIVI)		
POS 388 Religion, Ethics, and International Politics (CIVI)		
SGS 360 Cultural Aspects of Globalization		
SGS 370 Geopolitics (GCSI)		

Requirement	Minimum Grade	Credit Hours
International Relations Track Electives	C	6
INTELLIGENCE, DIPLOMACY, AND SECURITY		
POS 348 Do You Want to Build a Nation? (CIVI)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 394 Topic: Democratic Resilience in the Digital Age		
POS 394 Topic: The Politics of Cyberspace		
POS 466 Migration, Environment and Global Security		
POS 467 International Security (GCSI)		
POS 494 / **SGS 494 Topic: Diplomacy/PolicyDesignStudio I**		
POS 494 Topic: Spies, Intelligence, & National Security		
SGS 204 Professional Global Career Development		
SGS 494 Topic: International Criminal Tribunals & Global Security		
INTERNATIONAL LAW, ECONOMY AND INSTITUTIONS		
POS 150 Comparative Government (GCSI) **or** **POS 350 Comparative Politics (GCSI)**		
POS 351 Democratization (GCSI)		
POS 356 European Union (GCSI)		
POS 361 American Foreign Policy (SOBE)		

Requirement	Minimum Grade	Credit Hours
POS 367 World Politics and Global Inequalities (GCSI)		
POS 465 International Organization and Law (GCSI)		
POS 480 Global Justice (GCSI)		
POS 486 International Political Economy (GCSI)		
SGS 303 Global Trends (GCSI)		
SGS 321 International Institutions and Global Governance		
SGS 323 International Development		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SGS 340 Violence, Conflict and Human Rights (GCSI)		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 350 Economic Development and Globalization		
SGS 379 The Resource Curse		
CULTURE, POLITICS AND IDENTITY		
POS 240 / **SGS 240 Introduction to Southeast Asia**		
POS 260 Current Issues in International Politics (GCSI)		
POS 300 Contemporary Global Controversies (GCSI)		
POS 352 European Democracies		
POS 353 Comparative Politics of the Middle East (GCSI)		

Requirement	Minimum Grade	Credit Hours
POS 359 African Politics and Society		
POS 368 Ethics and Human Rights (GCSI)		
POS 378 Religion, War and Peace (CIVI)		
POS 388 Religion, Ethics, and International Politics (CIVI)		
SGS 107 Religion and Globalization (GCSI)		
SGS 360 Cultural Aspects of Globalization		
SGS 370 Geopolitics (GCSI)		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Upper Division Science and Society Elective	C	3

Science and Society Elective	C	3

Additional Requirements

Any course from the subjects in the list below will apply to the Related Area requirement.

Upper Division Related Area	C	6

- AFR Elective
- AIS Elective
- ASB Elective
- ASM Elective
- COM Elective
- ECN Elective
- FAS Elective
- GCU Elective
- GIS Elective
- GPH Elective
- HST Elective
- JUS Elective
- PHI Elective
- PSY Elective
- REL Elective
- SOC Elective

SOS Elective

TCL Elective

WST Elective

Related Area	C	6

AFR Elective

AIS Elective

ASB Elective

ASM Elective

COM Elective

ECN Elective

FAS Elective

GCU Elective

GIS Elective

GPH Elective

HST Elective

JUS Elective

PHI Elective

PSY Elective

REL Elective

SOC Elective

SOS Elective

TCL Elective

WST Elective

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Homeland Security, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPHSLCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security. Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.		

Required Courses

CRJ 412 International Terrorism	C	3
CRJ 417 Cyber Terrorism	C	3
CRJ 419 Domestic Terrorism	C	3

Elective Courses

Upper Division Electives	C	6
CRJ 394 Special Topics		
CRJ 422 Violence in America		
CRJ 455 Police and International Terrorism		

Requirement	Minimum Grade	Credit Hours
CRJ 456 Etiology of Martyrdom		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 464 Organized Crime		
CRJ 494 Special Topics		
PAF 426 Intelligence Analysis and Homeland Security		
PAF 461 Homeland Security		

Only approved homeland security-related topics may be taken from Special Topics courses (CRJ 394 and CRJ 494).

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Bachelor of Science in criminology and criminal justice majors who are also pursuing the Homeland Security certificate may not use CRJ 412, CRJ 417, CRJ 419, CRJ 422, CRJ 455, CRJ 456, CRJ 462, CRJ 463, and CRJ 464 toward both their major and the certificate. These courses will only be used toward the certificate requirements.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT International Trade and Applied Business Data Analytics (TBINTRABS and BABDACERT)

Program description:
The Bachelor of Science program in international trade provides talented, driven students with the exposure to the global business environment that will distinguish them in the workforce. Students learn the functional disciplines of international business while gaining an in-depth understanding of the political, cultural and economic aspects of doing business on a global scale and in international markets in which government regulations vary widely from country to country.

Supported by Thunderbird's training that builds a global mindset, Thunderbird's STEM-designated BS program provides rigorous training for a career in global commerce. Students gain tools for managing supply chains, systematically assessing risk, exporting and importing goods and services, and using economic agreements to develop effective strategies for conducting international trade.

This program is distinct in enabling students to learn new skills needed for a career in international trade through comprehensive hands-on training, and then to apply those skills during a local, national or international internship. Along with applicable learning experiences that open up global career opportunities, students attend courses taught by outstanding Thunderbird graduate school faculty and enjoy unique opportunities to learn from fellow students from around the world.

Thunderbird's BS program is also offered in a flexible online format. Students should see the ASU Online website for more information.

About Thunderbird
Thunderbird School of Global Management has produced world-class leaders for more than 75 years. The ideal Thunderbird student is curious, globally minded and eager to develop and advance their career in leadership and management within the global and digital landscape. Upon completion of this program, graduates join a thriving global alumni network nearly 50,000 strong, managing some of the world's largest institutions, companies, nonprofits and NGOs.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BS At a Glance:
College/school: Thunderbird School of Global Management
Location: West Valley, ASU at Hainan, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
In the increasingly globalized economy, the dramatic expansion of international trade has created tremendous opportunities for global business, and Thunderbird's BS program prepares students for a career in this growing field, in which skilled managers are in demand all over the world. Trained negotiators with a strong grasp of economics and politics on an international level are more valuable than ever to employers operating across borders.

Thunderbird's rigorous curriculum and renowned faculty prepare students for leadership positions in a wide variety of career fields. Graduates have the intercultural skills and global mindset needed to do business or take on leadership roles in any part of the world. Graduates of this program have mastered a repertoire of globally transferable skills that open doors to an abundance of opportunities, including these positions:

- commodities broker
- compliance manager

- financial risk specialist
- import and export agent
- international business development manager
- international market analyst
- international product or brand manager
- regional manager

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - International Trade, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Thunderbird School of Global Management
Plan Code: TBINTRABS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Core		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
COM 225 Public Speaking and Presentations (CIVI)	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
ECN 306 Survey of International Economics (GCSI)	C	3
Upper Division Ethics course LES 305 Business Law and Ethics for Managers PHI 306 Applied Ethics (CIVI) PHI 360 Business and Professional Ethics (HUAD) PHI 406 / IAS 406 Moral Dilemmas	C	3
MAT 210 Brief Calculus (MATH)	C	3

Requirement	Minimum Grade	Credit Hours
MAT 211 Mathematics for Business Analysis	C	3
STP 226 Elements of Statistics (QTRS)	C	3

TGM Core

TGM 101 Principles of Global Management (GCSI)	C	3
TGM 200 Principles of Accounting for Global Organizations	C	3
TGM 204 Principles of Marketing for Global Organizations	C	3
TGM 300 Principles of Finance for Global Organizations	C	3
TGM 310 Supply Chain Operations for Global Organizations	C	3
TGM 312 Big Data in the Global Economy	C	3
TGM 353 Regional Management Environment (GCSI)	C	3
TGM 391 Global Business and Professional Development Skills	C	1
TGM 430 International Trade and Regional Economic Agreements	C	3
TGM 460 Global Risk Assessment and Management	C	3
TGM 468 States and Markets in a Global Economy (GCSI)	C	3
TGM 478 Cross-Cultural Communication and Negotiation	C	3
TGM 484 Internship	C	3 - 6
TGM 489 Multinational Organizational Leadership	C	3

Requirement	Minimum Grade	Credit Hours
TGM 498 Pro-Seminar	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

TGM 191 First-Year Seminar		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree

requirements in four years.
Review the "ThunderGuide" located on your Canvas course page for both ASU and Thunderbird-specific resources and information. See advisor for details.
An internship is required. Review the "ThunderGuide" Canvas course module titled "TGM 484 Internship Information." Work with your academic advisor and Career Services to start preparing for this experience.
Meet with your academic advisor to begin planning for the best study abroad options for your major.
The Thunderbird proficiency requirement may be satisfied through one of the following: completion of a language course at the intermediate level (202 or equivalent); completion of an upper-division course or courses taught in a foreign language, taken in the United States or the relevant country; or, completion of six credit hours of upper-division courses that have the global communities, societies and individuals (GCSI) designation (in addition to the courses used to meet the university general studies requirements). Students must earn a grade of â Câ (2.00) or higher in the courses taken to fulfill this requirement. Most students will fulfill this requirement through the completion of TGM 353 and TGM 468. Adjustment to upper-division and elective hours may be required based on the coursework taken (see advisor).

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Justice Studies and Legal Issues in Criminal Justice (LAJUSBS and PPLCRJCERT)

Program description:
The Bachelor of Science in justice studies is an innovative social science and liberal arts program that examines current and historical social justice issues. Students explore social justice in the context of inequality, race, gender, citizenship, indigeneity or other major contemporary issues.

This program provides a broad approach to understanding justice within the legal system and in wider social contexts. To provide students with the analytical skills required of today's workforce, the program offers a social science focus and requires students to enroll in a quantitative data analysis course.

Students use multiple research methodologies to understand social justice issues in diverse settings, working with a variety of people and cultures. The skills gained enable students to create real change.

The legal issues in criminal justice certificate program focuses on the intersection of policy and its effects on the criminal justice system. Topics include a focus on law and theoretical perspectives regarding the ramifications of certain policies in the field of criminal justice.

Students seeking more specialized knowledge about legal consequences of policy on the criminal justice system or those interested in careers in the public sector, law or the criminal justice system should consider this certificate program.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley or Online

Career opportunities:
Graduates emerge from this program with knowledge and skills that enable them to identify and address social justice concerns as they manifest in their professional lives. Program graduates work in a variety of fields, including:

- business
- economics
- education
- human welfare and social work
- international relations
- law
- nongovernmental organizations
- politics
- public service fields
- social advocacy

Many graduates go on to law school, graduate school or other professional degree programs.

Graduates are prepared for employment opportunities in public policy, law enforcement and corrections, law firms and social service agencies. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Justice Studies, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAJUSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Major Core

JUS 105 Introduction to Justice Studies (CIVI) OR **JUS 305 Principles of Justice Studies (HUAD)**	C	3
JUS 301 Research in Justice Studies (SOBE)	C	3
JUS 302 Statistical Analysis for Justice Studies (QTRS)	C	3
JUS 303 Justice Theory (CIVI)	C	3
Justice Studies 200-level Core (choose one)	C	3
JUS 210 Introduction to Ethnic Studies in the U.S. (SOBE)		

Requirement	Minimum Grade	Credit Hours
JUS 214 The Pursuit of Justice in the 21st Century (CIVI)		
JUS 235 Disability, Justice and Advocacy (CIVI)		

Major Electives

JUS Elective	C	3
Upper Division **JUS Elective** Justice Studies majors are highly encouraged to take JUS 484 Internship as an upper division JUS elective. Visit https://sst.asu.edu/internships to get started.	C	15

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields and ASU General Studies requirements.		
Science and Society Elective	C	3

Upper Division Science and Society Elective	C	3

Additional Requirements

Upper Division School of Social Transformation Related Area

Upper Division AFR Elective	C	3
Upper Division AMS Elective		
Upper Division APA Elective		
Upper Division SST Elective		
Upper Division WST Elective		

Upper Division Additional Related Area Courses

Upper Division AFR Elective	C	6
Upper Division AIS Elective		
Upper Division AMS Elective		
Upper Division APA Elective		
Upper Division ARS Elective		
Upper Division ASB Elective		
Upper Division ASM Elective		
Upper Division CDE Elective		
Upper Division COM Elective		
Upper Division CRJ Elective		
Upper Division ECN Elective		

Upper Division	ENG Elective
Upper Division	FAS Elective
Upper Division	FMS Elective
Upper Division	GCU Elective
Upper Division	GPH Elective
Upper Division	HST Elective
Upper Division	IED Elective
Upper Division	MHL Elective
Upper Division	PHI Elective
Upper Division	POS Elective
Upper Division	PSY Elective
Upper Division	REL Elective
Upper Division	SOC Elective
Upper Division	SST Elective
Upper Division	TCL Elective
Upper Division	THE Elective
Upper Division	WST Elective

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.	C	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Legal Issues in Criminal Justice, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPLCRJCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
At least 12 credit hours must be taken in residence at ASU.		

Required Courses

CRJ 203 Courts and Sentencing	C	3
CRJ 260 Criminal Law I: Introduction to Substantive Criminal Law	C	3
CRJ 410 Criminal Procedure I: The Law of Investigations	C	3
CRJ 416 Criminal Procedure II: Adjudication	C	3
CRJ 460 Criminal Law II: Advanced Substantive Criminal Law	C	3

Elective Course

Upper Division Electives	C	3
CRJ 321 Evidence: Imperatives of Proof		
CRJ 350 Law and Social Control (CIVI)		
CRJ 394 Special Topics		

Requirement	Minimum Grade	Credit Hours
CRJ 411 Legal Issues in Corrections		
CRJ 494 Special Topics		
Special Topics courses (CRJ 394 and CRJ 494) must be approved legal issues-related topics only.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Bachelor of Science in criminology and criminal justice majors who are also pursuing the Legal Issues in Criminal Justice certificate may not use CRJ 410, CRJ 416, CRJ 460, and their chosen elective (CRJ 321, CRJ 350, or CRJ 411) towards both their degree and certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSLA/CERT Landscape Architecture and Biomimicry (ARPLABSLA and SUBMYCERT)

Program description:
The Bachelor of Science in Landscape Architecture at The Design School is an accredited undergraduate professional degree that provides students with the knowledge and skills necessary to become a professional landscape architect. The program offers students the opportunity to engage with the community in applied projects that focus on designing socially and environmentally sustainable outdoor environments.

Undergraduate landscape architecture projects can range from large-scale work encompassing open space preservation and recreation planning, landscape ecological planning, community planning and design, and urban design to projects at the more intimate scale such as parks, campus spaces or residential landscapes. Emerging areas of focus include creative placemaking, social and environmental equity, green roofs and living walls, biodiversity, green storm water infrastructure, restorative environments, sustainable design, and urban climate design.

The BSLA program is accredited by the Landscape Architectural Accreditation Board. Graduates are qualified to begin taking the Landscape Architect Registration Exams, which lead to registration as a professional landscape architect. www.asla.org/accreditationlaab.aspx

The undergraduate biomimicry certificate program is a 19 credit hour interdisciplinary opportunity for students from a variety of backgrounds and any major. The certificate program is designed to address the growing interest in biomimicry knowledge and training.

The knowledge, competencies and skills students have upon completion of this program include the ability to:

- apply Life's Principles to specific needs within one's discipline
- facilitate the integration of biology into design within one's discipline using biomimicry thinking
- guide processes in one's discipline toward sustainability from a biomimetic perspective
- integrate biomimicry thinking into a discipline-specific opportunity that results in biomimetic outcomes
- interpret observations in nature with a functional lens for design applications

The biomimicry certificate consists of four core classes, one elective course within the student's discipline, and a practicum capstone course offered through either the student's discipline or BMY 430 Biomimicry Practicum.

BSLA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 170 - Precalculus
Math intensity: Moderate

CERT At a Glance:
College/school: College of Global Futures
Location: Tempe

Career opportunities:
The BSLA program prepares graduates for landscape architecture professional practice and advanced study at the graduate level. Graduates have found employment in nationally recognized firms working with notable landscape architects in large multinational firms or in public agencies. Graduates have also gone on to pursue advanced study at universities with distinguished graduate programs in landscape architecture and allied design fields.

The U.S. Bureau of Labor Statistics projects employment for landscape architects to grow 5% between 2023 and 2033 --- about as fast as the average for all occupations. The bureau also notes that employers prefer hiring entry-level landscape architects with internship experience to significantly reduce the amount of on-the-job training. The bachelor's degree program has an internship requirement meant to address this preference and better prepare graduates for employment.

Earning a certificate in biomimicry is a transformative step that amplifies the impact of a graduate's major degree program. This transdisciplinary endeavor equips graduates with a specialized skill set rooted in applied, nature-inspired design and innovation. In a world where innovation, creativity and collaboration are highly sought-after, this certificate becomes a powerful asset, setting graduates apart in competitive job markets.

Biomimicry transcends career boundaries, seamlessly complementing paths in business, technology, science, education or government. It offers an avenue for contributing to meaningful work by emulating the wisdom of the natural world. By

delving into biomimetic principles, graduates have gained the ability to understand and generate sustainable solutions, a skill set in high demand across industries. With a biomimicry certificate, graduates not only bring the natural world into their professional and personal lives but also bring about positive change, adding transdisciplinary and innovative value to their major degree program.

Curriculum - Landscape Architecture, BSLA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Landscape Architecture, BSLA
College/School: Herberger Institute for Design and the Arts
Plan Code: ARPLABSLA
Minimum credit hours: 120
Upper division minimum credit hours: 57

Requirement	Minimum Grade	Credit Hours
ALA 100 Introduction to Environmental Design (HUAD)	C	3
ALA 102 Landscapes and Sustainability (SUST)	C	3
ALA 121 Design Fundamentals I	C	3
ALA 122 Design Fundamentals II	C	3
LAP 231 Introduction to Digital Applications for Designers (QTRS)	C	3
LAP 251 Plant Materials for Sustainable Landscapes	C	3
LAP 341 Landscape Construction I	C	4
LAP 342 Landscape Construction II	C	4
LAP 352 Ecosystems and Sustainable Design	C	3
LAP 353 Planting Design for Sustainable Landscapes	C	3
LAP 371 Landscape Architecture Professional Practice I	C	1
LAP 372 Landscape Architecture Professional Practice II	C	1
LDE 261 Landscape Architecture Design Fundamentals III	C	4

Requirement	Minimum Grade	Credit Hours
LDE 262 Landscape Architecture Design Fundamentals IV	C	4
LAP 311 History of Landscape Architecture (HUAD) OR LAP 312 20th-Century Landscape Architecture OR LAP 413 Landscape Architecture Theory and Criticism	C	9
LDE 361 Landscape Architecture I	C	5
LDE 362 Landscape Architecture II	C	5
LDE 461 Landscape Architecture III	C	5
LDE 462 Landscape Architecture IV	C	5
Upper Division Computer Applications Elective ARC 494 Topic: Revit I ARC 494 Topic: Revit II DSC 494 Topic: Grasshopper DSC 494 Topic: Rhino LAP 332 GIS Applications in Environmental Design LAP 494 Topic: Advanced GIS Applications in Environmental Design LAP 494 Topic: AutoCAD for Landscape Architecture and Planning LAP 494 Topic: 3D Technologies for Designers I	C	3

Check: Minimum 3.00 ASU Cumulative GPA

MAT 170 Precalculus (MATH)	C	3
GPH 111 Introduction to Physical Geography (SCIT) AND GPH 112 Introduction to Physical Geography Lab (SCIT)	C	4
Upper Division Professional Elective ARC Elective BIO Elective DSC Elective EDS Elective ENV Elective GLG Elective GRA Elective IND Elective INT Elective LAP Elective LDE Elective LTC Elective LTE Elective PUP Elective SOS Elective	C	9

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

DSC 100 ASU Design Experience	C	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Biomimicry, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Global Futures

Plan Code: SUBMYCERT

Minimum credit hours: 19

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Core Courses		
SOS 110 Building a Sustainable World (SUST) Students should complete SOS 110 prior to enrolling in the certificate or in the first semester of enrollment.	B	3
BMY 230 How Nature Works	B	4
BMY 302 Principles of Life BMY 302 is typically only offered in spring semester.	B	3
BMY 304 The Practice of Biomimicry BMY 304 is typically only offered in fall semester.	B	3
Upper Division Biomimicry-Related Elective		
Students must complete BMY 230 and either BMY 302 or BMY 304 prior to taking the upper-division elective.		
Upper Division Biomimicry-related Elective	B	3
The elective must be biomimicry-related and ideally makes a connection between the student's major and the certificate. Students are responsible for identifying elective options and submitting a proposal prior to taking the course. Students must be prepared to present a course syllabus and explain how they will apply biomimicry		

Requirement	Minimum Grade	Credit Hours
directly to course assignments. After completing the course, students must complete and submit a one-page form that guides them to reflect on their goals for applying biomimicry to the course, whether and how they succeeded, and what they learned in the process. The course will not be moved in the DARS audit to show completion of the requirement until after the student has completed and submitted the form, which will be provided to them upon approval of the elective. Email cgfadvising@asu.edu with questions about the upper division elective.		

Capstone (BMY 430 or other)

Upper Division Capstone Course Recommended: **BMY 430**	B	3
Students must select either BMY 430, or a biomimicry-focused capstone in their corresponding major, or BMY 499 Independent Study (only if options 1 and 2 are unavailable). Students must complete BMY 230 and either BMY 302 or BMY 304 prior to the capstone. With the exception of BMY 430, students are responsible for identifying capstone options and submitting a proposal prior to taking the course. Students must be prepared to provide a course syllabus and explain how they will apply biomimicry directly to course assignments. After completing the course, students must complete and submit a one-page form that guides them to reflect on their goals for applying biomimicry to the course, whether and how they succeeded, and what they learned in the process. The course will not be moved in the DARS audit to show completion of the requirement until after the student has completed and submitted the form, which will be provided to them upon approval of the capstone. Email cgfadvising@asu.edu with questions about the capstone.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.		
This certificate takes a minimum of four semesters to complete, due to course sequencing.		

Students must obtain approval of upper division elective and capstone (unless taking BMY 430, which is preferred and pre-approved) prior to enrolling in those requirements. Email cgfadvising@asu.edu or schedule an appointment with a CGF advisor for questions.

A grade of "B" or better is required in all biomimicry certificate courses. Students who earn a "B-" or lower in a certificate course must repeat the course to earn a "B" or better.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Management and Professional Sales (BAMGTBS and BAPRSCERT)

Program description:
The Bachelor of Science program in management prepares students to become effective managers and team leaders. Students gain theoretical and conceptual knowledge and build critical skills such as:

- analytical research and problem-solving
- communication
- critical thinking
- global awareness
- leadership
- personal ethics and integrity
- teamwork

The curriculum includes the fundamentals of the global economy, the world of e-business, ethics, human resources, strategic management and collaborative team skills. Throughout the program, theories and concepts of management and ethical leadership are enhanced by experiencing and testing them in skill-based exercises, case discussions and practical, team-based project work.

The management major prepares students to face:

- corporate accountability
- cross-functional management
- demands for continuous process improvements to enhance the value chain
- ethical decision-making
- the fast pace of e-business
- growing technological sophistication
- the need for skills in communicating and working with people, directing projects and managing change racial, cultural and gender diversity in the workforce

Designed for the nonmarketing business major, the certificate program in professional sales was created for business students who are interested in pursuing the many opportunities in professional sales.

With the inclusion of courses in professional sales as well as sales management, this program prepares students to be successful account managers or sales team leaders in business-to-business and business-to-consumer settings.

An optional internship in sales is strongly encouraged as part of the program.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Polytechnic, Tempe, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe

Career opportunities:
Graduates with a BS in management are likely to be recruited by:

- for-profit and nonprofit organizations
- high-tech firms
- large and small organizations
- management consulting firms
- service and manufacturing firms

Graduates who have combined the certificate in professional sales with their major program of study may become more marketable to employers. They often decide to pursue employment in sales, marketing or procurement.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Management, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BAMGTBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core Courses		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MKT 300 Marketing and Business Performance	C	3
MGT 300 Principles of Management and Leadership	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

MGT 320 Organizational Behavior	C	3
MGT 400 Cross-Cultural Management (GCSI)	C	3
MGT 411 Leading Organizations	C	3
Upper Division Management Major Elective Select two courses ENT 340 Creativity and Innovation ENT 360 Entrepreneurship and Value Creation ENT 440 Entrepreneurship	C	6

Requirement	Minimum Grade	Credit Hours
ENT 445 Business Model Development		
ENT 446 Venture Capital Experience		
ENT 447 Lean Launch		
ENT 494 Special Topics		
MGT 310 Collaborative Team Skills		
MGT 420 Human Resource Management		
MGT 421 Compensation in Organizations		
MGT 422 Staffing		
MGT 423 Training and Development in Organizations		
MGT 424 Employment Law		
MGT 425 Global Human Resources		
MGT 426 HR Consulting Projects		
MGT 430 Negotiations		
MGT 450 Consulting Projects		
MGT 459 International Management (GCSI)		
MGT 484 Internship		
(Maximum three credits of internship courses may be applied towards the major)		
MGT 493 Honors Thesis		
MGT 494 Special Topics		

Requirement	Minimum Grade	Credit Hours
Upper Division Management Major Elective: 400-level Business Course		
400-Level ACC Elective	C	3
400-Level AGB Elective		
400-Level CIS Elective		
400-Level ECN Elective		
400-Level ENT Elective		
400-Level FIN Elective		
400-Level MGT Elective		
400-Level MKT Elective		
400-Level REA Elective		
400-Level SCM Elective		
WPC 484 Internship		
(Maximum three credits of internship courses may be applied towards the major)		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must earn a 2.0 GPA in major courses.

Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Professional Sales, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAPRSCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The certificate in professional sales requires 15 credit hours with at least 12 upper division credits. To receive the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or better.		

Required Courses

MKT 300 Marketing and Business Performance **or** MKT 303 Honors Marketing Theory and Practice	C	3
MKT 370 Professional Sales and Relationship Management	C	3
MKT 410 Sales Management	C	3

Certificate Electives

Upper Division Professional Sales Certificate Electives	C	6

Select two courses

- MGT 430 Negotiations
- MKT 435 Entrepreneurial Marketing

Requirement	Minimum Grade	Credit Hours
MKT 438 Advanced Selling Using Data and Technology		
MKT 441 Sports Revenue Generation		
MGT 484 Internship		
MKT 493 Honors Thesis		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Marketing and International Business Studies (BAMKTBS and BAIBSCERT)

Program description:
Students pursuing the Bachelor of Science in marketing gain an understanding of the science behind consumer behavior and the critical role that marketing plays in all organizations. In addition, students develop marketing skills that provide a competitive advantage in their careers.

The nationally ranked and award-winning marketing faculty share a passion for teaching and mentoring undergraduate students. Faculty members provide many productive ways for students to get involved in the life of the department and work with business partners.

The department is home to the Center for Services Leadership, the premier international center for the study of the science of services, and offers distinctive coursework in professional sales, relationship management and sports business.

The certificate program in international business studies helps students develop competence in a foreign language and a sensitivity to foreign cultures. Students gain an awareness of global social processes and an understanding of international business environments, principles and operations.

The W. P. Carey School of Business has partnerships with universities all over the world, so students can experience new cultures, visit new places and build intercultural and language skills. International internships also are offered in conjunction with the ASU Global Education Office.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
The degree program provides fundamentals, flexibility and specialization opportunities, and through the proper selection of coursework and other educational experiences, a marketing graduate may prepare for a variety of careers in areas such as:

- business development
- business-to-business marketing
- customer relationship management
- international marketing
- market research and information management
- marketing communications
- professional sales and relationship management
- retail management
- sales management
- services marketing

Students can advance their career options with an undergraduate certificate. The certificate program in international business enables students to develop additional competencies that complement the marketable knowledge and skills they acquire in their majors.

Graduates who have completed this undergraduate certificate often decide to pursue employment in management, sales, marketing and communication. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Marketing, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BAMKTBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core Courses		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
SCM 300 Global Supply Operations (SUST)	C	3

Requirement	Minimum Grade	Credit Hours
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course **AGB 302 International Management and Agribusiness (GCSI)** **ECN 306 Survey of International Economics (GCSI)** **MGT 302 Principles of International Business (GCSI)** **MKT 425 Global Marketing Management (GCSI)** **SCM 463 Global Supply Chain Management (GCSI)**	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

MKT 302 Strategic Marketing Management	C	3
MKT 352 Marketing Research	C	3
MKT 402 Consumer Behavior	C	3
MKT 365 Advertising and Beyond: Customer-Centric Brand Development **OR** **MKT 375 Services Marketing** **OR** **MKT 385 Digital Media Marketing**	C	3
Upper Division Marketing Major Elective **MKT 355 Designing Brand Identity: Methods and Digital Tools** **MKT 365 Advertising and Beyond: Customer-Centric**	C	9

Requirement	Minimum Grade	Credit Hours
Brand Development		
MKT 370 Professional Sales and Relationship Management		
MKT 375 Services Marketing		
MKT 385 Digital Media Marketing		
MKT 410 Sales Management		
MKT 412 Innovations in Marketing		
MKT 420 Retail Management		
MKT 425 Global Marketing Management (GCSI)		
MKT 435 Entrepreneurial Marketing		
MKT 438 Advanced Selling Using Data and Technology		
MKT 450 Social Media and Content Marketing		
MKT 452 Business-to-Business Marketing Strategy		
MKT 455 Brand Management		
MKT 472 Immersive Brand Experience I: Intelligence, Insights and Strategy		
MKT 484 Internship		
(Maximum three credits of MKT 484 may be applied towards the major)		
MKT 493 Honors Thesis		
MKT 494 Special Topics		

Requirement	Minimum Grade	Credit Hours
(MKT 494 Special Topic course may not be sports related)		
MKT 499 Individualized Instruction		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit

hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.
Students must earn a 2.0 GPA in major courses.
Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - International Business Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BAIBSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate program requires a minimum of 18 credit hours (at least 12 credit hours must be upper division). All business coursework must be completed through the W. P. Carey School of Business or through an approved ASU international study program.		
International Business Core Course		
MGT 302 Principles of International Business (GCSI) **or** **ECN 306 Survey of International Economics (GCSI)**	C	3
International Business Elective		
Upper Division International Business Certificate Elective	C	6
Select two courses		
AGB 302 International Management and Agribusiness (GCSI)		
ECN 306 Survey of International Economics (GCSI)		
ECN 331 Economics of the European Economic Union (GCSI)		
ECN 335 South Asia and the World Economy		

Requirement	Minimum Grade	Credit Hours
ECN 360 Economic Development (GCSI)		
ECN 365 Economics of Russia and Eastern Europe		
ECN 436 International Trade Theory		
ECN 438 International Monetary Economics		
FIN 456 International Financial Management		
MGT 302 Principles of International Business (GCSI)		
MGT 400 Cross-Cultural Management (GCSI)		
MGT 425 Global Human Resources		
MGT 459 International Management (GCSI)		
MGT 425 Global Human Resources		
SCM 463 Global Supply Chain Management (GCSI)		
300+ level WPC subject courses earned on a sponsored ASU study abroad program may be applied toward the elective area, per approval of the international programs coordinator. Courses applied toward the W. P. Carey business core cannot be used toward the elective area.		

Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies and Individuals Coursework	C	6
Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		

Requirement	Minimum Grade	Credit Hours
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.		
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Upper Division Nonbusiness Global Communities, Societies and Individuals Coursework

Nonbusiness Global Communities, Societies, and Individuals coursework may be satisfied by any combination of the following:		
1) Students can choose any of the university-designated nonbusiness Global Communities, Societies and Individuals (GCSI) courses.		
2) One course must be upper division to meet the 12 upper-division hours requirement.		
3) It is recommended to choose courses related to the area of study abroad experience. Additional courses may be approved by the international program coordinator.	C	3
4) Nonbusiness Global Communities, Societies and Individuals (GCSI) hours may also be satisfied by: * An ASU or W. P. Carey School of Business education abroad program earning six credit hours or more fulfills six of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements. * An ASU or W. P. Carey School of Business education abroad program earning three credit hours fulfills three of the credit hours of nonbusiness Global Communities, Societies and Individuals requirements.		

Foreign Language Proficiency

Foreign Language Proficiency

Requirement	Minimum Grade	Credit Hours
The certificate program requires students to meet a foreign language proficiency by meeting one of the following:		
1) Completion of one year (two semesters) of the same foreign language at the college level.		
2) Completion of one semester of the equivalent of 101- and 102-level coursework.		
3) Completion of two years of the same foreign language in high school with a minimum grade of "C" (2.00 on a 4.00 scale).		
4) Documentation of a proficiency or placement test confirming preparedness to start at least the second year of a foreign language (201 level or above).		
A student whose native language is not English may have this requirement waived.		

International Study Experience

International Study Experience

The certificate program requires students to participate in an ASU Global Education Office sponsored program.		
Students cannot use independent non-sponsored programs to fulfill this requirement. Sponsored programs can be found on the Global Education Office website.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Only courses in which a student receives a grade of "C" (2.00 on a 4.00 scale) or better may be used to meet the certificate requirements, and an overall certificate GPA of at least 2.50 must be earned.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Marketing (Digital) and Cross-Sector Leadership (BAMKDIMCBS and PPCSLDCERT)

Program description:
The digital concentration builds on the knowledge provided in the Bachelor of Science in marketing major program and prepares marketing students with specialized knowledge and training in the areas of advertising, brand management and digital marketing.

In this program, students gain specialized expertise in an area that is growing in importance in the marketplace.

The certificate program in cross-sector leadership provides a comprehensive overview of leading solutions to complex social challenges by integrating the public, private, nonprofit and military sectors.

Students engage in a systems-thinking approach to challenges faced by local and global communities, explore the diverse characteristics and motives of each sector in engaging in cross-sector collaborations, and master processes to formalize such partnerships. Students study values-based leadership and how individual, organizational and sector values can drive a leader's ability to act. Students gain leadership skills, such as leading change within and between organizations across multiple sectors; and they learn to use human-centered design, social entrepreneurship and other approaches when tackling community challenges.

Students end the program with a thesis or applied project that integrates the theories, procedures and concepts learned in the certificate courses with experiences from their internships in each sector.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
The digital concentration program equips graduates with knowledge in the marketing communications area. Graduates are well prepared to assume jobs in the areas of advertising, brand management and digital marketing. While the number and quality of job opportunities in advertising and brand management are relatively small, the number of entry-level positions in digital marketing has exploded. A sampling of career opportunities includes:

- digital account manager
- digital marketing analyst
- digital marketing coordinator
- digital marketing specialist
- electronic marketing specialist

Students can advance their career options with an undergraduate certificate.

Graduates of the certificate in cross-sector leadership have acquired a beneficial knowledge of cross-sector collaboration, advanced leadership skills, and an understanding of how to use these. These transferrable skills complement students' major program of study and may make them more marketable to employers.

Curriculum - Marketing (Digital), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BAMKDIMCBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core Courses		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MGT 300 Principles of Management and Leadership	C	3
SCM 300 Global Supply Operations (SUST)	C	3

Requirement	Minimum Grade	Credit Hours
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI) **AND** Global Communities, Societies, and Individuals (GCSI)	C	3

Major Courses

MKT 302 Strategic Marketing Management	C	3
MKT 352 Marketing Research	C	3
MKT 385 Digital Media Marketing OR MKT 412 Innovations in Marketing OR MKT 420 Retail Management OR MKT 450 Social Media and Content Marketing	C	3
MKT 402 Consumer Behavior	C	3
MKT 440 Creating Digital Experiences	C	3
Upper Division Marketing (Digital) Major Elective MKT 385 Digital Media Marketing	C	6

Requirement	Minimum Grade	Credit Hours
MKT 412 Innovations in Marketing		
MKT 420 Retail Management		
MKT 435 Entrepreneurial Marketing		
MKT 450 Social Media and Content Marketing		
MKT 472 Immersive Brand Experience I: Intelligence, Insights and Strategy		
MKT 484 Internship		
(Maximum three credits of MKT 484 may be applied towards the major)		
MKT 493 Honors Thesis		
(Maximum three credits of MKT 493 may be applied towards the major)		
MKT 494 Topic: Influencer Marketing		

Business Capstone

WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3

ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3
SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business		1

WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.

Students must earn a 2.0 GPA in major courses.

Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Cross-Sector Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPCSLDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in cross-sector leadership is a requirement for, and is limited to, participants in the Public Service Academy's Next Generation Service Corps, a four-year leadership development track that engages future civilian leaders in the public, private and nonprofit sectors to engage in collaboration and change in the context of social challenges in which they hold interest. Students are required to demonstrate forward academic progress to maintain enrollment in the certificate as well as the Next Generation Service Corps. ROTC students also may pursue the certificate.		
PAF 215 NGSC Community Impact Lab	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 315 Cross-Sector Collaboration (CIVI)	C	3
PAF 415 Social Entrepreneurship	C	3
PAF 394 Topic: NGSC Leadership Instruction **or** **PAF 421 Leadership Capstone**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Mathematics (Statistics) and Social Science Research Methods (LAMATTBS and LASSRMCERT)

Program description:
Statistics involves identifying relevant details of data and how to best collect that data to make reliable conclusions. In the Bachelor of Science program in mathematics with a concentration in statistics, students gain a strong math background with a focus on statistics. Flexibility is built into the program, giving students the freedom to explore other mathematical areas of interest in addition to statistics.

Using statistical methods, students discover how to generate insights that inform fact-based decision-making and research through statistical inference and controlled experimentation. They use next-generation techniques to study and explore strategies for dealing with uncertainty.

In the certificate program in social science research methods, students are prepared to acquire, manage and analyze a wide variety of human thought and behavior data. Data can be qualitative (e.g., text, images, sound) or quantitative (e.g., direct observation, surveys, geographic information systems).

Data acquisition skills may include downloading and managing information from online sources, collecting data in surveys or making direct observations. A key feature of this program is a focus on data analysis, so students can analyze any data they collect.

All students in this program demonstrate skills in statistical analysis and selecting methods related to their interests.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 270 - Calc w/Analytic Geometry I
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Based on factors such as pay, growth and job satisfaction, statistics has been named in separate job reports as one of the best career areas, and statistical analysis and data mining have been identified as two of the most desirable skills in today's job market.

The U.S. Bureau of Labor Statistics projects 12% employment growth for statisticians by 2033. The role of statistical thinking is exploding in many important areas, such as biostatistics, business analytics and the social sciences. For those pursuing a BS in mathematics with a concentration in statistics, that means an exciting future of career opportunities in fields including:

- biostatistics
- business
- economics
- engineering
- finance
- government
- marketing
- sports
- technology

People with the skill set needed to solve complex problems are in demand in the job market. There is a growing need for researchers and analysts with keen thinking skills who can manage, evaluate and interpret large amounts of data to address these challenges.

Some career opportunities include:

- acting as legal advocates in international cases
- analyzing and proposing policies

- conducting postgraduate academic research
- consulting for private and public organizations
- directing nonprofit organizations
- directing programs in the private or public sector

Curriculum - Mathematics (Statistics), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAMATTBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.		
Major Core		
MAT 270 Calculus with Analytic Geometry I (MATH) OR **MAT 265 Calculus for Engineers I (MATH)**	C	3 - 4
MAT 271 Calculus with Analytic Geometry II (MATH) OR **MAT 266 Calculus for Engineers II (MATH)**	C	3 - 4
MAT 272 Calculus with Analytic Geometry III (MATH) OR **MAT 267 Calculus for Engineers III (MATH)**	C	3 - 4
MAT 300 Mathematical Structures	C	3
MAT 343 Applied Linear Algebra OR **MAT 342 Linear Algebra**	C	3

Requirement	Minimum Grade	Credit Hours
MAT 371 Advanced Calculus I	C	3
CSE 110 Principles of Programming (QTRS)	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
Statistics Core		
STP 420 Introductory Applied Statistics (QTRS)	C	3
STP 421 Probability The STP 421 requirement serves as a capstone experience and must be taken from the School of Mathematical and Statistical Sciences.	C	3
STP 427 Mathematical Statistics The STP 427 requirement serves as a capstone experience and must be taken from the School of Mathematical and Statistical Sciences.	C	3
STP 429 Applied Regression (QTRS)	C	3
MAT or STP Advanced Course		
Upper Division MAT and STP Advanced Courses **ACT 430 Mathematics of Financial Derivatives** **ACT 435 Statistics for Risk Modeling** **ACT 450 Actuarial Models** **ACT 451 Short-Term Actuarial Mathematics**	C	6

Requirement	Minimum Grade	Credit Hours
MAT 372 Advanced Calculus II		
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 442 Advanced Linear Algebra		
MAT 472 Intermediate Real Analysis I		
400-Level STP Elective		
MAT and STP Advanced Courses	C	3
ACT 430 Mathematics of Financial Derivatives		
ACT 435 Statistics for Risk Modeling		
ACT 450 Actuarial Models		
ACT 451 Short-Term Actuarial Mathematics		
MAT 275 Modern Differential Equations (MATH)		
MAT 372 Advanced Calculus II		
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 442 Advanced Linear Algebra		
MAT 472 Intermediate Real Analysis I		

Requirement	Minimum Grade	Credit Hours
400-Level STP Elective		

Related Field

Related Field Course	C	10
Upper Division ACT Elective		
Upper Division AST Elective		
400-Level BCH Elective		
Upper Division BME Elective		
Upper Division CEE Elective		
CHE Elective		
CHM 341 Elementary Physical Chemistry		
CHM 343 Elementary Physical Chemistry Laboratory		
CHM 345 Physical Chemistry I		
CHM 346 Physical Chemistry II		
CHM 348 Physical Chemistry Laboratory I		
CHM 349 Physical Chemistry Laboratory II		
CHM 453 Inorganic Chemistry		
CHM 460 Biological Chemistry		
CHM 471 Solid-State Chemistry		
200-Level CIS Elective		

Requirement	Minimum Grade	Credit Hours
Upper Division CIS Elective		
CSE Elective		
DAT 301 Exploring Data in R and Python		
DAT 402 Machine Learning for Data Science		
Upper Division ECN Elective		
EEE Elective		
Upper Division FIN Elective		
GLG 418 Geophysics		
GLG 419 Geodynamics		
GLG 470 Hydrogeology		
GLG 481 Geochemistry		
Upper Division IEE Elective		
MAE Elective		
Upper Division MAT Elective		
MSE Elective		
PHI 333 Symbolic Logic		
PHI 413 Advanced Symbolic Logic		
PHY 121 University Physics I: Mechanics (SCIT)		
PHY 122 University Physics Laboratory I (SCIT)		

Requirement	Minimum Grade	Credit Hours
PHY 131 University Physics II: Electricity and Magnetism (SCIT)		
PHY 132 University Physics Laboratory II (SCIT)		
PHY 150 Physics I (SCIT)		
PHY 151 Physics II (SCIT)		
200-Level PHY Elective		
Upper Division PHY Elective		
Upper Division STP Elective		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
LIA 101 Student Success in The College of Liberal Arts and Sciences **OR ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq		
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr		
Mathematics Placement Assessment score determines placement in first mathematics course.		
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree		

requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Social Science Research Methods, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LASSRMCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires 18 credit hours, 12 of which must be upper division. A minimum grade of "C" (2.00 on a scale of 4.00) is required for all coursework. At least six upper-division credit hours must be completed with courses offered by The College of Liberal Arts and Sciences.		

Core Course

GIS 469 Multivariate Statistics for Social Sciences **or** **SOC 469 Multivariate Statistics for Social Sciences** **or** **STP 452 Multivariate Statistics**	C	3

Research Methods Courses

Social Science Research Methods Core (choose two)	C	6

- **ACO 100 All About Data: Design, Query, and Visualization (QTRS)**
- **ACT 435 Statistics for Risk Modeling**
- **ACT 450 Actuarial Models**

Requirement	Minimum Grade	Credit Hours
ALA 235 Introduction to Computer Modeling		
AML 253 / CAS 253 Introduction to Mathematical Tools and Modeling for the Life and Social Sciences (MATH)		
AML 441 / SOS 441 Mathematical Concepts and Tools in Sustainability		
ASB 389 / SBS 389 / SOC 389 Ethnographic Field Lab		
ASM 494 Topic: Models in Social Evolution		
BME 301 Numerical Methods in Biomedical Engineering		
BMI 211 Clinical Decision Analysis		
BMI 311 Biomedical Artificial Intelligence		
BMI 312 Health Data Mining		
BMI 461 Advanced Topics in Biomedical Informatics I		
BMI 462 Advanced Topics In Biomedical Informatics II		
COM 308 Communication Research Strategies		
COM 407 Qualitative Data Analysis in Communication		
CRJ 303 Statistical Analysis (QTRS)		
ECN 310 Applied Regression and Data Analytics		
ECN 416 Game Theory and Economic Behavior		
EDP 454 Statistical Data Analysis in Education		
FAS 361 / SOC 391 Applied Research Methods (SOBE)		
FAS 498 / SOC 498 Topic: Advanced Statistics for Social Sciences		
GCU 351 Population Geography (GCSI)		
GCU 373 Introduction to Geographic Information Science		

Requirement	Minimum Grade	Credit Hours
GCU 442 Geographical Analysis of Transportation		
GCU 496 Geographic Research Methods		
GIS 311 Geographic Information Science III (QTRS)		
GIS 322 Programming Principles in GIS II		
GIS 341 Cartography and Georepresentation (QTRS)		
GIS 431 Spatial Databases		
GIS 441 Geographics: Interactive and Animated Cartography and Geovisualization		
GIS 461 / PUP 481 Fundamentals of Spatial Optimization		
GIS 462 Location Analysis and Modeling		
GIS 470 Advanced Statistics for Geography and Planning (QTRS)		
GIS 471 Spatial Statistics for Geography and Planning		
GIS 472 Spatial Regression Analysis		
GPH 494 Topic: Advanced Digital Analysis		
HSE 290 Experimental Methods for Human Systems Research (QTRS)		
HSE 390 Qualitative Research Methods		
IFT 200 Information Modeling, Storage and Retrieval		
IFT 410 Big Data Tools and Practices		
MKT 352 Marketing Research		
POS 301 / SGS 305 Empirical Political Inquiry (SOBE)		
POS 401 / SGS 401 Political Statistics (QTRS)		
PSY 330 Statistical Methods (QTRS)		

Requirement	Minimum Grade	Credit Hours
PUP 424 Planning Methods		
SBS 302 Qualitative Methods (SOBE)		
SBS 404 Social Statistics II: Multivariate Analysis		
SOS 211 Calculus and Probability for the Life and Social Sciences (MATH)		
STP 280 Probability and Statistics for Researchers (QTRS)		
STP 310 Design and Analysis of Experiments		
STP 311 Regression and Time Series Analyses		
STP 315 Statistical Computing		
STP 420 Introductory Applied Statistics (QTRS)		
STP 421 Probability		
STP 425 Stochastic Processes		
STP 429 Applied Regression (QTRS)		
STP 450 Nonparametric Statistics		
STP 460 Categorical Data Analysis		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 411 Principles of Visual Communication		
Upper Division Social Science Research Methods Electives (choose two)	C	6
ACT 435 Statistics for Risk Modeling		
ACT 450 Actuarial Models		
AML 441 / SOS 441 Mathematical Concepts and Tools in Sustainability		
ASB 389 / SBS 389 / SOC 389 Ethnographic Field Lab		
ASM 494 Topic: Models in Social Evolution		

Requirement	Minimum Grade	Credit Hours
BME 301 Numerical Methods in Biomedical Engineering		
BMI 311 Biomedical Artificial Intelligence		
BMI 312 Health Data Mining		
BMI 461 Advanced Topics in Biomedical Informatics I		
BMI 462 Advanced Topics In Biomedical Informatics II		
COM 308 Communication Research Strategies		
COM 407 Qualitative Data Analysis in Communication		
CRJ 303 Statistical Analysis (QTRS)		
ECN 310 Applied Regression and Data Analytics		
ECN 416 Game Theory and Economic Behavior		
EDP 454 Statistical Data Analysis in Education		
FAS 361 / SOC 391 Applied Research Methods (SOBE)		
FAS 498 / SOC 498 Topic: Advanced Statistics for Social Sciences		
GCU 351 Population Geography (GCSI)		
GCU 373 Introduction to Geographic Information Science		
GCU 442 Geographical Analysis of Transportation		
GCU 496 Geographic Research Methods		
GIS 311 Geographic Information Science III (QTRS)		
GIS 322 Programming Principles in GIS II		
GIS 341 Cartography and Georepresentation (QTRS)		
GIS 431 Spatial Databases		
GIS 441 Geographics: Interactive and Animated Cartography and Geovisualization		

Requirement	Minimum Grade	Credit Hours
GIS 461 / PUP 481 Fundamentals of Spatial Optimization		
GIS 462 Location Analysis and Modeling		
GIS 470 Advanced Statistics for Geography and Planning (QTRS)		
GIS 471 Spatial Statistics for Geography and Planning		
GIS 472 Spatial Regression Analysis		
GPH 494 Topic: Advanced Digital Analysis		
HSE 390 Qualitative Research Methods		
IFT 410 Big Data Tools and Practices		
MKT 352 Marketing Research		
POS 301 / SGS 305 Empirical Political Inquiry (SOBE)		
POS 401 / SGS 401 Political Statistics (QTRS)		
PSY 330 Statistical Methods (QTRS)		
PUP 424 Planning Methods		
SBS 302 Qualitative Methods (SOBE)		
SBS 404 Social Statistics II: Multivariate Analysis		
STP 310 Design and Analysis of Experiments		
STP 311 Regression and Time Series Analyses		
STP 315 Statistical Computing		
STP 420 Introductory Applied Statistics (QTRS)		
STP 421 Probability		
STP 425 Stochastic Processes		
STP 429 Applied Regression (QTRS)		

Requirement	Minimum Grade	Credit Hours
STP 450 Nonparametric Statistics		
STP 460 Categorical Data Analysis		
TWC 301 Fundamentals of Writing for Digital Media		
TWC 411 Principles of Visual Communication		

Capstone

ASB 484 Internship or ASB 499 Individualized Instruction	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSE/CERT Mechanical Engineering and Mathematical Concepts of Engineering (ESMAEMBSE and LAMACECERT)

Program description:
Mechanical engineering is a creative, diverse discipline. Mechanical engineers design, build and control the devices, machines, processes and systems that are the mainstay of modern industrialized society.

In the Bachelor of Science in Engineering program in mechanical engineering, students prepare for a career in mechanical engineering through a curriculum that includes the study of the principles that govern energy transfer, mechanical design, sensors and control devices, and the application of these principles to the creative solutions of practical modern problems.

Accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Mechanical Engineering Program Criteria.

The certificate program in mathematical concepts of engineering is designed for students who seek a strong foundation in mathematics to support their interests in engineering. Combining a core foundation in the quantitative and analytical skills found in mathematics with related skills in engineering, the program provides students with a solid mathematical background well-suited for multiple career paths.

BSE At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Mechanical engineers are employed in virtually every kind of industry. They are involved in seeking new knowledge through research; in generating creative design and development; and in the production, control, management and sales of the devices and systems needed by society. Therefore, a major strength of a mechanical engineering education is the flexibility it provides for its graduates in future employment opportunities.

The BSE program in mechanical engineering has the following program educational objectives:

Through activities such as volunteering, entrepreneurial endeavors, community service, and their employment, graduates of the mechanical engineering program demonstrate commitment to the Sun Devil ideals of global engagement, social embeddedness, social transformation and sustainability.

Graduates of the mechanical engineering program should have attained one or more of the following objectives within a few years after earning their degree:

- admission to a graduate degree program in mechanical engineering or other technical fields
- admission to a professional degree program, such as law, business or medicine, in accordance with the specific interests and abilities of the graduate
- employment in engineering or other fields in a position that capitalizes on the skills and abilities gained through the degree program in mechanical engineering (holding positions of increasing responsibility and leadership within their organizations)

Graduates of the mechanical engineering program are expected to attain:

- an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
- an ability to apply engineering design to produce solutions that meet specified needs, with consideration of public health, safety and welfare, as well as global, cultural, social, environmental and economic factors
- an ability to communicate effectively with a range of audiences
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- an ability to function effectively on a team whose members together provide leadership, create a collaborative and

inclusive environment, establish goals, plan tasks and meet objectives
- an ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science and mathematics
- an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental and societal contexts

The certificate program in mathematical concepts of engineering complements many major programs of study. Graduates with this enhanced math background can become more marketable to employers.

Curriculum - Mechanical Engineering, BSE

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Engineering, BSE
College/School: Ira A. Fulton Schools of Engineering
Plan Code: ESMAEMBSE
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours
Mechanical Engineering Lower Division		
EEE 202 Circuits I	C	4
FSE 100 Introduction to Engineering	C	2
MAE 201 Mechanics of Particles and Rigid Bodies I: Statics	C	3
MAE 202 Mechanics of Particles and Rigid Bodies II: Dynamics	C	3
MAE 213 Mechanics of Materials	C	3
MAE 214 Computer-Aided Engineering I	C	1
MAE 215 Introduction to Programming in MATLAB	C	1
MAE 241 Introduction to Thermodynamics	C	3
MAE 242 Introduction to Fluid Mechanics	C	3
MSE 250 Structure and Properties of Materials	C	3
Mechanical Engineering Upper Division		

Requirement	Minimum Grade	Credit Hours
MAE 301 Applied Experimental Statistics	C	3
MAE 318 System Dynamics and Control I	C	3
MAE 384 Advanced Mathematical Methods for Engineers (QTRS)	C	3
MAE 417 System Dynamics and Control II	C	3
MEE 322 Structural Mechanics	C	3
MEE 323 Computer-Aided Engineering II	C	2
MEE 340 Heat Transfer	C	3
MEE 342 Principles of Mechanical Design	C	3
MEE 488 Mechanical Engineering Design I	C	3
MEE 489 Mechanical Engineering Design II	C	3
MEE 491 Experimental Mechanical Engineering	C	2
Upper Division Mechanical Engineering Technical Electives *Students who do not meet the enrollment requirements for these courses (excluding MAE and MEE prefixes) may be allowed to enroll with instructor consent. Courses not listed here require a department petition form. To take any 494 class, please check with your advisor first. A max of 3 credits from MAE 484/499 can be applied toward the TE requirements. Upper Division AEE Elective **AST 321 Stellar and Planetary Astrophysics**	C	9

Requirement	Minimum Grade	Credit Hours
AST 322 Introduction to Galactic and Extragalactic Astrophysics		
BME 300 Bioengineering Product Design		
BME 316 Biomechanics for Biomedical Engineers		
BME 318 Biomaterials		
BME 350 Signals and Systems for Bioengineers		
BME 467 Tissue Engineering and Regenerative Medicine		
BME 494 Topic: Bioenergy and Microbial Biotechnology		
BME 494 Topic: Neural Bases of Motor Control		
BME 494 Topic: Polymeric Drug Delivery		
BME 494 Topic: Wearable Devices for Sport, Health, and Wellness		
CEE 361 Introduction to Environmental Engineering		
CEE 372 Transportation Engineering		
CEE 440 / GLG 471 Hydrology		
CEE 441 Water Resources Engineering		
CEE 494 Topic: Airport Design		
CEE 494 Topic: Energy Efficient Buildings and Systems		
CEE 494 Topic: Sustainable Energy Technologies		
CEE 494 / EVE 494 Topic: Sustainable Energy and Material Use		

Requirement	Minimum Grade	Credit Hours
CHE 468 Polymer Principles and Processing		
CHE 473 Fuel Cells and Biofuel Cells		
CHE 478 Biomass Energy Conversion Technology		
CHE 494 Topic: Nanobiotechnology		
CHE 494 Topic: Six Sigma Methodology/Engineering Experimentation		
CHE 494 / MSE 494 Topic: Quantum Mechanical Simulations of Chemical Process		
CHM 302 Environmental Chemistry		
CHM 325 Analytical Chemistry		
CSE 475 Foundations of Machine Learning		
EEE 304 Signals and Systems II		
EEE 333 Hardware Design Languages and Programmable Logic		
EEE 334 Circuits II		
EEE 350 Random Signal Analysis		
EEE 360 Energy Systems and Power Electronics		
EEE 407 Digital Signal Processing		
EEE 434 Quantum Mechanics for Engineers		
EEE 460 Nuclear Power Engineering		
EEE 463 Electrical Power Plants		

Requirement	Minimum Grade	Credit Hours
EEE 473 Electrical Machinery		
EEE 480 Feedback Systems		
EEE 481 Computer-Controlled Systems		
EEE 498 Topic: Foundations Machine Learning: From Theory to Pract		
EEE 498 Topic: Renewable Energy Technology and Systems		
EEE 498 Topic: Science and Technology of Solar Cell Fabrication		
EGR 433 Transforms and Systems Modeling		
EGR 455 Robotic Systems I		
EGR 456 Robotic Systems II		
EGR 494 Special Topics		
EVE 302 Environmental Engineering Fundamentals: Physical and Chemical Processes		
EVE 303 Environmental Engineering Fundamentals: Microbiological Processes		
GLG 418 Geophysics		
IEE 305 Information Systems Engineering		
IEE 376 Operations Research Deterministic Techniques/Applications		
Upper Division MAE Elective		

Requirement	Minimum Grade	Credit Hours
MAT 300 Mathematical Structures		
MAT 310 Introduction to Geometry		
MAT 371 Advanced Calculus I		
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 425 Numerical Analysis II		
MAT 451 Mathematical Modeling		
MAT 461 Applied Complex Analysis		
MAT 462 Applied Partial Differential Equations		
Upper Division MEE Elective		
MSE 330 Thermodynamics of Materials		
MSE 355 Structure and Defects		
MSE 440 Mechanical Behavior of Materials		
MSE 450 Introduction to Materials Characterization		
MSE 457 Quantum Mechanics for Understanding Properties of Atoms and Solids		
MSE 460 Nanomaterials in Energy Production and Storage		
MSE 466 Electrochemical Energy Storage and Conversion		

Requirement	Minimum Grade	Credit Hours
MSE 476 Growth and Processing of Semiconductors		
MSE 494 Topic: Adv. Materials Synth, Manufacturing, & Processing		
MSE 494 Topic: Advanced Polymer Science and Engineering		
MSE 494 Topic: Battery Materials Science and Engineering		
MSE 494 Topic: Bioinspired Materials and Biomaterials		
MSE 494 Topic: Electrochemical Materials Science		
MSE 494 Topic: Failure Analysis of Metallic Materials		
MSE 494 Topic: Intro to FEA for Matl Design and Characterization		
MSE 494 Topic: Manufacturing Processes for Structural Materials		
MSE 494 Topic: Semiconductor materials, devices, and fabrication		
PHY 310 Classical Particles, Fields, and Matter I		
PHY 361 Introductory Modern Physics		
SES 311 Essentials of Astrobiology: Exploration for Life in the Universe		
SES 350 Engineering Systems and Experimental Problem Solving (QTRS)		
SES 494 Topic: Modeling and Analysis of Space Thermal Systems		

Requirement	Minimum Grade	Credit Hours
TMC 498 Pro-Seminar		
By approval only:		
MAE 484 Internship		
MAE 492 Honors Directed Study		
MAE 493 Honors Thesis		
MAE 499 Individualized Instruction		
Students may only apply ONE (1) course from the list below:		
CEE 400 Earth Systems Engineering and Management (SUST)		
EGR 317 Humanitarian Engineering Project II		
FSE 301 Entrepreneurship and Value Creation		
FSE 394 Topic: Interdisciplinary Mobile Application Development		
FSE 394 Topic: Engineering in Global Context		
IEE 300 Economic Analysis for Engineers		
IEE 431 Engineering Administration		
IEE 437 Human Factors Engineering		
SES 407 Space Works II: Model, Fabricate, Test		
SES 494 Topic: Space Works 4:Sim and Analysis		

Requirement	Minimum Grade	Credit Hours
Upper Division Interdisciplinary Requirements		
ARC 434 Great Cities (HUAD) OR OGL 345 Organizational Ethics (HUAD) OR HPS 314 Philosophy of Science (HUAD) **or** PHI 314 Philosophy of Science (HUAD) OR PHI 330 Theory of Knowledge (HUAD) OR REL 330 Native American Worldviews (HUAD)	C	3
PAF 311 Leadership and Change (SOBE) OR PAF 410 Building Leadership Skills (SOBE) OR POS 301 Empirical Political Inquiry (SOBE) OR STS 304 Science, Technology and Society (SOBE) OR SWU 349 Stress Management Tools II (SOBE) OR SWU 350 Whole Person Health Across the Lifespan (SOBE)	C	3
Mechanical Engineering Major GPA		
Check: Minimum 2.0 Major GPA		
Math and Science Requirements		
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH)	C	3
MAT 275 Modern Differential Equations (MATH)	C	3

MAT 242 Elementary Linear Algebra	C	2
CHM 114 General Chemistry for Engineers (SCIT) OR **CHM 116 General Chemistry II (SCIT)**	C	4
PHY 121 University Physics I: Mechanics (SCIT)	C	3
PHY 122 University Physics Laboratory I (SCIT)	C	1
PHY 131 University Physics II: Electricity and Magnetism (SCIT)	C	3
PHY 132 University Physics Laboratory II (SCIT)	C	1

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-MEE The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition AND **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** AND **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit

hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Mathematical Concepts of Engineering, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAMACECERT

Minimum credit hours: 21

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The mathematical concepts of engineering certificate requires a minimum of 21 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		

Required Courses

IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 266 Calculus for Engineers II (MATH) **or** **MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3
MAT 267 Calculus for Engineers III (MATH) **or** **MAT 272 Calculus with Analytic Geometry III (MATH)**	C	3
MAT 275 Modern Differential Equations (MATH) **or** **MAT 274 Elementary Differential Equations (MATH)**	C	3
MAT 343 Applied Linear Algebra **or** **MAT 342 Linear Algebra**	C	3

Requirement	Minimum Grade	Credit Hours
MAT 343 and STP 420 must be completed with courses offered by the School of Mathematical and Statistical Sciences.		
STP 420 Introductory Applied Statistics (QTRS)	C	3

Elective (choose one)

Upper Division Mathematical Concepts of Engineering Electives

DAT 301 Exploring Data in R and Python	C	3
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 470 Stochastic Operations Research		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Media Arts and Sciences (Games and Interactive Media) and Arts and Humanities in Games (HIMASGIMBS and ASAHGCERT)

Program description:
The School of Arts, Media and Engineering educates the next generation of learners and empowers them with technofluency --- its development, application and implications. Students are prepared to be socially aware, critically thinking global citizens who strive to bring about positive change in a society that will be increasingly shaped by new technologies.

In the Bachelor of Science program in media arts and sciences with a concentration in games and interactive media, students learn to create computational media, which is computation combined with objects, sound, video, time, space, culture and bodies; breathe behavior into media, objects or systems by programming; and think critically about how computation impacts lives and how culture makes a difference in how people experience computational media, a critical skill in this age.

This concentration program in games and interactive media pairs a maker approach with a rich historical and conceptual understanding of games, augmented and virtual reality, esports, and location-based and themed environments and experiences. Working within this interdisciplinary program, students create, envision and critique digital and hybrid spaces that impact work, education, communication, interpersonal relationships, entertainment, physical and mental health care, and lifelong learning.

Students who are interested in the entirety of game infrastructure may also pursue a certificate in computer gaming. This certificate program focuses on game development and is offered by the Ira A. Fulton Schools of Engineering at the Tempe campus. Students may also pursue a certificate in arts and humanities in games, offered by the New College of Interdisciplinary Arts and Sciences at the West Valley campus.

The certificate program in arts and humanities in games trains students to design, create and analyze games from holistic and interdisciplinary perspectives and to understand the utilization, consumption and impact of games in a diverse culture and society.

The goal is to make students' minds more supple, critical in thinking and expansive through an interdisciplinary approach that encompasses the design, development and qualitative study of toys and games. The interdisciplinary approach helps students understand the impact of play on human mental, emotional and social growth.

This program, through foregrounding arts and humanities in the study of games, provides a complementary approach to the technically based study of games offered by the Ira A. Fulton Schools of Engineering.

BS At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: West Valley

Career opportunities:
Working within this field of games and interactive media are artists, programmers, designers, storytellers, engineers, policy advocates and countless other professionals. Games and interactive media arts industries are growing at a rapid pace; for example, job opportunities for special effects artists and animators are expected to grow by 16% by 2030, double that of the national outlook. The large scale of the video gaming industry --- valued at $184 billion globally in 2023 according to the International Trade Administration --- goes beyond video game design to include fields of specialized marketing, monetization and other ancillary industries.

The certificate in arts and humanities in games is appropriate for students who are seeking employment as:

- artists
- board game designers
- game archivists and librarians
- game curators

- game sound designers
- game writers
- multimedia artists
- narrative designers
- video game designers

Curriculum - Media Arts and Sciences (Games and Interactive Media), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Herberger Institute for Design and the Arts
Plan Code: HIMASGIMBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
AME 111 Introduction to Digital Culture (QTRS)	C	3
AME 130 Prototyping Dreams (HUAD)	C	3
AME 220 Programming for the Web (QTRS)	C	3
AME 230 Programming for the Media Arts (QTRS)	C	3
Media Arts and Sciences Foundational Media Course		
AME 112 Computational Thinking for Media Arts	C	12
AME 210 Media Editing		
AME 240 Introduction to Physical Computing		
AME 244 Introduction to Interactive Environments		
AME 294 Topic: Game Engine Fundamentals		
AME 294 Topic: Intro to Blender and 3D Concepts		
MDC 211 Introduction to Digital Sound		
AME 360 Designing Mixed-Reality Experiences	C	3

Requirement	Minimum Grade	Credit Hours
AME 365 People at Play (HUAD)	C	3
AME 436 Animating Virtual Worlds	C	3
AME 465 Designing Play	C	3
AME 485 Media Arts and Sciences Capstone I	C	3
AME 486 Media Arts and Sciences Capstone II	C	3
Upper Division Track Focus Area Course	C	12
Creative Code and Development Track		
AME 394 Topic: Computational Photography		
AME 400 Minds and Machines		
AME 430 Mac Development for Media Arts		
AME 434 Machine Learning for Media Arts		
AME 435 Mobile Development		
AME 470 Programming for Social and Interactive Media		
AME 494 Topic: Artificial Intelligence for Social Good		
AME 494 Topic: Programming for the Internet of Things		
Emerging Media Arts Track		
AME 320 Motion Capture for Integrative Systems		
AME 394 Topic: Computational Photography		

Requirement	Minimum Grade	Credit Hours
AME 394 Topic: User Experience in Media Arts		
AME 444 Media Installations		
AME 494 Topic: Spatial Design		
AME 494 Topic: Systems and Content Design for Digital Experiences		
Games and Immersive Worlds Track		
AME 320 Motion Capture for Integrative Systems		
AME 394 Topic: Intro to Esports Management		
AME 494 Topic: Cinema and Game Worlds		
AME 494 Topic: Spatial Audio for XR		
AME 494 Topic: Worldbuilding		
Sound and Music Track		
AME 333 Improvising Cyborgs		
AME 394 Topic: Synthesis and Expression		
AME 411 Advanced Interactive Sound		
AME 494 Topic: Acousmatic Composition		
AME 494 Topic: Musical Microcontrollers		
AME 494 Topic: Spatial Audio for XR		
AME 494 Topic: Wearable Music		
AME 494 Topic: Web Audio for Collaborative Situated Media		

Requirement	Minimum Grade	Credit Hours
Tangible and Physical Computing Track		
AME 320 Motion Capture for Integrative Systems		
AME 330 Digital-Physical Systems		
AME 410 Interactive Materials		
AME 444 Media Installations		
AME 494 Topic: Advanced Modeling and Fabrication		
AME 494 Topic: Expressive Robotics		
AME 494 Topic: Musical Microcontrollers		
AME 494 Topic: Wearable Music		
Tech and Society Track		
AME 310 Media Literacies and Composition		
AME 325 Technical Lives		
AME 394 Topic: Gender, Technology & Design		
AME 394 Topic: Imagining Futures in Science Fiction		
AME 494 Topic: Alternate Ecologies and Economies		
AME 494 Topic: Media Archaeology		
AME 494 Topic: Sensable Heatscapes		
AME 494 Topic: Sense-making Complexity		
AME 494 Topic: Socio-Technical Futures		
AME 494 Topic: Worldbuilding		

Requirement	Minimum Grade	Credit Hours
Track Focus Areas: Students may choose courses from any combination of focus areas and are encouraged to choose courses that align with their career goals. Contact your advisor for guidance or suggestions.		
Upper Division Digital Media Course	C	9
ART 424 Stop Motion Animation		
ART 440 Experimental Video Art		
ART 444 Short Subject: Documentary Video		
ART 494 Topic: Visual Prototyping		
CIS 300 Web Design and Development		
EDT 440 Creating and Marketing Mobile Apps		
FMP 315 Sound Design for Film and Media I		
FMS 351 Emerging Digital Media (HUAD)		
FMS 365 Video Games and Narrative		
GIT 314 Multimedia Design, Planning and Storyboards		
GIT 402 New Media Internet Technologies		
IAP 322 Multitrack Digital Recording		
IAP 361 Digital Editing and Media Literacy		
IAP 364 Documentaries		
IAP 367 Motion Graphics and Animation		
IAP 480 Art as Praxis: From Conceptualization to Production		

Requirement	Minimum Grade	Credit Hours
TWC 411 Principles of Visual Communication TWC 451 Copyright and Intellectual Property in the Electronic Age TWC 452 Information in the Digital Age		
CPI 111 Game Development I (QTRS)	C	3
CPI 211 Game Development II	C	3
IAP 220 Games, Culture and Aesthetics (GCSI)	C	3
MAT 210 Brief Calculus (MATH)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

AME 101 ASU Media Arts and Sciences Experience	C	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR ENG 105 Advanced First-Year Composition OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Arts and Humanities in Games, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: New College of Interdisciplinary Arts and Sciences

Plan Code: ASAHGCERT

Minimum credit hours: 18

Upper division minimum credit hours: 6

Requirement	Minimum Grade	Credit Hours
The certificate in arts and humanities in games consists of 18 credit hours of coursework, of which a minimum of 12 hours must be upper division. A minimum of six upper-division credit hours must be earned through courses offered by the New College of Interdisciplinary Arts and Sciences. All courses used to satisfy requirements for the certificate must be completed with a grade of "C" (2.00 on a 4.00 scale) or better.		

Required Foundational Course

IAP 220 Games, Culture and Aesthetics (GCSI)	C	3

Game Emphasis Area

Game Sound Emphasis	C	9
Required courses (complete both):		
IAP 362 Games and Narratology		
IAP 421 Composition: Process, Technique and Style **or** **IAP 469 Advanced Audio Production**		
Elective (complete one):		

Requirement	Minimum Grade	Credit Hours
IAP 322 Multitrack Digital Recording		
IAP 325 Sound Performance: Exploring Alternative Performance Groups		

OR **Game Writing Emphasis**

Required courses (complete both):		
IAP 362 Games and Narratology		
IAP 494 Topic: Scriptwriting for Games		
Elective (complete one):		
ENG 379 Travel Writing		
ENG 388 Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice		
IAP 222 Games and Ethics (HUAD)		
IAP 368 Digital Graphic Technologies		
IAP 462 Games and Play (SOBE)		

OR **Toys and Game Culture Emphasis**

Required courses (complete both):		
IAP 222 Games and Ethics (HUAD)		
IAP 462 Games and Play (SOBE)		
Elective (complete one):		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 324 Rhetoric and Media Criticism		
COM 416 Gender and Race in the Media		
COM 429 Visual Communication and Semiotics		

Requirement	Minimum Grade	Credit Hours
ENG 449 Masculinities, Femininities and Literacies		
IAP 464 Media and Diversity (HUAD)		
IAP 494 Topic: Cyberfeminist Cultural Production		

OR **Toys and Games as Works of Art Emphasis**

Required courses (complete both):

IAP 362 Games and Narratology

IAP 462 Games and Play (SOBE)

Elective (complete one):

IAP 352 Seeing and Drawing

IAP 354 Visual Representation

IAP 366 3D Modeling and Media Literacy (HUAD)

IAP 368 Digital Graphic Technologies

Students select and complete one emphasis area (comprised of two required courses and one elective course). At least six hours must be upper division.

Portfolio

IAP 495 Playworks Capstone I	C	3
IAP 496 Playworks Capstone II	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Media Arts and Sciences (Graphic Information Technology) and Artificial Intelligence and Digital Media (HIDGCTEBA and HIAIDMCERT)

Program description:
The School of Arts, Media and Engineering educates the next generation of learners and empowers them with technofluency --- its development, application and implications.

The Bachelor of Arts program in media arts and sciences with a concentration in graphic information technology offers students technical skills to develop computational media, and cultural skills to apply them meaningfully. Students immerse themselves in hands-on projects; explore the intertwined evolution of culture, society and tech; and create computational media systems with sound, video, objects, space and immersive media. This fusion of arts, humanities and engineering foundations enables students not only to craft innovative digital media but also to think critically about how technology and society are coproductive. The program's overarching goal is to develop socially conscious global citizens who are ready to navigate and shape a more connected and creative digital world.

The graphic information technology concentration is offered in partnership with the Ira A. Fulton Schools of Engineering. Students complement their knowledge of media arts and sciences with discipline-specific courses in the graphic information technology program. The concentration courses focus on entrepreneurship, knowledge of legal and ethical issues for technology, and skills in graphic communication, digital illustration and design methodology.

Students should be advised that most requirements can be completed at the Tempe campus, but courses specific to this concentration take place on the Polytechnic campus.

The artificial intelligence and digital media certificate program focuses on the creative exploration of how new media, built on advances in AI and machine learning, influences the way people live, learn, create and communicate.

Pursuing the certificate enables students to enhance their program of study with integrated, transdisciplinary training in the use of AI in new media and its sociocultural implications. Students learn how to design and create new media as well as analyze existing media products in the world from a transdisciplinary perspective.

The School of Arts, Media and Engineering educates the next generation of learners and empowers them with technofluency --- its development, application and implications. The School of Arts, Media and Engineering prepares students to be socially aware, critically thinking global citizens who strive to bring about positive change in a society that is increasingly shaped by new technologies.

BA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 117 - College Algebra
Math intensity: Moderate

CERT At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe

Career opportunities:
Armed with skills and sound judgment, graduates work in cultural communication, marketing, design, social media, health, education, entertainment and creative arts, and all areas in which culture is shaped by technology and computational media. All graduates have learned techniques to change the world and communicate using contemporary computational media --- a vital power in today's world. Some go on to invent fresh techniques.

Graduates of the media arts and sciences program have a wide array of career opportunities in new media involving the fields of:

- communications (Cisco, Google, Facebook)
- computing (Apple, Microsoft)
- gaming and entertainment (Industrial Light & Magic, Electronic Arts, Pixar)
- media arts (engineering multimedia shows, video and sound production)

Graduates are also prepared for roles in the development of modern media systems that address complex sociotechnical problems, such as:

- diagnostic, monitoring and assistive cyber-physical tools and systems that can be used by healthcare providers
- new systems for collaborative, participatory content creation and sharing
- social networking and reflection tools for promoting sustainability
- systems for interactive, adaptive learning and computational assessment in educational organizations

Graduates who are interested in continuing their higher education are well prepared to apply for admission to the top transdisciplinary new media programs in the nation, including graduate programs in the School of Arts, Media and Engineering at ASU.

Media arts and sciences alumni have received job opportunities in:

- audio and video
- engineering
- graphic design
- illustration
- iOS development
- journalism
- programming
- software engineering
- special effects
- 3D modeling and fabrication
- visual media

There are several companies who hire in the space of augmented and virtual reality, image and video multimedia including Adobe, Dreamscape, NVIDIA, Disney and Intel.

According to the U.S. Bureau of Labor Statistics, employment of media and communication occupations is projected to grow about as fast as the average for all occupations from 2023 to 2033, which will result in about 27,600 new jobs. Demand for media and communication occupations is expected to arise from the need to create, edit, translate and disseminate information through a variety of different platforms. About 109,500 openings are projected each year, on average, in these occupations due to employment growth and the need to replace workers who leave the occupations permanently. The median annual wage for media and communication workers (such as public relations specialists, news analysts, and writers and authors) was $66,320 in May 2023, which was higher than the median annual wage for all occupations of $48,060. Media and communication equipment workers (such as broadcast technicians, film and video editors, and photographers) had a median annual wage of $53,850 in May 2023, which was higher than the median annual wage for all occupations.

Employment in computer and information technology occupations is projected to grow much faster than the average for all occupations from 2023 to 2033. About 356,700 openings are projected each year, on average, in these occupations due to employment growth and the need to replace workers who leave the occupations permanently. All these numbers show a promising future for graduates who develop the skills taught in this certificate program.

Example careers:

- augmented and virtual reality software developer
- computer animator
- data scientist
- graphics software developer
- machine learning engineer
- media and communications designer
- user experience and user interface designer

Curriculum - Media Arts and Sciences (Graphic Information Technology), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: Herberger Institute for Design and the Arts
Plan Code: HIDGCTEBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
AME 111 Introduction to Digital Culture (QTRS)	C	3
AME 130 Prototyping Dreams (HUAD)	C	3
AME 230 Programming for the Media Arts (QTRS)	C	3
Media Arts and Sciences Foundational Media Course		
AME 112 Computational Thinking for Media Arts		
AME 210 Media Editing		
AME 220 Programming for the Web (QTRS)		
AME 240 Introduction to Physical Computing	C	12
AME 244 Introduction to Interactive Environments		
AME 294 Topic: Game Engine Fundamentals		
AME 294 Topic: Intro to Blender and 3D Concepts		
MDC 211 Introduction to Digital Sound		
Upper Division Digital Media Course	C	6

Requirement	Minimum Grade	Credit Hours
ART 424 Stop Motion Animation		
ART 440 Experimental Video Art		
ART 444 Short Subject: Documentary Video		
ART 494 Topic: Visual Prototyping		
CIS 300 Web Design and Development		
EDT 440 Creating and Marketing Mobile Apps		
FMP 315 Sound Design for Film and Media I		
FMS 351 Emerging Digital Media (HUAD)		
FMS 365 Video Games and Narrative		
GIT 314 Multimedia Design, Planning and Storyboards		
GIT 402 New Media Internet Technologies		
IAP 322 Multitrack Digital Recording		
IAP 361 Digital Editing and Media Literacy		
IAP 364 Documentaries		
IAP 367 Motion Graphics and Animation		
IAP 480 Art as Praxis: From Conceptualization to Production		
TWC 411 Principles of Visual Communication		
TWC 451 Copyright and Intellectual Property in the Electronic Age		

Requirement	Minimum Grade	Credit Hours
TWC 452 Information in the Digital Age		
Upper Division Track Focus Area Course	C	12
Creative Code and Development Track		
AME 360 Designing Mixed-Reality Experiences		
AME 394 Topic: Computational Photography		
AME 400 Minds and Machines		
AME 430 Mac Development for Media Arts		
AME 434 Machine Learning for Media Arts		
AME 435 Mobile Development		
AME 436 Animating Virtual Worlds		
AME 470 Programming for Social and Interactive Media		
AME 494 Topic: Artificial Intelligence for Social Good		
AME 494 Topic: Programming for the Internet of Things		
Emerging Media Arts Track		
AME 320 Motion Capture for Integrative Systems		
AME 394 Topic: Computational Photography		
AME 394 Topic: User Experience in Media Arts		
AME 444 Media Installations		

Requirement	Minimum Grade	Credit Hours
AME 494 Topic: Spatial Design		
AME 494 Topic: Systems and Content Design for Digital Experiences		
Games and Immersive Worlds Track		
AME 320 Motion Capture for Integrative Systems		
AME 360 Designing Mixed-Reality Experiences		
AME 365 People at Play (HUAD)		
AME 394 Topic: Intro to Esports Management		
AME 465 Designing Play		
AME 494 Topic: Cinema and Game Worlds		
AME 494 Topic: Spatial Audio for XR		
AME 494 Topic: Worldbuilding		
Sound and Music Track		
AME 333 Improvising Cyborgs		
AME 394 Topic: Synthesis and Expression		
AME 411 Advanced Interactive Sound		
AME 494 Topic: Acousmatic Composition		
AME 494 Topic: Musical Microcontrollers		
AME 494 Topic: Spatial Audio for XR		
AME 494 Topic: Wearable Music		

Requirement	Minimum Grade	Credit Hours
AME 494 Topic: Web Audio for Collaborative Situated Media		
Tangible and Physical Computing Track		
AME 320 Motion Capture for Integrative Systems		
AME 330 Digital-Physical Systems		
AME 410 Interactive Materials		
AME 444 Media Installations		
AME 494 Topic: Advanced Modeling and Fabrication		
AME 494 Topic: Expressive Robotics		
AME 494 Topic: Musical Microcontrollers		
AME 494 Topic: Wearable Music		
Tech and Society Track		
AME 310 Media Literacies and Composition		
AME 325 Technical Lives		
AME 365 People at Play (HUAD)		
AME 394 Topic: Gender, Technology & Design		
AME 394 Topic: Imagining Futures in Science Fiction		
AME 494 Topic: Alternate Ecologies and Economies		
AME 494 Topic: Media Archaeology		
AME 494 Topic: Sensable Heatscapes		

Requirement	Minimum Grade	Credit Hours
AME 494 Topic: Sense-making Complexity **AME 494 Topic: Socio-Technical Futures** **AME 494 Topic: Worldbuilding** Track Focus Areas: Students may choose courses from any combination of focus areas and are encouraged to choose courses that align with their career goals. Contact your advisor for guidance or suggestions.		
AME 485 Media Arts and Sciences Capstone I	C	3
AME 486 Media Arts and Sciences Capstone II	C	3
GIT 211 3D Media Production OR **GIT 215 Introduction to Web Authoring**	C	3
GIT 230 Digital Illustration in Publishing	C	3
GIT 312 Computer Animation and Motion Graphics OR **GIT 337 Web Content Design**	C	3
GIT 314 Multimedia Design, Planning and Storyboards OR **GIT 402 New Media Internet Technologies** OR **GIT 417 Advanced Web Markup and Scripting**	C	3
GIT 411 Visual Narrative in Motion Graphics OR **GIT 414 Web Site Design and Internet/Web Technologies**	C	3
TMC 110 Understanding the Enterprise	C	3
Upper Division Technological Entrepreneurship **OMT 430 Ethical Issues in Technology**	C	9

Requirement	Minimum Grade	Credit Hours
OMT 480 Organizational Effectiveness		
TEM 330 Systems Innovation		
TEM 431 Innovation Management		
TMC 310 Promotion of the Enterprise		
TMC 320 Funding the Enterprise		
TMC 330 Leading the Enterprise		
TMC 430 Enterprise Strategy and Innovation		

Technological Entrepreneurship

OMT 430 Ethical Issues in Technology		
OMT 480 Organizational Effectiveness		
TEM 230 Creativity and Business Innovation		
TEM 330 Systems Innovation		
TEM 431 Innovation Management	C	3
TMC 310 Promotion of the Enterprise		
TMC 320 Funding the Enterprise		
TMC 330 Leading the Enterprise		
TMC 430 Enterprise Strategy and Innovation		

MAT 117 College Algebra (MATH)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

AME 101 ASU Media Arts and Sciences Experience	C	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Artificial Intelligence and Digital Media, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Herberger Institute for Design and the Arts

Plan Code: HIAIDMCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
AME 130 Prototyping Dreams **or** AME 230 Programming for the Media Arts (QTRS)	C	3
AME 400 Minds and Machines	C	3
AME 404 Reading the Algorithm	C	3
Upper Division Media Processing Electives	C	6
AME 430 Mac Development for Media Arts		
AME 434 Machine Learning for Media Arts		
AME 435 Mobile Development		
AME 436 Animating Virtual Worlds		
AME 470 Programming for Social and Interactive Media		
CPI 321 Fundamentals of Game Art		
CPI 411 Graphics for Games		
CPI 421 3-D Modeling and Texturing		
CPI 462 Design for Learning in Virtual Worlds		
SER 332 Introduction to Graphics and Game Development		

Requirement	Minimum Grade	Credit Hours
SER 431 Advanced Graphics		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Medical Studies and Cross-Sector Leadership (NHMEDBS and PPCSLDCERT)

Program description:
The Bachelor of Science program in medical studies enables students to meet the prerequisites for medical and professional school. This program also prepares students for required postgraduate entrance exams, including the revised MCAT.

Students can customize the medical studies degree to meet the prerequisites of the health professions programs to which they intend to apply. In addition, students have the opportunity to learn directly from health care providers who are currently practicing in the field, and they can select clinically related internships or electives during their junior year.

This degree program integrates evidence-based research, communication, ethics, critical thinking, teamwork and leadership --- all essential competencies for members of today's health care teams.

Because of the high volume of overlap in curriculum, students enrolled in this degree are not permitted to declare a concurrent degree combination with certain majors, such as the BS in biological sciences, including the following concentrations: biomedical sciences; genetics, cell and developmental biology; and neurobiology, physiology and behavior.

The certificate program in cross-sector leadership provides a comprehensive overview of leading solutions to complex social challenges by integrating the public, private, nonprofit and military sectors.

Students engage in a systems-thinking approach to challenges faced by local and global communities, explore the diverse characteristics and motives of each sector in engaging in cross-sector collaborations, and master processes to formalize such partnerships. Students study values-based leadership and how individual, organizational and sector values can drive a leader's ability to act. Students gain leadership skills, such as leading change within and between organizations across multiple sectors; and they learn to use human-centered design, social entrepreneurship and other approaches when tackling community challenges.

Students end the program with a thesis or applied project that integrates the theories, procedures and concepts learned in the certificate courses with experiences from their internships in each sector.

BS At a Glance:
College/school: College of Health Solutions
Location: Downtown Phoenix, Polytechnic, West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 170 - Precalculus
Math intensity: Moderate

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Graduates are equipped with a diverse set of applicable skills for a number of exciting careers in the allied health fields, education, government, health care industries and nonprofit organizations.

Opportunities include these positions:
- community health worker
- project coordinator
- research assistant
- sales or marketing representative (e.g., medical device or pharmaceutical industry)

Graduates also are well prepared to pursue postgraduate health degrees in areas such as:
- dentistry
- medicine (Doctor of Medicine, Doctor of Osteopathic Medicine and naturopathic)
- occupational therapy
- optometry
- pharmacy
- physician assistant training

Further study can result in a career as a:

- chiropractor
- dentist
- naturopathic physician
- optometrist
- pharmacist
- physician
- physician assistant
- podiatrist
- public health professional

Students can advance their career options with an undergraduate certificate.

Graduates of the certificate in cross-sector leadership have acquired a beneficial knowledge of cross-sector collaboration, advanced leadership skills, and an understanding of how to use these. These transferrable skills complement students' major program of study and may make them more marketable to employers.

Curriculum - Medical Studies, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: College of Health Solutions
Plan Code: NHMEDBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Courses		
BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
BIO 201 Human Anatomy and Physiology I (SCIT)	C	4
BIO 202 Human Anatomy and Physiology II (SCIT)	C	4
CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
CHM 233 General Organic Chemistry I **AND** **CHM 237 General Organic Chemistry Laboratory I**	C	4
CHM 234 General Organic Chemistry II **AND** **CHM 238 General Organic Chemistry Laboratory II**	C	4

ASU Online students will complete CHM 237 and CHM 238 organic chemistry laboratories during summer sessions. For each lab course, the hands-on experiments will be conducted at the ASU Tempe campus during a one-week session and lab

Requirement	Minimum Grade	Credit Hours
reports will be completed in the weeks following the in-person session. This may impact your financial aid. Financial aid is available to those who apply and qualify, and students may receive funds to help cover costs for each semester of enrollment. The amount of financial aid that a student is eligible for varies depending on prior education experience and other individual factors. Learn more about summer financial aid and additional ways to cover summer costs.		
HCD 300 Biostatistics (QTRS)	C	3
HCD 303 Global Health Care Systems (GCSI)	C	3
HCD 330 Health Care Systems in the U.S. (CIVI)	C	3
HSC 210 Cultural Aspects of Health (GCSI)	C	3
HSC 310 Health Communication	C	3
MED 300 Historical and Contemporary Issues in Health	C	3
MED 320 Applied Medical/Health Care Ethics (HUAD)	C	3
MED 450 Leadership and Professionalism	C	3
CHS 484 Topic: Applied Health Experience OR **CHS 484 Topic: Citizen Science in Health** OR **CHS 484 Topic: Translational Research** OR **CHS 493 Honors Thesis** OR **CHS 494 Topic: Undergraduate Research** OR **HSC 484 Internship** OR **MED 484 Internship** OR **MED 494 Topic: Introduction to Clinical Healthcare**	C	3

Requirement	Minimum Grade	Credit Hours
Courses in the requirement above (CHS 484, CHS 493, CHS 494, HSC 484, MED 484, or MED 494) fulfill the College of Health Solutions Experiential Learning requirement.		
Upper Division Breadth Electives	C	9
ABS 311 Molecular and Cellular Biology		
ABS 422 Head and Neck Anatomy		
BCH 361 Advanced Principles of Biochemistry		
BCH 367 Elementary Biochemistry Laboratory		
BCH 371 Modern Concepts in Biochemistry		
BCH 372 Modern Concepts in Biochemistry Laboratory		
BIO 353 Cell Biology		
BIO 355 Introduction to Computational Molecular Biology		
BIO 360 Animal Physiology		
BIO 420 Immunology: Molecular and Cellular Foundations		
BIO 475 Advanced Human Anatomy		
CHS 340 Health Theory		
HCD 302 Health Care Management		
HCD 304 Health Care Finance		
HCD 332 Population Health Policy and Legislation		
HCD 420 Population Health Management		

Requirement	Minimum Grade	Credit Hours
HSC 410 Supporting the Health of Older Adults		
HSC 412 Health Issues in Later Life		
400-Level LSC Elective		
MED 325 Elements of Hospice and Palliative Care		
MED 350 Health Care and Humanities		
MED 375 Alzheimer's and Other Dementias		
MED 394 Topic: Preparing for Medical School		
MED 417 Impact of Violence on Health		
MED 445 Prevention and Management of Chronic Disease		
MED 475 Palliative Care: Managing Complex Serious Illness		
MED 484 Internship		
NTR 390 Current Nutrition Research		
NTR 480 Integrative and Functional Nutrition		
NTR 490 Undergraduate Research Methods in Nutrition		
PBH 410 Public Mental Health		
PBH 422 Health Disparities and Access to Health		
Students who plan to apply to medical school are strongly recommended to complete an upper division biochemistry course with lab.		

Requirement	Minimum Grade	Credit Hours
Preprofessional Courses		
Preprofessional Courses	C	11
Dentistry Courses		
MIC 205 Microbiology (SCIT) AND MIC 206 Microbiology Laboratory (SCIT)		
PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)		
PHY 112 General Physics (SCIT) AND PHY 114 General Physics Laboratory (SCIT)		
Integrative Health (ND/NMD/DC) Courses		
BIO 340 General Genetics or LSC 347 Fundamentals of Genetics AND LSC 348 Fundamentals of Genetics Laboratory		
HSC 300 Complementary Health Care		
MIC 205 Microbiology (SCIT) AND MIC 206 Microbiology Laboratory (SCIT)		
PSY 341 Developmental Psychology (SOBE)		
Medicine (MD/DO) Courses		
BIO 340 General Genetics or LSC 347 Fundamentals of Genetics AND LSC 348 Fundamentals of Genetics Laboratory		
MAT 251 Calculus for Life Sciences (MATH)		

Requirement	Minimum Grade	Credit Hours
MIC 205 Microbiology (SCIT) AND MIC 206 Microbiology Laboratory (SCIT)		
PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)		
PHY 112 General Physics (SCIT) AND PHY 114 General Physics Laboratory (SCIT)		
Occupational Therapy Courses		
CHS 260 Health Professions Terminology		
PSY 341 Developmental Psychology (SOBE)		
PSY 366 Psychological Disorders (SOBE)		
SOC 400 Perspectives on Aging or SOC 410 Race, Medicine, and the Body or SOC 418 Aging and the Life Course (SOBE) or SOC 424 Women and Health (SOBE) or SOC 426 Social Inequalities (CIVI) or SOC 427 Sociology of Health and Illness (SOBE)		
Optometry Courses		
MAT 251 Calculus for Life Sciences (MATH)		
MIC 205 Microbiology (SCIT) AND MIC 206 Microbiology Laboratory (SCIT)		
PHY 111 General Physics (SCIT) AND PHY 113 General Physics Laboratory (SCIT)		
PHY 112 General Physics (SCIT) AND PHY 114 General Physics Laboratory (SCIT)		

Requirement	Minimum Grade	Credit Hours
Pharmacy Courses		
COM 225 Public Speaking and Presentations (CIVI)		
MAT 251 Calculus for Life Sciences (MATH)		
MIC 205 Microbiology (SCIT) **AND** **MIC 206 Microbiology Laboratory (SCIT)**		
PHY 111 General Physics (SCIT) **AND** **PHY 113 General Physics Laboratory (SCIT)**		
Physician Assistant (PA) Courses		
BIO 340 General Genetics **or** **LSC 347 Fundamentals of Genetics** **AND** **LSC 348 Fundamentals of Genetics Laboratory**		
CHS 260 Health Professions Terminology		
MIC 205 Microbiology (SCIT) **AND** **MIC 206 Microbiology Laboratory (SCIT)**		

Students customize the Medical Studies degree by following the preprofessional course list that aligns with their planned health career path. A minimum of 11 credit hours of preprofessional coursework is required, though more may be needed depending on the selected course list and the requirements of the health graduate programs to which the student intends to apply.

College of Health Solutions Requirements

CHS 100 Optimizing Your Health and Performance (SOBE)	C	3
OR **CHS 300 An Exploration of Well-Being (SOBE)**		

First-year students should take CHS 100. Students who enter with more than 30 credits should take CHS 300.

College of Health Solutions students must complete three credits of Experiential Learning coursework. This requirement is fulfilled for Medical Studies, BS students by a course within the major. If interested in additional experiential learning opportunities, visit: https://chs.asu.edu/current-students/experiential-learning.

Foundational Courses

CDE 232 Human Development (SOBE) OR **COM 100 Introduction to Human Communication (SOBE)** OR **ECN 211 Macroeconomic Principles (SOBE)** OR **SOC 101 Introductory Sociology (SOBE)**	C	3

Students should select the course from this list that aligns with their desired health professions program. For more information, current students can check their graduation audit (DARS): https://goto.asuonline.asu.edu/dars/.

MAT 170 Precalculus (MATH)	C	3
PSY 101 Introduction to Psychology (SOBE)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

CHS 101 The ASU Experience for Health Solutions Students	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

For student resources, including academic advising appointment scheduling, forms and policies, internship information, involvement/research opportunities and more, visit: https://chs.asu.edu/.

Students interested in pursuing health-related professional and graduate programs should explore pre-health resources, including Pre-Health 101 Workshops and Pre-Health Advising. For more information, visit: https://prehealth.asu.edu/.

Career preparation resources are available through Career Services. For more information, visit: https://career.asu.edu/.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Cross-Sector Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPCSLDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in cross-sector leadership is a requirement for, and is limited to, participants in the Public Service Academy's Next Generation Service Corps, a four-year leadership development track that engages future civilian leaders in the public, private and nonprofit sectors to engage in collaboration and change in the context of social challenges in which they hold interest. Students are required to demonstrate forward academic progress to maintain enrollment in the certificate as well as the Next Generation Service Corps. ROTC students also may pursue the certificate.		
PAF 215 NGSC Community Impact Lab	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 315 Cross-Sector Collaboration (CIVI)	C	3
PAF 415 Social Entrepreneurship	C	3
PAF 394 Topic: NGSC Leadership Instruction **or** **PAF 421 Leadership Capstone**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Neuroscience and Evolutionary Medicine (LABMENBS and LAEVMDCERT)

Program description:
Neuroscientists seek to understand how the brain and nervous system operate to control bodily function, behavior and our mental states. Students in the Bachelor of Science program in neuroscience receive comprehensive interdisciplinary training at the crossroads of biology, chemistry and psychology, along with specialized focus in key neuroscience domains:

- Behavioral neuroscience: How does the brain work to control behavior?
- Cellular and molecular neuroscience: How do the cells of the nervous system work?
- Cognitive neuroscience: How does brain activity underlie our thoughts and emotions?
- Systems neuroscience: How do the billions of neurons work together?

In the evolutionary medicine certificate program, students discover a burgeoning new field that is improving human health and transforming our understanding of disease by merging the fields of evolutionary biology, genetics, medicine, global health and public health.

Students integrate perspectives from across these fields to investigate questions about health and disease in the context of human history. Using their mastery of these new approaches within the biological and social sciences, they address emerging and anticipated public needs, such as reemerging infectious disease, challenges facing vaccination, expanding chronic disease and other growing public health crises.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
or MAT 265 Calculus for Engineers I or MAT 270 Calculus with Analytic Geometry I
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
The BS program in neuroscience equips students for diverse career trajectories in health and research, as well as a variety of STEM fields. Graduates are well prepared for professional opportunities in academic research, bioengineering, biotechnology, data science, law, medicine, medical research, psychology, pharmaceutical research and development, and physical and speech rehabilitation.

This program's rigorous curriculum imparts skills that are applicable across the health sciences, offering graduates the flexibility they need to take their first steps toward their chosen profession. Furthermore, students gain the foundational knowledge necessary to excel in competitive graduate-level programs within biomedical fields such as medicine, nursing, clinical professions, technology and veterinary medicine.

Graduates of the evolutionary medicine certificate program have gained integrated and individualized skills that are in high demand to address a growing need for innovation in medicine and public health care. Graduates who combine this certificate program with their major program of study are well prepared for roles in a variety of fields, including biology, medicine, law and ethics.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Neuroscience, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABMENBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Lower Division Major Core

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH) OR **MAT 265 Calculus for Engineers I (MATH)** OR **MAT 270 Calculus with Analytic Geometry I (MATH)**	C	3
NEU 101 Introduction to Neuroscience	C	3

Requirement	Minimum Grade	Credit Hours
NEU 290 Data Science for Neuroscience Majors (QTRS) OR **STP 231 Statistics for Life Science (QTRS)**	C	3
Upper Division Major Core		
BIO 360 Animal Physiology	C	3
BIO 476 Cellular and Molecular Neuroscience	C	3
BIO 477 Systems and Behavioral Neuroscience OR **NEU 477 Systems and Behavioral Neuroscience**	C	3
Note: Students should not enroll in BIO 467: Neurobiology since it does not apply to the neuroscience degree program. Completion of this course will prevent enrollment in the required BIO 476 and BIO/NEU 477.		
NEU 310 Fundamentals of Cognitive Neuroscience	C	3
Upper Division Major Electives		
Upper Division Major Electives	C	18
Behavioral Neuroscience		
NEU 307 Your Brain on Drugs		
NEU 327 Neuroscience of Learning		
NEU 433 Behavioral Neuroendocrinology		
NEU 460 Brain and Emotion		
NEU 494 Topic: Neural Basis of Learning and Memory		

Requirement	Minimum Grade	Credit Hours
NEU 494 Topic: Neuroeconomics		
NEU 494 Topic: Psychiatric Medications		
NEU 494 Topic: The Social Brain		
Cellular and Molecular Neuroscience		
BIO 327 Evolution of Human Behavior		
BIO 331 Animal Behavior		
BIO 435 Research Techniques in Animal Behavior		
BIO 436 Sociobiology and Behavioral Ecology		
BIO 465 Neurophysiology		
BIO 494 / **NEU 494 Topic: Biotechnology Viruses as Tools**		
BIO 494 Topic: Genetics and Genomics of Behavior		
BIO 494 Topic: Neurobiology of Attachment		
BIO 498 Topic: Neural Development		
BIO 498 Topic: Neurodegenerative Disorders of the Aging Brain		
Cognitive Neuroscience		
NEU 323 Neuroscience of Perception		
NEU 394 Topic: Language and the Brain		
NEU 394 Topic: Neuroimaging Methods		
NEU 456 Visual Cognitive Neuroscience		

Requirement	Minimum Grade	Credit Hours
NEU 494 Topic: Cognitive Neuroscience of Memory		
NEU 494 Topic: Neuroscience of Social Cognition		
NEU 494 Topic: Themes in Cognitive Neuroscience		
SHS 367 Language Science (SOBE)		
SHS 485 Acquired Speech and Language Disorders		
SHS 494 Topic: Health Neuroscience		
Experiential Coursework		
NEU 394 Topic: Neuroscience Undergraduate Teaching Assistant		
NEU 484 Internship		
NEU 492 Honors Directed Study		
NEU 493 Honors Thesis		
NEU 499 Individualized Instruction		
Systems and Computational Neuroscience		
BIO 355 Introduction to Computational Molecular Biology		
BIO 439 Computing for Research		
BIO 494 / **MAT 494 Topic: Data Analysis in Neuroscience**		
BME 316 Biomechanics for Biomedical Engineers		
BME 350 Signals and Systems for Bioengineers		

Requirement	Minimum Grade	Credit Hours
BME 360 Control in Biological Systems		
BME 416 Advanced Biomechanics		
BME 465 Magnetic Resonance Imaging		
KIN 424 Neural Aspects of Movement and Rehabilitation		
MAT 451 Mathematical Modeling		
MAT 494 Topic: Mathematical Neuroscience		
NEU 426 Neuroanatomy		
SHS 310 Anatomical and Physiological Bases of Speech		
SHS 311 Hearing Science		

A maximum of six hours from NEU 484, NEU 492, NEU 493, and NEU 499 can be used to satisfy major requirements.

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count

towards any major, minor, related fields, and ASU General Studies requirements.		
Upper Division Science and Society Elective	C	3
Science and Society Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
ASU 101-LA The ASU Experience **OR LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq		
All undergraduate students must complete General Studies		

requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Evolutionary Medicine, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAEVMDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in evolutionary medicine consists of 15 credit hours, at least 12 of which must be upper division. All 15 credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for all courses used toward the certificate.		
Required Courses		
ASM 403 Evolutionary Medicine and Global Health **or** **BIO 403 Evolutionary Medicine and Global Health**	C	3
ASB 408 Advanced Evolutionary Medicine **or** **BIO 408 Advanced Evolutionary Medicine**	C	3
Electives		
Evolutionary Medicine Electives	C	3
ASB 250 / **BIO 250 Introduction to Evolution and Medicine (SOBE)**		
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 246 Human Origins (SOBE)		
ASM 342 / BIO 327 Evolution of Human Behavior		
ASM 345 Disease and Human Evolution		
ASM 394 / BIO 394 Topic: Ecology and Evolution of Infectious Diseases		
ASM 401 Health and Human Biology		
ASM 446 / BIO 446 Principles of Human Genetics		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / BIO 494 Topic: Evolution and Mental Disorders		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / HPS 331 History of Medicine (HUAD)		
BIO 345 Evolution		
BIO 394 / PSY 394 Topic: Introduction to Evolutionary Psychology		
BIO 440 / MBB 440 Functional Genomics		
BIO 462 Endocrine Physiology		
MBB 445 / MIC 445 Techniques in Molecular Biology/Genetics		
MIC 205 Microbiology (SCIT) or MIC 220 Biology of Microorganisms		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		
Upper Division Evolutionary Medicine Electives	C	6
ASB 448 Maternal and Child Health		
ASB 462 Medical Anthropology: Culture and Health (SOBE)		

Requirement	Minimum Grade	Credit Hours
ASM 342 / **BIO 327 Evolution of Human Behavior**		
ASM 345 Disease and Human Evolution		
ASM 394 / **BIO 394 Topic: Ecology and Evolution of Infectious Diseases**		
ASM 401 Health and Human Biology		
ASM 446 / **BIO 446 Principles of Human Genetics**		
ASM 456 Infectious Disease and Human Evolution		
ASM 494 / **BIO 494 Topic: Evolution and Mental Disorders**		
BIO 302 Cancer--Mother of All Diseases		
BIO 318 / **HPS 331 History of Medicine (HUAD)**		
BIO 345 Evolution		
BIO 394 / **PSY 394 Topic: Introduction to Evolutionary Psychology**		
BIO 440 / **MBB 440 Functional Genomics**		
BIO 462 Endocrine Physiology		
MBB 445 / **MIC 445 Techniques in Molecular Biology/Genetics**		
MIC 314 HIV/AIDS: Science, Behavior, and Society		
MIC 425 Advanced Immunology		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Neuroscience and Recreational Therapy (LABMENBS and PPRECTCERT)

Program description:
Neuroscientists seek to understand how the brain and nervous system operate to control bodily function, behavior and our mental states. Students in the Bachelor of Science program in neuroscience receive comprehensive interdisciplinary training at the crossroads of biology, chemistry and psychology, along with specialized focus in key neuroscience domains:

Behavioral neuroscience: How does the brain work to control behavior?
Cellular and molecular neuroscience: How do the cells of the nervous system work?
Cognitive neuroscience: How does brain activity underlie our thoughts and emotions?
Systems neuroscience: How do the billions of neurons work together?
In addition to reviewing the guidelines in the Concurrent Program Options section below, students interested in pursuing concurrent or second baccalaureate degrees in The College of Liberal Arts and Sciences are advised to visit The College's website for more information and requirements.

Students enrolled in the recreational therapy certificate program gain knowledge and requisite competencies to lead recreation-based therapeutic programs as a strategy to improve individual and community health. Through curriculum foundational to the field, students learn the systematic process of conducting assessments, developing service plans, implementing therapeutic interventions, and evaluating and documenting outcomes of care. Students examine the holistic benefits of recreational therapy through exposure to creative and expressive arts, adapted exercise and sport, aquatic therapy, therapeutic riding, horticulture therapy, community integration, leisure education and structured play.

The certificate program is an ideal choice for individuals who value the importance of a healthy leisure lifestyle for all, want to advocate for accessible recreation opportunities, and are dedicated to the use of recreation-based interventions to improve well-being.

The certificate is a valuable supplement to degrees in related fields. It helps students develop a unique set of competencies and also serves as a pathway to credentialing as a qualified provider of recreational therapy.

Students seeking professional certification in recreational therapy have the option to select specific recreational therapy content courses to contribute a portion of the requirements necessary for eligibility with the National Council for Therapeutic Recreation Certification. Further information is available on its website. https://www.nctrc.org/about-certification/ctrs-the-qualified-provider

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
or MAT 265 Calculus for Engineers I or MAT 270 Calculus with Analytic Geometry I
Math intensity: Moderate

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
The BS program in neuroscience equips students for diverse career trajectories in health and research, as well as a variety of STEM fields. Graduates are well prepared for professional opportunities in academic research, bioengineering, biotechnology, data science, law, medicine, medical research, psychology, pharmaceutical research and development, and physical and speech rehabilitation.

This program's rigorous curriculum imparts skills that are applicable across the health sciences, offering graduates the flexibility they need to take their first steps toward their chosen profession. Furthermore, students gain the foundational knowledge necessary to excel in competitive graduate-level programs within biomedical fields such as medicine, nursing, clinical professions, technology and veterinary medicine.

Recreational therapists practice in settings such as inpatient and outpatient physical rehabilitation, inpatient and outpatient mental health, and skilled nursing facilities, as well as in assisted living and adult day programs, parks and recreation and adapted sports programs, acute care hospitals, pediatric hospitals and programs, and school systems.

Curriculum - Neuroscience, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABMENBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Lower Division Major Core

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH) OR **MAT 265 Calculus for Engineers I (MATH)** OR **MAT 270 Calculus with Analytic Geometry I (MATH)**	C	3
NEU 101 Introduction to Neuroscience	C	3

Requirement	Minimum Grade	Credit Hours
NEU 290 Data Science for Neuroscience Majors (QTRS) OR **STP 231 Statistics for Life Science (QTRS)**	C	3
Upper Division Major Core		
BIO 360 Animal Physiology	C	3
BIO 476 Cellular and Molecular Neuroscience	C	3
BIO 477 Systems and Behavioral Neuroscience OR **NEU 477 Systems and Behavioral Neuroscience**	C	3
Note: Students should not enroll in BIO 467: Neurobiology since it does not apply to the neuroscience degree program. Completion of this course will prevent enrollment in the required BIO 476 and BIO/NEU 477.		
NEU 310 Fundamentals of Cognitive Neuroscience	C	3
Upper Division Major Electives		
Upper Division Major Electives	C	18
Behavioral Neuroscience		
NEU 307 Your Brain on Drugs		
NEU 327 Neuroscience of Learning		
NEU 433 Behavioral Neuroendocrinology		
NEU 460 Brain and Emotion		
NEU 494 Topic: Neural Basis of Learning and Memory		

Requirement	Minimum Grade	Credit Hours
NEU 494 Topic: Neuroeconomics		
NEU 494 Topic: Psychiatric Medications		
NEU 494 Topic: The Social Brain		
Cellular and Molecular Neuroscience		
BIO 327 Evolution of Human Behavior		
BIO 331 Animal Behavior		
BIO 435 Research Techniques in Animal Behavior		
BIO 436 Sociobiology and Behavioral Ecology		
BIO 465 Neurophysiology		
BIO 494 / **NEU 494 Topic: Biotechnology Viruses as Tools**		
BIO 494 Topic: Genetics and Genomics of Behavior		
BIO 494 Topic: Neurobiology of Attachment		
BIO 498 Topic: Neural Development		
BIO 498 Topic: Neurodegenerative Disorders of the Aging Brain		
Cognitive Neuroscience		
NEU 323 Neuroscience of Perception		
NEU 394 Topic: Language and the Brain		
NEU 394 Topic: Neuroimaging Methods		
NEU 456 Visual Cognitive Neuroscience		

Requirement	Minimum Grade	Credit Hours
NEU 494 Topic: Cognitive Neuroscience of Memory		
NEU 494 Topic: Neuroscience of Social Cognition		
NEU 494 Topic: Themes in Cognitive Neuroscience		
SHS 367 Language Science (SOBE)		
SHS 485 Acquired Speech and Language Disorders		
SHS 494 Topic: Health Neuroscience		
Experiential Coursework		
NEU 394 Topic: Neuroscience Undergraduate Teaching Assistant		
NEU 484 Internship		
NEU 492 Honors Directed Study		
NEU 493 Honors Thesis		
NEU 499 Individualized Instruction		
Systems and Computational Neuroscience		
BIO 355 Introduction to Computational Molecular Biology		
BIO 439 Computing for Research		
BIO 494 / **MAT 494 Topic: Data Analysis in Neuroscience**		
BME 316 Biomechanics for Biomedical Engineers		
BME 350 Signals and Systems for Bioengineers		

Requirement	Minimum Grade	Credit Hours
BME 360 Control in Biological Systems		
BME 416 Advanced Biomechanics		
BME 465 Magnetic Resonance Imaging		
KIN 424 Neural Aspects of Movement and Rehabilitation		
MAT 451 Mathematical Modeling		
MAT 494 Topic: Mathematical Neuroscience		
NEU 426 Neuroanatomy		
SHS 310 Anatomical and Physiological Bases of Speech		
SHS 311 Hearing Science		

A maximum of six hours from NEU 484, NEU 492, NEU 493, and NEU 499 can be used to satisfy major requirements.

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count

towards any major, minor, related fields, and ASU General Studies requirements.		
Upper Division Science and Society Elective	C	3
Science and Society Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies

requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Recreational Therapy, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPRECTCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The recreational therapy certificate requires completion of 18 credit hours: six credit hours of required courses and 12 credit hours of electives. Students seeking the national credential in therapeutic recreation should select electives from that list.		

Required Courses

RTH 364 Foundations in Recreational Therapy (SOBE)	C	3
RTH 413 Leadership and Professional Development in Recreational Therapy	C	3

Elective Courses

Choose four courses from Blocks A and B if interested in the ASU certificate, but not seeking the National Council for Therapeutic Recreation (NCTRC) credential. Choose four courses from only Block B if interested in taking support courses for NCTRC credential: https://www.nctrc.org/about-certification/ctrs-the-qualified-provider/		
Elective Courses	C	6
Upper Division Elective Courses	C	6

Requirement	Minimum Grade	Credit Hours

Block A

Choose 4 courses from Block A and B if interested in only ASU certificate. Please note that Block A classes do not meet NCTRC credential requirements.

CDE 244 Children Facing Health Care Challenges

CDE 312 Adolescence (SOBE)

CDE 414 The School-Aged Child: Development in the Elementary Years

CDE 418 Aging and the Life Course (SOBE)

CDE 430 Infant and Toddler Development in the Family (SOBE)

CDE 450 Childhood Disorders and Family Functioning

DST 101 Introduction to Disability Studies (CIVI)

PRM 120 Leisure and the Quality of Life (SOBE)

RTH 453 Inclusive Community Sport

Block B

Students seeking the national credentialing through the National Council for Therapeutic Recreation (NCTRC) should select four courses from this list.

RTH 250 Therapeutic Recreation and Community Health (CIVI)

RTH 400 Intervention Techniques in Recreational Therapy

RTH 440 Advocacy in Therapeutic Recreation (GCSI)

RTH 455 Recreational Therapy and Play with Children, Youth and Families

RTH 460 Assessment and Documentation in Recreational Therapy

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Neuroscience and Veterans, Society and Service (LABMENBS and LAVSSCERT)

Program description:
Neuroscientists seek to understand how the brain and nervous system operate to control bodily function, behavior and our mental states. Students in the Bachelor of Science program in neuroscience receive comprehensive interdisciplinary training at the crossroads of biology, chemistry and psychology, along with specialized focus in key neuroscience domains:

- Behavioral neuroscience: How does the brain work to control behavior?
- Cellular and molecular neuroscience: How do the cells of the nervous system work?
- Cognitive neuroscience: How does brain activity underlie our thoughts and emotions?
- Systems neuroscience: How do the billions of neurons work together?

Through the certificate program in veterans, society and service, students explore the history, representations, experiences and culture of military service and veterans.

Students study the veteran community with an interdisciplinary approach that combines history, politics, business, journalism, psychology, law, sociology and the arts through the intersectional lenses of gender, race, ethnicity and national identity. This program trains students to listen to, learn from, serve, research and advocate for veterans and their families.

Future professionals and current employees at government agencies, health provider organizations, nonprofit organizations and media industries can benefit from this multifaceted certificate program.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
or MAT 265 Calculus for Engineers I or MAT 270 Calculus with Analytic Geometry I
Math intensity: Moderate

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Tempe or Online

Career opportunities:
The BS program in neuroscience equips students for diverse career trajectories in health and research, as well as a variety of STEM fields. Graduates are well prepared for professional opportunities in academic research, bioengineering, biotechnology, data science, law, medicine, medical research, psychology, pharmaceutical research and development, and physical and speech rehabilitation.

This program's rigorous curriculum imparts skills that are applicable across the health sciences, offering graduates the flexibility they need to take their first steps toward their chosen profession. Furthermore, students gain the foundational knowledge necessary to excel in competitive graduate-level programs within biomedical fields such as medicine, nursing, clinical professions, technology and veterinary medicine.

Students can advance their career options with an undergraduate certificate.

Graduates who have combined the certificate in veterans, society and service with their major program of study may become more marketable to employers.

Graduates often pursue employment as health care social workers, social and community service managers, or community health workers. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Neuroscience, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LABMENBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Lower Division Major Core

BIO 181 General Biology I (SCIT)	C	4
BIO 182 General Biology II (SCIT)	C	4
CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH) OR **MAT 265 Calculus for Engineers I (MATH)** OR **MAT 270 Calculus with Analytic Geometry I (MATH)**	C	3
NEU 101 Introduction to Neuroscience	C	3

Requirement	Minimum Grade	Credit Hours
NEU 290 Data Science for Neuroscience Majors (QTRS) OR **STP 231 Statistics for Life Science (QTRS)**	C	3
Upper Division Major Core		
BIO 360 Animal Physiology	C	3
BIO 476 Cellular and Molecular Neuroscience	C	3
BIO 477 Systems and Behavioral Neuroscience OR **NEU 477 Systems and Behavioral Neuroscience**	C	3
Note: Students should not enroll in BIO 467: Neurobiology since it does not apply to the neuroscience degree program. Completion of this course will prevent enrollment in the required BIO 476 and BIO/NEU 477.		
NEU 310 Fundamentals of Cognitive Neuroscience	C	3
Upper Division Major Electives		
Upper Division Major Electives	C	18
Behavioral Neuroscience		
NEU 307 Your Brain on Drugs		
NEU 327 Neuroscience of Learning		
NEU 433 Behavioral Neuroendocrinology		
NEU 460 Brain and Emotion		
NEU 494 Topic: Neural Basis of Learning and Memory		

Requirement	Minimum Grade	Credit Hours
NEU 494 Topic: Neuroeconomics		
NEU 494 Topic: Psychiatric Medications		
NEU 494 Topic: The Social Brain		
Cellular and Molecular Neuroscience		
BIO 327 Evolution of Human Behavior		
BIO 331 Animal Behavior		
BIO 435 Research Techniques in Animal Behavior		
BIO 436 Sociobiology and Behavioral Ecology		
BIO 465 Neurophysiology		
BIO 494 / **NEU 494 Topic: Biotechnology Viruses as Tools**		
BIO 494 Topic: Genetics and Genomics of Behavior		
BIO 494 Topic: Neurobiology of Attachment		
BIO 498 Topic: Neural Development		
BIO 498 Topic: Neurodegenerative Disorders of the Aging Brain		
Cognitive Neuroscience		
NEU 323 Neuroscience of Perception		
NEU 394 Topic: Language and the Brain		
NEU 394 Topic: Neuroimaging Methods		
NEU 456 Visual Cognitive Neuroscience		

Requirement	Minimum Grade	Credit Hours
NEU 494 Topic: Cognitive Neuroscience of Memory		
NEU 494 Topic: Neuroscience of Social Cognition		
NEU 494 Topic: Themes in Cognitive Neuroscience		
SHS 367 Language Science (SOBE)		
SHS 485 Acquired Speech and Language Disorders		
SHS 494 Topic: Health Neuroscience		
Experiential Coursework		
NEU 394 Topic: Neuroscience Undergraduate Teaching Assistant		
NEU 484 Internship		
NEU 492 Honors Directed Study		
NEU 493 Honors Thesis		
NEU 499 Individualized Instruction		
Systems and Computational Neuroscience		
BIO 355 Introduction to Computational Molecular Biology		
BIO 439 Computing for Research		
BIO 494 / **MAT 494 Topic: Data Analysis in Neuroscience**		
BME 316 Biomechanics for Biomedical Engineers		
BME 350 Signals and Systems for Bioengineers		

Requirement	Minimum Grade	Credit Hours
BME 360 Control in Biological Systems		
BME 416 Advanced Biomechanics		
BME 465 Magnetic Resonance Imaging		
KIN 424 Neural Aspects of Movement and Rehabilitation		
MAT 451 Mathematical Modeling		
MAT 494 Topic: Mathematical Neuroscience		
NEU 426 Neuroanatomy		
SHS 310 Anatomical and Physiological Bases of Speech		
SHS 311 Hearing Science		

A maximum of six hours from NEU 484, NEU 492, NEU 493, and NEU 499 can be used to satisfy major requirements.

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count

towards any major, minor, related fields, and ASU General Studies requirements.		
Upper Division Science and Society Elective	C	3
Science and Society Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
ASU 101-LA The ASU Experience **OR LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq		
All undergraduate students must complete General Studies		

requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Veterans, Society and Service, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LAVSSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires 18 credit hours, of which at least 12 credit hours must be completed at the upper-division level and nine must be completed at ASU. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Required Courses

MVS 100 Introduction to Military Studies	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals or **MVS 301 Experience of America's Modern Wars**	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3

Elective

Upper Division Electives	C	3
AFR 494 Topic: Black Military History		

Requirement	Minimum Grade	Credit Hours
CAP 316 Combat Trauma		
CAP 336 Counseling Military Veterans		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 414 Crisis Communication		
COM 420 Rhetoric and Community Advocacy		
HST 302 Topic: War and Political Thought		
HST 302 Topic: Women, War and Peace		
HST 306 Topic: World War II		
HST 340 American Military History (HUAD)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 372 Modern Middle East (GCSI)		
HST 456 The Vietnam War (HUAD)		
IAP 307 Art and War (GCSI)		
ISS 428 Religion and Global Violence (GCSI)		
ISS 441 Conflict and Conflict Resolution		
ISS 456 Culture, Conflict and War		
JST 346 Israeli Wars in Israeli Movies		
MCO 494 Topic: War and Media		
MVS 376 Writing a Personal History		
MVS 394 Special Topics		
MVS 395 Combat in Film		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		

Requirement	Minimum Grade	Credit Hours
MVS 494 Special Topics		
PAF 302 Public Service Research Methods		
POS 310 American National Government (AMIT)		
POS 316 American Political Institutions (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 346 Problems of Democracy (HUAD)		
POS 350 Comparative Politics (GCSI)		
POS 360 World Politics (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 378 / **REL 378 Religion, War and Peace (CIVI)**		
POS 414 Political History and Leadership		
POS 426 Elements of Public Policy		
POS 467 International Security (GCSI)		
SGS 394 Topic: Gender and Armed Conflict		

Internship

MVS 484 Internship All students must complete an internship and should review their internship options, including virtual, with the CISA internship coordinator. Prerequisite courses may be needed in order to complete the requirements of this certificate.	C	3

Notes

Prerequisite courses may be needed in order to complete the

requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Nonprofit Leadership and Management and Nonprofit Professional (PPNLMBS and PPNPYCERT)

Program description:
The Bachelor of Science program in nonprofit leadership and management explores the nonprofit sector through a blend of classroom instruction and field experience, preparing students for various possible career challenges. Students gain valuable experience through a required internship, opening doors to professional opportunities in the nonprofit arena. They have the option to pursue the National Certified Nonprofit Professional credential, enhancing their qualifications through partnership with the Nonprofit Leadership Alliance. https://nla1.org/cnp-professionals/

This program is accredited by the Nonprofit Academic Centers Council, ensuring a high-quality education that meets industry standards.

This nationally recognized certificate program awards qualified students from diverse academic fields with the national Certified Nonprofit Professional credential. The CNP credential is awarded through the Nonprofit Leadership Alliance (formerly American Humanics, Inc.), a consortium of universities, nonprofits and funders that are committed to preparing students for management careers in the nonprofit sector. More information is available on the NLA website. https://nla1.org/

The NLA and ASU joint program provides curricular and cocurricular programs that prepare students through its competency-based, experiential educational framework, which includes curriculum instruction in management of nonprofit elements (fundraising, volunteers, organizational management) and field experience.

The program is ideal for students wishing to complement their majors with a strong core of nonprofit management knowledge and skills through professional affiliation with and certification by the Nonprofit Leadership Alliance, the nation's leader in education for nonprofit careers. NLA collaborates with a number of national nonprofit organizations as well as locally based grassroots organizations that actively seek NLA and ASU program interns and job candidates.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix

Career opportunities:
Graduates of this program have built expertise in nonprofit leadership and management. Career opportunities include:

- chief administrative officer
- chief executive officer
- chief financial officer
- foundation officer

The nonprofit professional credential opens up career opportunities across a range of diverse nonprofit areas, such as arts and culture; environmental, health and human services; and youth development.

Curriculum - Nonprofit Leadership and Management, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPNLMBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Unit Core		
CRD 210 Community Services and Professions	C	3
CRD 301 Sustainable Communities (SUST)	C	3
CRD 302 Inclusive Community Development (SOBE)	C	3
CRD 402 Assessment and Evaluation of Community Services (QTRS)	C	3
Professional Core		
CRD 403 Leadership and Professional Development	C	3
CRD 435 Service Learning for Community Development	C	1
Upper Division Senior Internship Experience	C	12

> Students can choose 12 credits of CRD 463, 6 credits of CRD 463 and 6 credits of electives, or 3 credits of CRD 435 and 9 credits of electives. Electives must not be from previous coursework.

Requirement	Minimum Grade	Credit Hours
CRD 463 Senior Internship **CRD 463 Senior Internship** **AND** Upper Division CRD Elective **or** Upper Division NLM Elective **or** Upper Division PRM Elective **or** Upper Division RTH Elective **or** Upper Division TDM Elective **CRD 435 Service Learning for Community Development** **AND** Upper Division CRD Elective **or** Upper Division NLM Elective **or** Upper Division PRM Elective **or** Upper Division RTH Elective **or** Upper Division TDM Elective		

Review eligibility for each option at https://scrd.asu.edu/content/documents

Major Core

NLM 160 Voluntary Action and Community Leadership (CIVI)	C	3
NLM 220 Introduction to Nonprofit Organizations	C	3
NLM 300 Fund Raising and Resource Development	C	3
NLM 310 Volunteer Management (CIVI)	C	3
NLM 380 Financial Management for Nonprofit Organizations	C	3
NLM 410 Social Entrepreneurship	C	3
NLM 430 Managing Nonprofit Organizations	C	3

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of NLM 160, CRD 301, CRD 402, or CRD 463 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement

Area 1: Criminology and Criminal Justice		
CRJ Elective		
Area 2: Public Affairs		
PAF Elective		
Area 3: Social Work		6
SWU Elective		
Area 4: Public Service and Community Solutions		
CPP Elective		

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Nonprofit Electives

Nonprofit Leadership and Management Elective	C	12

ACC 382 Accounting and Financial Analysis

COM 259 Communication in Business and the Professions (CIVI)

COM 263 Elements of Intercultural Communication (GCSI)

CRD Elective

CSM Elective

MGT 380 Management and Strategy

NLM 203 Program Planning

NLM 320 Professional Development Seminar

NLM 420 Nonprofit Leadership Alliance Institute

NLM 440 Nonprofit Professional Certification

NLM 451 Grant Writing

PAF 410 Building Leadership Skills (SOBE)

PRM Elective

PRM 145 Special Events Management

PRM 304 Recreation and Sport Planning and Facilities

PRM 370 Public Lands Management

RTH 364 Foundations in Recreational Therapy (SOBE)

PRM 485 Sports Events

SOC 241 Modern Social Problems (SOBE)

TDM Elective

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree

requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Nonprofit Professional, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPNPYCERT

Minimum credit hours: 17

Upper division minimum credit hours: 14

Requirement	Minimum Grade	Credit Hours
The program includes active participation by nonprofit professionals who offer workshops, seminars, mentoring and field trips. The certified nonprofit professional credential can be earned in conjunction with any bachelor's degree and requires successful participation in co-curricular, experiential activities in addition to required academic coursework. For more information on the credential, please visit https://nla1.org/cnp/.		

Required Courses

NLM 220 Introduction to Nonprofit Organizations	C	3
NLM 320 Professional Development Seminar NLM 320 is taken twice, over two semesters, for a total of four credits.	C	4
NLM 420 Nonprofit Leadership Alliance Institute NLM 420 is offered fall semester only.	C	3
NLM 440 Nonprofit Professional Certification	C	1

Elective Courses

Upper Division **NLM Elective**	C	6

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Standards

17 hours of graded coursework.

Minimum "C" (2.00 on a 4.00 scale) grade required for all courses in the certificate.

Minimum GPA of 2.00 for those pursuing the certificate.

Students should be at least a junior to take 400-level courses.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSN/CERT Nursing and Cross-Sector Leadership (NUNURDBSN and PPCSLDCERT)

Program description:
Achieving a Bachelor of Science in Nursing is possible through various distinctive pathways.

Traditional prelicensure BSN nursing program
The traditional prelicensure clinical nursing program is a full-time, upper-division nursing program for students who wish to become a registered nurse by completing a BSN. The program has three start dates per year: spring, summer and fall (semester start dates vary by campus location). It may be completed in a 16-month year-round schedule or a 24-month academic year schedule. Graduates are eligible to sit for the National Council Licensure Examination to obtain licensure as a registered nurse.

Students advance into the program in one of two ways: direct admission or the competitive advancement process. Direct admission is offered to incoming first-year students from high school who meet specific admission criteria. Students admitted directly must meet continuing eligibility criteria while attending ASU to advance into the upper-division nursing program. Directly admitted nursing students who do not meet continuing eligibility criteria, transfer students or ASU students who are changing majors may apply for advancement to the upper-division nursing program by competing for any remaining spaces.

Accelerated BSN clinical nursing program
The accelerated BSN clinical nursing program is a full-time, 12-month upper-division clinical nursing program for students who wish to become a registered nurse by completing a BSN (semester start dates vary by campus location). Selection is competitive. Priority is given for students with an earned bachelor's degree seeking a second degree. Students pursuing advancement to the accelerated BSN clinical nursing program complete prerequisite coursework and apply for advancement to the program. Graduates are eligible to sit for the National Council Licensure Examination to gain licensure as a registered nurse.

Online RN to BSN program
The online RN to BSN program is available to students who have earned an associate degree in nursing and have a current RN license in good standing with the state board of nursing. RN to BSN program courses are offered online in 7.5-week sessions and can be completed in as little as 14 months. There are five starts per year: two in the fall, two in the spring and one in the summer. Assignments may include readings, discussions, papers, presentations and clinical practice experiences completed in a hospital or community setting in the location where the student resides.

Transfer pathway agreements are in place with community college nursing programs, which provide additional benefits to students. The RN to BSN program is not currently available to students residing in Tennessee or Washington.

Concurrent Enrollment Program
The concurrent enrollment program pathway is available to students enrolling in or already enrolled in any regionally accredited associate degree program in nursing that leads to NCLEX-RN licensure. This program is for qualified nursing students who are interested in earning their BSN while simultaneously pursuing their associate degree in nursing. Selected students enroll in the community college program and ASU CEP courses at the same time (concurrently). CEP courses taken at ASU are delivered in an online format and are offered in 15-week sessions. ASU CEP is not currently available to students residing in Tennessee or Washington.

Eastern Arizona College Partnership
This program offers a concurrent enrollment program pathway for qualified students pursuing an AAS in nursing from Eastern Arizona College while simultaneously earning a BSN from ASU. The Eastern Arizona College nursing courses are delivered in-person while the ASU BSN courses are delivered in an online format.

ASU Sync format option
This program is also offered via ASU Sync. ASU Sync enables students to attend live classes remotely via Zoom. Classes are designed to foster active collaboration and discussion in real time with faculty and peers.

Students on I-20 immigration status are not permitted to complete courses via Sync and should speak with an advisor about other options to complete this program.

Students seeking to use GI Bill® benefits for ASU Sync programs should contact the Pat Tillman Veterans Center regarding certain limitations.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs. More information about education benefits offered by VA is available on the official U.S. government website at www.benefits.va.gov/gibill.

The certificate program in cross-sector leadership provides a comprehensive overview of leading solutions to complex social challenges by integrating the public, private, nonprofit and military sectors.

Students engage in a systems-thinking approach to challenges faced by local and global communities, explore the diverse characteristics and motives of each sector in engaging in cross-sector collaborations, and master processes to formalize such partnerships. Students study values-based leadership and how individual, organizational and sector values can drive a leader's ability to act. Students gain leadership skills, such as leading change within and between organizations across multiple sectors; and they learn to use human-centered design, social entrepreneurship and other approaches when tackling community challenges.

Students end the program with a thesis or applied project that integrates the theories, procedures and concepts learned in the certificate courses with experiences from their internships in each sector.

BSN At a Glance:
College/school: Edson College of Nursing and Health Innovation
Location: Downtown Phoenix, Polytechnic, West Valley, ASU Sync, ASU at The Gila Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
The Edson College of Nursing and Health Innovation prepares graduates for excellence upon entering the workplace. Graduates deliver nursing care to individuals, families and communities. Completion of this degree program also prepares individuals for entrance into graduate study in nursing at the master's or doctoral degree levels, which is essential for teaching, administration, clinical specialization and research.

Students can advance their career options with an undergraduate certificate.

Graduates of the certificate in cross-sector leadership have acquired a beneficial knowledge of cross-sector collaboration, advanced leadership skills, and an understanding of how to use these. These transferrable skills complement students' major program of study and may make them more marketable to employers.

Curriculum - Nursing, BSN - Traditional BSN

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Nursing, BSN
College/School: Edson College of Nursing and Health Innovation
Plan Code: NUNURDBSN
Minimum credit hours: 120
Upper division minimum credit hours: 63

Requirement	Minimum Grade	Credit Hours
Traditional Prelicensure Term 5 (15 credit hours)		
NUR 325 Health and Illness Concepts I	C	3
NUR 330 Professional Nurse Attributes (HUAD)	C	3
NUR 336 Experiential Learning	C	3
NUR 346 Nursing Practice: Geriatric and Adult Health	Y	3
NUR 352 Fundamental Concepts in Nursing	C	3
Students must be approved for advancement into the traditional prelicensure nursing program before enrolling in term 5 courses. Please meet with your advisor to review advancement requirements and timelines.		
Students must successfully complete all traditional prelicensure term 5 courses to proceed to term 6.		
Traditional Prelicensure Term 6 (16 credit hours)		
NUR 315 Nursing Research and Application to Practice	C	3

Requirement	Minimum Grade	Credit Hours
NUR 326 Health and Illness Concepts: Adults and Psychiatric/Mental Health	C	4
NUR 337 Experiential Learning: Intermediate	C	3
NUR 347 Nursing Practice: Psychiatric/Mental Health and Childbearing Family	Y	3
NUR 353 Integration of Concepts Across the Lifespan: Conception to End of Life	C	3

Students must successfully complete all traditional prelicensure term 6 courses to proceed to term 7.

Traditional Prelicensure Term 7 (17 credit hours)

NUR 404 Professional Nurse Concepts: Intermediate	C	2
NUR 425 Health and Illness Concepts: Adults and Pediatrics	C	3
NUR 436 Experiential Learning: Advanced	C	3
NUR 446 Nursing Practice: Pediatrics and Complex Care of Adults	Y	3
NUR 452 Concepts in Population-Based Health	C	3
NUR 458 Community Care and Collaboration	C	3

Students must successfully complete all traditional prelicensure term 7 courses to proceed to term 8.

Traditional Prelicensure Term 8 (15 credit hours)

Requirement	Minimum Grade	Credit Hours
NUR 405 Professional Nurse Concepts: Advanced	C	3
NUR 426 Health and Illness Concepts Advanced	C	3
NUR 437 Experiential Learning: Readiness to Practice	C	3
NUR 448 Nursing Practice Readiness	Y	3
NUR 453 Integration Concepts in the Health Care	C	3

Nursing: Foundation Prerequisite Courses

CDE 232 Human Development (SOBE) OR **PSY 341 Developmental Psychology (SOBE)**	C	3
HCR 210 Ethics for the Health Care Professional (HUAD)	C	3
HCR 220 Introduction to Health Professions and the U.S. Health Care System (CIVI)	C	3
HCR 230 Culture and Health (GCSI)	C	3
NTR 241 Human Nutrition	C	3
PSY 101 Introduction to Psychology (SOBE)	C	3
Mathematics (MATH)	C	3
STP 226 Elements of Statistics (QTRS)	C	3

Nursing: Science Prerequisite Courses

CHM 101 Introductory Chemistry (SCIT)	C	4

BIO 201 Human Anatomy and Physiology I (SCIT)	C	4
BIO 202 Human Anatomy and Physiology II (SCIT)	C	4
MIC 205 Microbiology (SCIT) **AND** **MIC 206 Microbiology Laboratory (SCIT)**	C	4
HCR 240 Human Pathophysiology	C	4

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-NU The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.	
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.	

Direct Admit Continuing Eligibility Criteria (CEC)

Direct admit students must meet Continuing Eligibility Criteria (CEC) each semester (Terms 1-4) to advance into the prelicensure clinical nursing program. The following criteria will be reviewed each semester: **AND** Full-time enrollment at ASU (minimum 12 credit hours per term) **AND** Enroll in courses following the published course sequence (according to term) on the major map in terms 1-4. Any deviation from the published major map must be approved by petition. **AND** All courses must be completed at ASU unless approved by petition. **AND** 3.50 minimum semester critical (prerequisite) courses GPA in term 1-4 (includes +/- in computation) with no grades lower than a C. Critical courses are marked with symbol on the major map. Electives are not included in the calculation. **AND** Successful completion of all screening items by the established deadlines.

Licensure / Certification Direct Disclosure Statement

The Edson College of Nursing and Health Innovation prepares graduates for excellence upon entering the workplace. Certification and licensure requirements vary by profession and from state-to-state, students should review professional licensure information at ASU Professional Licensure to determine if a program meets educational requirements for

licensure or certification in a specific state. State licensing contact information is available on the website: https://admission.asu.edu/academics/licensure.

Advancement to the Prelicensure Clinical Nursing Program

Advancement into the prelicensure clinical nursing programs at Arizona State University requires an application. Application deadlines are September 1 for spring and February 1 for summer and fall.

Students must meet all health and safety requirements at the time of advancement and must maintain compliance on all health and safety requirements throughout their enrollment in the program.

An Arizona IVP Fingerprint Clearance Card is required for advancement.

A valid American Heart Association Basic Life Support (BLS) for Healthcare Providers certificate is required for advancement.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Cross-Sector Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPCSLDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in cross-sector leadership is a requirement for, and is limited to, participants in the Public Service Academy's Next Generation Service Corps, a four-year leadership development track that engages future civilian leaders in the public, private and nonprofit sectors to engage in collaboration and change in the context of social challenges in which they hold interest. Students are required to demonstrate forward academic progress to maintain enrollment in the certificate as well as the Next Generation Service Corps. ROTC students also may pursue the certificate.		
PAF 215 NGSC Community Impact Lab	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 315 Cross-Sector Collaboration (CIVI)	C	3
PAF 415 Social Entrepreneurship	C	3
PAF 394 Topic: NGSC Leadership Instruction **or** **PAF 421 Leadership Capstone**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Ocean Futures (Coastal and Marine Science) and Geographic Information Science (GFSEACMSBS and LAGISCERT)

Program description:
The Bachelor of Science program in ocean futures with a concentration in coastal and marine science builds on a foundation in coastal and marine system science to focus on physical, chemical and biological aspects; ecosystem functioning; biogeochemistry; and ocean interaction with the climate system. Students gain knowledge of integrated ocean science, but also cognitive skills in critical and futures thinking, information and digital literacy, and problem-solving. The concentration offers research opportunities studying coral reefs, biogeochemical cycling, ocean dynamics and land-sea interactions. It provides preparation for graduate study in a variety of fields, such as biological, chemical and physical oceanography; coastal ecosystem science; and coral reef science.

Healthy human futures depend on healthy ocean futures, and vice versa. According to the United Nations, about 40% of the world's population presently lives within 100 kilometers of the coast. The flourishing of societies and the planet requires a holistic approach to support healthy ocean and coastal ecosystems in the face of a changing future. Addressing the growing challenges the ocean faces requires transdisciplinary study and use-inspired research that works toward culturally appropriate solutions for local to global stewardship of the future oceans. The BS program in ocean futures is designed to grow the next generation of ocean stewards, community leaders, innovators and researchers and build capacity for transformational changes in societal perspectives and practices related to the oceans. Students develop interpersonal skills in leadership, civic and global responsibility, and cultural sensitivity.

One of the benefits of this program is the opportunity for students to gain additional experience through offerings at the ASU Bermuda Institute of Ocean Sciences, Center for Global Discovery and Conservation Science in Hawai'i, and opportunity for study in Antarctica.

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BS At a Glance:
College/school: College of Global Futures
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 251 - Calculus for Life Sciences
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
The BS program addresses the crucial role of healthy oceans and coastal communities in the future of the planet and human well-being. Graduates are prepared for professional roles in high demand across sectors such as county, state and federal agencies, along with nongovernmental and community organizations. Graduates are equipped to work collaboratively with diverse communities to become the next generation of leaders dedicated to stewarding coastal and marine resources.

Career paths include:

- conservation manager
- environmental consultant
- environmental scientist
- fisheries manager
- marine biologist
- marine educator
- marine research assistant
- marine research technician
- marine scientist
- natural resource manager

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Ocean Futures (Coastal and Marine Science), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: College of Global Futures
Plan Code: GFSEACMSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Courses		
SEA 101 Ocean Futures (SUST)	C	3
SEA 201 Ocean Conservation (SUST) OR SEA 202 Ocean Communities: Introduction to Ethnobotany (GCSI)	C	3
SEA 220 Biology of the Marine Environment	C	3
SEA 325 Oceanography	C	3
Ocean Futures Stewardship	C	3
SEA 294 Topic: Ocean Exploration		
SEA 340 Surfing: Economics, Culture and Science		
SEA 410 Arctic Futures		
SEA 494 Topic: Ethnoecology		
SEA 494 Topic: Coastal & Marine Management & Stewardship		

Requirement	Minimum Grade	Credit Hours
SOS 483 Should I Eat Fish? Economics, Ecology and Policy of Sustainable Seafood		
SEA 485 Ocean Futures Workshop	C	3
SEA 496 Ocean Futures Capstone	C	3
Ocean Futures Upper Division Electives		
Upper Division SEA Elective	C	6
Ocean Futures Quantitative Applications		
STP 231 Statistics for Life Science (QTRS) OR SEA 310 Paleoclimate Perspectives on Contemporary Climate Change OR SEA 330 Digital Blue Planet (QTRS) OR SEA 430 Cloud-Based Remote Sensing	C	3
Ocean Futures (Coastal and Marine Science) Related Area		
BIO 181 General Biology I (SCIT)	C	4
CHM 113 General Chemistry I (SCIT)	C	4
CHM 116 General Chemistry II (SCIT) OR PHY 101 Introduction to Physics (SCIT)	C	4
MAT 251 Calculus for Life Sciences (MATH)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

CGF 101 First-Year Student: Introduction to ASU and Your Academic Community	C	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Students are encouraged to complete an Experiential Aquatic course to fulfill elective hours. Students should meet with their

academic advisor to learn more about these experiences that may be available locally and regionally in Arizona, and globally. In some cases, additional costs may apply.

Ocean Futures Experiential Aquatic Elective

> **FIS 494 Topic: Antarctica: Humans and the Environment**
>
> **FIS 400** / **SEA 400 Sea Turtles, Sharks and Fisheries of Baja California**
>
> **SEA 415 Marine Invertebrate Zoology**
>
> **SEA 420 Coral Reef Ecology**
>
> **SEA 425 Research Diving Methods**

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

AA/CERT Organizational Leadership and Organizational Leadership (LSORGLAA and LSORGLCERT)

Program description:
This Associate of Arts program provides leadership training to active duty Navy, Marine Corps and Coast Guard enlisted personnel. This program uses transdisciplinary methods to prepare students to build a leadership foundation. Students learn skills applicable to any work environment, regardless of assigned role, in organizations across all sectors: private, nonprofit, government and military. Students develop the skills leaders need to solve problems, communicate effectively, assess programs, manage resources and evaluate emerging technologies.

Students who complete the program can continue in an established transfer path to the Bachelor of Arts program in organizational leadership and other ASU degree programs. The flexible AA degree allows students to complete general education coursework and concentrated coursework in a second disciplinary field to prepare for leadership in a specific industry or sector.

In the certificate program in organizational leadership, students develop the skills leaders need to solve problems, communicate effectively, assess programs, manage resources and evaluate emerging technologies.

AA At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Online
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Online

Career opportunities:
Graduates may pursue a variety of careers, such as:

- account manager
- deputy sheriff trainee
- executive assistant
- facilities manager
- knowledge manager
- organization development consultant
- sales executive
- sales manager
- service manager
- supervisor

Graduates have the skills and knowledge needed for leadership positions in a wide variety of areas, such as business, government, the military, health care administration, nonprofit agencies and the service industry. This knowledge is applicable to any work environment, regardless of assigned role.

Curriculum - Organizational Leadership, AA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Associate of Arts, AA
College/School: College of Integrative Sciences and Arts
Plan Code: LSORGLAA
Minimum credit hours: 60
Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
Organizational Leadership Requirements		
OGL 200 Introduction to Organizational Leadership (CIVI)	C	3
OGL 220 Behavioral Dynamics in Organizations (SOBE)	C	3
OGL 260 Resource Allocation in Organizations (SUST)	C	3
OGL 300 Theory and Practice of Leadership	C	3
OGL 345 Organizational Ethics (HUAD)	C	3
OGL 355 Leading Organizational Innovation and Change	C	3
OGL 381 Organizational Leadership Capstone	C	3
General Education Requirements		
Mathematics (MATH) Recommended: **MAT 114**		3
Quantitative Reasoning (QTRS) Recommended: **CSE 180**		3

Scientific Thinking in Natural Sciences (SCIT) Recommended: **BIO 130**		8
COM 302 Military and Veterans in Media and Arts (HUAD) **OR** **MVS 302 Military and Veterans in Media and Arts (HUAD)**	C	3

USNCC Naval Studies

USNCC NAV 101 **OR** **PHI 105 Intro to Ethics (HUAD)**	C	3
USNCC NAV 102 **OR** HST 999 (HUAD)	C	3
USNCC NAV 103 **OR** POS 999 (CIVI)	C	3
USNCC NAV 104 **OR** **POS 110 American Government and Politics (AMIT)**	C	3
USNCC NAV 105 **OR** **POS 160 Global Politics (GCSI)**	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CLS The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All associate degree students must fulfill university graduation requirements, including a minimum of 60 credit hours. https://catalog.asu.edu/associatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
USNCC NAV 101: Naval Ethics and Leadership satisfies PHI 105
USNCC NAV 102: Modern Naval History satisfies HST elective
USNCC NAV 103: Naval Force Design and Concepts satisfies Elective
USNCC NAV 104: Civilian/Military Organization and Policy satisfies POS 110
USNCC NAV 105: Introduction to Geopolitical Environment satisfies POS 160. NAV 105 must be taken at USNCC to satisfy USNCC certificate requirements.
Contact USNCC regarding the applicability of transfer credit to USNCC requirements.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Organizational Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LSORGLCERT

Minimum credit hours: 21

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in organizational leadership requires 21 hours, of which 12 must be upper division. A minimum grade of "C" is required in each course.		

Required Courses

OGL 200 Introduction to Organizational Leadership (CIVI)	C	3
OGL 220 Behavioral Dynamics in Organizations (SOBE)	C	3
OGL 260 Resource Allocation in Organizations (SUST)	C	3
OGL 300 Theory and Practice of Leadership	C	3
OGL 345 Organizational Ethics (HUAD)	C	3
OGL 355 Leading Organizational Innovation and Change	C	3
OGL 381 Organizational Leadership Capstone	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

ENG 102, 105 or 108 is a prerequisite requirement to enroll in OGL 381.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Organizational Leadership (Project Management) and Applied Business Data Analytics (LSORGLPMBA and BABDACERT)

Program description:
The Bachelor of Arts program in organizational leadership with a concentration in project management offers a theoretical and skills-driven curriculum designed to prepare students to excel as project managers and leaders in the field.

In organizational leadership courses, students explore leadership theory and practice, gaining the skills and knowledge necessary to lead diverse teams, innovate, solve problems, communicate effectively, evaluate leadership and organizational effectiveness, manage resources and use emerging technologies within organizations. Additionally, students develop essential skills for managing complex projects, including project leadership, quality management, risk management, schedule management, cost management and resource management.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BA At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: Any math course that meets the MATH designation.
Math intensity: General

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Graduates are equipped for a variety of roles in the public and private sectors, including government, information technology, nonprofit agencies, various businesses and the service industry. They are prepared for positions such as technical project manager, project manager skilled in Agile methodology and others, senior project manager, portfolio manager, and director of project management. Additionally, graduates may pursue advanced credentials such as the Project Management Professional certification, or further their education through graduate programs.

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Organizational Leadership (Project Management), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: College of Integrative Sciences and Arts
Plan Code: LSORGLPMBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Organizational Leadership Core		
PMG 240 Introduction to Project Management	C	3
OGL 200 Introduction to Organizational Leadership (CIVI)	C	3
OGL 220 Behavioral Dynamics in Organizations (SOBE)	C	3
OGL 300 Theory and Practice of Leadership	C	3
OGL 340 Organizational Skills Students will select multiple topics under OGL 340 "Organizational Skills". Individual topics are not repeatable.	C	6
OGL 345 Organizational Ethics (HUAD)	C	3
OGL 350 Diversity and Organizations (GCSI)	C	3
OGL 357 Assessment in Organizations OR **OGL 360 Assessment of Leadership Effectiveness**	C	3
OGL 481 Organizational Leadership Pro-Seminar I	C	3

Requirement	Minimum Grade	Credit Hours
Project Management Concentration Courses		
OGL 343 Social Processes in Organizations (SOBE) OR **OGL 355 Leading Organizational Innovation and Change**	C	3
PMG 321 Project Leadership, Strategy and Scope	C	3
PMG 322 Project Schedule Management	C	3
PMG 323 Project Cost Management	C	3
PMG 324 Resources in Project Management	C	3
PMG 326 Project Procurement Management	C	3
PMG 421 Project Risk Management	C	3
PMG 422 Project Quality Management	C	3
ASU 101 or College-Specific First-Year Seminar		
ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
ASU 101-CLS The ASU Experience		1
First-Year Composition		
ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition**	C	6

OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

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All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

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Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Parks, Recreation and Sport Management and Sports, Cultures and Ethics (PPPRMBS and LASPCECERT)

Program description:
The Bachelor of Science program in parks, recreation and sport management provides a transdisciplinary education in the management of parks, protected areas, community-based recreation services, and sport and special event management. The parks and recreation field emerged from the youth development, recreation and park movements of the late 19th century.

Students in the program learn about wilderness, environmental communication, parks and recreation management and policy, assessment and evaluation, and sport and recreation planning and programming. They learn through classroom instruction and field experiences to integrate the natural, social and managerial sciences to make informed decisions for recreation services, both natural resource-based and community-based.

The required internship component of the program enables students to gain practical experience in the parks and recreation professions.

The Council on Accreditation of Parks, Recreation, Tourism and Related Professions accredits this degree program.

The certificate program in sports, cultures and ethics is a cross-disciplinary inquiry into the social, ethical and cultural influence of sports in society.

Courses explore the significance of sports in modern history, including relationships between sports and identity, community, politics, media, business and education. Students analyze the ethical and philosophical issues of participating in and watching sports. Students also explore how playing fields become places of connection and conflict, expanding opportunities or reinforcing inequalities based on race, gender, sexuality, religion and socioeconomic class.

Students who complete the program have knowledge and understanding of the multifaceted nature of sports and its wide-ranging impact on cultures and lives.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates are prepared for professional positions in which they design, develop and manage services that address the recreational needs of a particular clientele. They are employed in a variety of public, private and nonprofit organizations in Arizona, nationally and abroad, and they find employment in such diverse settings as:

- armed forces recreation
- city park and recreation departments
- county and state park agencies
- federal natural resource agencies
- hospitals and care facilities
- nonprofit recreation programs
- private and commercial recreation facilities
- special event management
- sport venues and theme parks
- youth agencies

Students who combine the certificate in sports, cultures and ethics with their major program of study become more marketable to employers.

Students who complete this undergraduate certificate often decide to pursue employment in sports business, sports

journalism, sports law, education, sports governance and administration, coaching or the sports sciences. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Parks, Recreation and Sport Management, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPPRMBS
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours
Unit Core		
CRD 210 Community Services and Professions	C	3
CRD 301 Sustainable Communities (SUST)	C	3
CRD 302 Inclusive Community Development (SOBE)	C	3
CRD 402 Assessment and Evaluation of Community Services (QTRS)	C	3
Professional Core		
CRD 403 Leadership and Professional Development	C	3
CRD 435 Service Learning for Community Development	C	1
Upper Division Senior Internship Experience	C	12

> Students can choose 12 credits of CRD 463, 6 credits of CRD 463 and 6 credits of electives, or 3 credits of CRD 435 and 9 credits of electives. Electives must not be from previous coursework

Requirement	Minimum Grade	Credit Hours
CRD 463 Senior Internship **CRD 463 Senior Internship AND** Upper Division CRD Elective **or** Upper Division NLM Elective **or** Upper Division PRM Elective **or** Upper Division RTH Elective **or** Upper Division TDM Elective **CRD 435 Service Learning for Community Development AND** Upper Division CRD Elective **or** Upper Division NLM Elective **or** Upper Division PRM Elective **or** Upper Division RTH Elective **or** Upper Division TDM Elective		

Review eligibility for each option at https://scrd.asu.edu/content/documents

Major Core

CRD 350 Tourism, Recreation and Sports Marketing	C	3
CRD 401 Managing Tourism and Leisure Enterprises	C	3
PRM 120 Leisure and the Quality of Life (SOBE)	C	3
PRM 201 Introduction to Parks, Recreation and Sport Management	C	3
PRM 203 Program Planning	C	3
PRM 304 Recreation and Sport Planning and Facilities	C	3
PRM 306 Advanced Programming and Facilitation	C	3

Requirement	Minimum Grade	Credit Hours
PRM 380 Wilderness and Parks in America (SUST) OR **RTH 364 Foundations in Recreational Therapy (SOBE)**	C	3

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of PRM 203, CRD 301, CRD 402, CRD 435, or CRD 463 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement

Area 1: Criminology and Criminal Justice	
CRJ Elective	
Area 2: Public Affairs	
PAF Elective	
Area 3: Social Work	6
SWU Elective	
Area 4: Public Service and Community Solutions	
CPP Elective	

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Major Electives

In total, four courses must be taken within the elective areas. Students can choose from any number of area groups. At least six credits must be upper-division. For a career as a park ranger, please take Park Ranger/Natural Resource Management Electives.

Upper Division PRM Major Electives	C	6

Upper Division Community Recreation Electives

- **PRM 335 Sports and Recreation for Youth Development**
- **PRM 475 Entrepreneurial Recreation and Tourism**
- **RTH 364 Foundations in Recreational Therapy (SOBE)**
- **RTH 455 Recreational Therapy and Play with Children, Youth and Families**

Upper Division Inclusive and Adaptive Sports Electives

- **PRM 335 Sports and Recreation for Youth Development**
- **PRM 453 Inclusive Community Sport**
- **RTH 364 Foundations in Recreational Therapy (SOBE)**

RTH 455 Recreational Therapy and Play with Children, Youth and Families

Upper Division Park Ranger/Natural Resource Management Electives

ABS 384 Natural Resources Measurements

ABS 430 Watershed Management

ABS 479 Ecosystem Management and Planning

ABS 485 GIS in Natural Resources

BIO 324 Environmental Ethics (SUST)

BIO 412 Conservation in Practice

BIO 434 People and Nature: Ecosystem Services

ENV 415 Field Techniques in Natural Resource Management

ERM 426 Environmental Issues

ERM 428 International Environmental Management

PHI 310 Environmental Ethics (SUST)

PRM 340 Outdoor Survival

PRM 360 Environmental and Cultural Interpretation

PRM 370 Public Lands Management

SCN 300 Foundations of Environmental Education

SCN 301 Ecology and Natural History of the Sonoran Desert (SCIT)

SOS 412 Conservation in Practice

TDM 448 Heritage and Cultural Tourism

TDM 480 Sustainable Tourism

Upper Division Special Event Management Electives

PRM 485 Sports Events

PRM 487 Advanced Special Events Management

TDM 345 Meeting and Convention Planning

Upper Division Sports Tourism Electives

PRM 483 Sports Tourism

PRM 485 Sports Events

Upper Division Youth Sports Electives

PPE 335 Movement and Physiology Principles of Children and Youth in Physical Activity Environments

PPE 494 Topic: Positive Sport Coaching

PRM 335 Sports and Recreation for Youth Development

PRM 483 Sports Tourism

PRM 485 Sports Events

Upper Division Other Electives

CRD Elective

NLM Elective

PRM Elective

TDM Elective

PAF 410 Building Leadership Skills (SOBE)

PUP 301 Introduction to Urban Planning

Major Elective Area	C	6

Community Recreation Electives

PRM 335 Sports and Recreation for Youth Development

PRM 475 Entrepreneurial Recreation and Tourism

RTH 364 Foundations in Recreational Therapy (SOBE)

RTH 455 Recreational Therapy and Play with Children, Youth and Families

Inclusive and Adaptive Sports Electives

PRM 335 Sports and Recreation for Youth Development

PRM 453 Inclusive Community Sport

RTH 364 Foundations in Recreational Therapy (SOBE)

RTH 455 Recreational Therapy and Play with Children, Youth and Families

Park Ranger/Natural Resource Management Electives

ABS 384 Natural Resources Measurements

ABS 430 Watershed Management

ABS 479 Ecosystem Management and Planning

ABS 485 GIS in Natural Resources

ASM 104 Bones, Stones, and Human Evolution (SCIT)

BIO 100 The Living World (SCIT)

BIO 130 Introduction to Environmental Science (SCIT)

BIO 324 Environmental Ethics (SUST)

BIO 412 Conservation in Practice

BIO 434 People and Nature: Ecosystem Services

ENV 415 Field Techniques in Natural Resource Management

ERM 426 Environmental Issues

ERM 428 International Environmental Management

GIS 205 Geographic Information Science I (QTRS)

GLG 101 Introduction to Geology I (Physical) (SCIT)

GLG 108 Water Planet (SCIT)

GPH 111 Introduction to Physical Geography (SCIT)

PHI 310 Environmental Ethics (SUST)

PRM 340 Outdoor Survival

PRM 360 Environmental and Cultural Interpretation

PRM 370 Public Lands Management

SCN 300 Foundations of Environmental Education

SCN 301 Ecology and Natural History of the Sonoran Desert (SCIT)

SOS 412 Conservation in Practice

TDM 448 Heritage and Cultural Tourism

TDM 480 Sustainable Tourism

Special Event Management Electives

PRM 145 Special Events Management

PRM 485 Sports Events

PRM 487 Advanced Special Events Management

TDM 345 Meeting and Convention Planning

Sports Tourism Electives

PRM 145 Special Events Management

PRM 483 Sports Tourism

PRM 485 Sports Events

TDM 205 Introduction to Travel and Tourism (GCSI)

Youth Sports Electives

PPE 215 Teaching Team Sports

PPE 335 Movement and Physiology Principles of Children and Youth in Physical Activity Environments

PPE 494 Topic: Positive Sport Coaching

PRM 335 Sports and Recreation for Youth Development

PRM 483 Sports Tourism

PRM 485 Sports Events		

Other Electives

CRD Elective		
NLM Elective		
PRM Elective		
TDM Elective		
PAF 410 Building Leadership Skills (SOBE)		
PUP 301 Introduction to Urban Planning		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition AND **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** AND **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit

hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Sports, Cultures and Ethics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LASPCECERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in sports, cultures and ethics requires a minimum of 18 credit hours, of which at least 12 must be upper division. At least six upper-division hours must be in courses offered by The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search. All courses for the certificate must be passed with a minimum grade of "C" (2.00 on a 4.00 scale).		
AFR 375 Race, Gender and Sport (SOBE) **or** **HST 377 Sports in United States History (HUAD)**	C	3
PHI 370 Sports Ethics (HUAD)	C	3
Upper Division Electives AFR 375 or HST 377 may be used as an elective if not used as a required sports culture course. **AFR 375 Race, Gender and Sport (SOBE)** **CEL 394 Topic: Sports and Leadership** **COM 394** / **SBS 394** / **SOC 394 Topic: Soccer: The Global Game** **COM 477 Sport, Culture, and Discourses** **CSM 335** / **PRM 335 Sports and Recreation for Youth Development**	C	6

Requirement	Minimum Grade	Credit Hours
FMS 360 Topic: Sports Media		
HST 302 Topic: History of the Olympic Movement		
HST 302 Topic: The Mexico City 1968 Olympics in Global Context		
HST 306 Topic: History of Baseball		
HST 377 Sports in United States History (HUAD)		
HST 379 History of College Sports		
HST 494 / MCO 494 / TGM 494 Topic: Sport and Globalization		
NEW 300 Topic: International Cities Barcelona		
PHI 371 Philosophy of Sport		
PHI 394 Topic: The Olympics and Philosophy		
REL 383 / ASB 383 Religion and Sports (HUAD)		
SGS 394 Topic: The Geopolitics of Sport		
Electives	C	6
AFR 375 or HST 377 may be used as an elective if not used as a required sports culture course.		
AFR 375 Race, Gender and Sport (SOBE)		
ASB 252 Sports and Culture (GCSI)		
CEL 394 Topic: Sports and Leadership		
COM 394 / SBS 394 / SOC 394 Topic: Soccer: The Global Game		
COM 477 Sport, Culture, and Discourses		
CSM 335 / PRM 335 Sports and Recreation for Youth Development		
FMS 360 Topic: Sports Media		

Requirement	Minimum Grade	Credit Hours
HST 214 / SLC 214 The World's Game: History and Culture of Soccer		
HST 302 Topic: History of the Olympic Movement		
HST 302 Topic: The Mexico City 1968 Olympics in Global Context		
HST 306 Topic: History of Baseball		
HST 377 Sports in United States History (HUAD)		
HST 379 History of College Sports		
HST 494 / MCO 494 / TGM 494 Topic: Sport and Globalization		
NEW 300 Topic: International Cities Barcelona		
PHI 371 Philosophy of Sport		
PHI 394 Topic: The Olympics and Philosophy		
POS 294 Topic: Sports, Politics, & the Law		
REL 383 / ASB 383 Religion and Sports (HUAD)		
SGS 394 Topic: The Geopolitics of Sport		
SOC 220 Sociology of Sport		

Additional courses related to sports, cultures and ethics that are not on the Electives list may be used with the approval of the certificate directors.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Not all courses listed for this program are available every term. Students should consult the class schedule prior to each term to confirm course availability.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Performance and Movement and Ethics (HIPERMVBA and LAETHCERT)

Program description:
The Bachelor of Arts program in performance and movement is a transdisciplinary degree program that encourages students to develop collaborative approaches to learning with cultural awareness and professional industry skills across the performing arts.

This degree program offers three focus areas:

Dance and theatre: This focus area is designed for dancers who seek experience working with theatrical performance and acting, actors and performers who seek to balance text and voice work with movement exploration, and writers and directors who want to explore a wide range of approaches to live performance.

Social and partnership dance: This dance focus area seeks to prepare future Afro-Latin social and ballroom dance leaders with pedagogical, performance and community-building strategies to help meet the need for local and national community engagement in social dance as a means to create social transformation and change.

Hip Hop arts: The Hip Hop arts focus area spans various forms of Hip Hop artistry and expression through in-studio courses and hands-on application. It also connects students with scholars and practitioners to embrace the community of Hip Hop culture: dance, music, visual and voice.

The ethics certificate program gives students a richer understanding of systematic philosophical thinking about ethics. Students with majors in business, nursing, journalism and public administration, as well as those who plan to pursue legal careers, among others, may find that training in ethics is beneficial to their career goals.

The certificate program permits some flexibility regarding course selection, thereby facilitating particular student interests.

BA At a Glance:
College/school: Herberger Institute for Design and the Arts
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
or any math course that meets the MATH designation.
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
The bachelor's degree program in performance and movement provides an excellent broad-based foundation for work in the arts or entertainment professions and readies students for further creative development and research via graduate programs or conservatories. The program's liberal arts framework, combined with rigorous physical practice and culturally aligned performance standards prepares graduates for a variety of occupations in both performance and movement related fields. Opportunities may include work with:

- arts entrepreneurship
- professional performing
- studio ownership and management
- themed entertainment

An undergraduate certificate can advance students' career options. Graduates are more marketable to employers when they have complemented their major program of study with this specialization in ethics. The certificate is evidence of analytical, reasoning and writing skills and competence in areas of increasing concern to employers, such as ethics, public policy and justice.

Graduates with this certificate often decide to pursue careers in business, law, policy or politics. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Performance and Movement, BA - Dance and Theatre

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: Herberger Institute for Design and the Arts
Plan Code: HIPERMVBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
DCE 136 Introduction to Somatic Movement	C	2
DCE 160 Creative Practices I	C	3
DCE 201 Dance, Culture, and Global Contexts (GCSI) OR **DCE 202 Dance in U.S. Popular Culture (HUAD)** OR **THF 220 Principles of Dramatic Analysis (HUAD)**	C	3
DCE 461 Transitions II OR **THF 497 Senior Project**	C	2 - 3
DCE 484 Internship OR **THP 484 Internship** OR Upper Division **DCE Elective** OR Upper Division **THE Elective** OR Upper Division **THP Elective** OR Upper Division **THF Elective**	C	3
DCE Elective OR **THE Elective** OR **THF Elective** OR **THP Elective**	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division **DCE Elective** **OR** Upper Division **THE Elective** **OR** Upper Division **THP Elective** **OR** Upper Division **THF Elective**	C	9
THF 126 Professional Development: Communication and Collaboration	C	2
THF 160 Introduction to Storytelling (HUAD)	C	3
THF 397 Professional Development Seminar	C	1
Lower Division Creative Practice Course **ART 116 Introduction to Digital Media** **ART 216 Contemporary Art in Practice: Methods, Making, Meaning** **DCE 161 Creative Practices II** **DCE 240 Media for Dance (QTRS)** **DCE 260 Creative Practices III** **DCE 261 Creative Practices IV** **MTC 125 Music Theory I** **MUS 100 Fundamentals of Music Notation** **MUS 145 Nonmajors Class Piano: Beginner** **THF 215 Design and Composition for Theatre and Film (HUAD)** **THP 213 Introduction to Technical Theatre**	C	3 - 4

Requirement	Minimum Grade	Credit Hours
THP 214 Introduction to Costuming		
THP 218 Directing I: Introduction to Directing		
THP 260 Introduction to Dramatic Writing		
Lower Division Physical Practice Course	C	8 - 12
DCE 110 Argentine Tango I		
DCE 120 Nonmajors Contemporary Modern I		
DCE 121 Ballet I		
DCE 122 Jazz I		
DCE 123 Nonmajors Hip Hop I		
DCE 124 Latin/Swing/Ballroom I		
DCE 125 Nonmajors Afro-Latin/Salsa I		
DCE 126 Country-Western		
DCE 133 Hip Hop I		
DCE 134 Contemporary Modern I		
DCE 135 Contemporary Ballet I		
DCE 136 Introduction to Somatic Movement		
DCE 137 African and Diaspora Movement Practices I		
DCE 139 Afro-Latin Salsa I		
DCE 220 Nonmajors Contemporary Modern II		

Requirement	Minimum Grade	Credit Hours
DCE 224 Latin/Swing/Ballroom II		
DCE 225 Nonmajors Afro-Latin/Salsa II		
DCE 233 Hip Hop II		
DCE 234 Contemporary Modern II		
DCE 236 Somatic Movement Applications: A Closer Look		
DCE 238 Hip Hop Ensemble		
DCE 239 Afro-Latin Salsa II		
DCE 294 Topic: Authentic Jazz Dance		
MUP 170 Music Theatre I		
MUP 172 Music Theatre II		
MUP 270 Music Theatre III		
MUP 272 Music Theatre IV		
MUS 146 Singing for Nonmajors I		
THF 101 Acting Introduction		
THP 102 Acting I		
THP 122 Acting II		
THP 203 Acting III		
THP 222 Acting IV		
THP 272 Movement I		

Requirement	Minimum Grade	Credit Hours
Upper Division Community Engagement and Education Course		
ART 442 Art and Community	C	3
DCE 354 Creative Approaches to Teaching Dance I		
DCE 356 Creative Approaches to Teaching Dance II		
THE 325 Play Reading for Educational Theatre		
THE 480 Methods of Teaching Theatre		
THP 311 Drama and Education: Performance Methods for Teaching (HUAD)		
THP 351 Arts Management (HUAD)		
THP 411 Methods of Teaching Drama		
THP 450 Theatre Organization and Management		
Upper Division Creative Practice Course	C	2 - 3
ART 443 Performance Art: Actions, Gestures, Journeys		
DCE 360 Creative Practices V		
DCE 361 Creative Practices VI		
DCE 460 Transitions I		
DCE 461 Transitions II		
THP 318 Directing II: Intermediate Directing		
THP 330 Costume Design		
THP 332 Makeup		

Requirement	Minimum Grade	Credit Hours
THP 345 Lighting Design		
THP 350 Sound Design		
THP 355 Media Design for Performance		
THP 360 Intermediate Playwriting		
THP 440 Advanced Scene Design		
Upper Division History and Context Course	C	3
DCE 300 Dancing Histories (HUAD)		
DCE 301 Dance Analysis and Theory (HUAD)		
DCE 302 History of American Hip Hop Dance (HUAD)		
DCE 306 History of Salsa: Afro-Latin Social and Global Contexts (HUAD)		
DCE 402 Ethnography of Dance Practices (HUAD)		
DCE 404 Dance and Ethics (CIVI)		
DCE 405 Writing the Creating Body (HUAD)		
THE 320 History of the Theatre I (GCSI)		
THE 321 History of the Theatre II (HUAD)		
THE 322 Theatre History and Culture (HUAD)		
THE 325 Play Reading for Educational Theatre		
THE 421 Shakespeare: Stage and Film (HUAD)		
THE 422 Latinx Theatre and Film (HUAD)		

Requirement	Minimum Grade	Credit Hours
THE 423 African American Theatre (HUAD)		
THE 430 History of Fashion I (HUAD)		
THE 431 History of Fashion II: 20th-Century Fashion (HUAD)		
Upper Division Physical Practice Course	C	3
DCE 324 Latin/Swing/Ballroom III		
DCE 333 Hip Hop III		
DCE 334 Contemporary Modern III		
DCE 335 Contemporary Ballet III		
DCE 336 Somatic Movement Development and Facilitation		
DCE 339 Afro-Latin Salsa III		
MUP 370 Music Theatre V		
MUP 465 Music Theatre VI		
MUP 466 Broadway Dance		
MUP 470 Music Theatre VII		
MUP 471 Music Theatre: Workshops		
MUP 472 Music Theatre VIII		
THP 301 Theatre Production		
THP 302 Acting V		

Requirement	Minimum Grade	Credit Hours
THP 307 Acting: Ten-Minute Plays		
THP 372 Movement II		
THP 377 Voice and Speech II		
THP 387 Acting VI		
THP 482 Theatre for Social Change (CIVI)		
Upper Division Production and Technical Course	C	1 - 3
DCE 438 Dance Theatre Performance/Production		
MUP 373 Music Theatre Performance and Production		
MUP 374 Music Theatre Technical Production		
THP 301 Theatre Production		
THP 317 Stage Management		
THP 331 Costume Construction		
THP 332 Makeup		
THP 335 Stagecraft		
THP 345 Lighting Design		
THP 350 Sound Design		
THP 355 Media Design for Performance		
THP 401 Theatre Practicum		
THP 435 Technical Direction		

Requirement	Minimum Grade	Credit Hours
THP 442 Rendering for Design and Production		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

DCE 170 First-Year Seminar I		1 - 2

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree

requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Ethics, Certificate

LAETHCERT

Ethics are the foundation of many legal and political systems. Pair your bachelor's degree with the study of ethics to become a better philosophical thinker who can solve ethical problems.

Description

The ethics certificate program gives students a richer understanding of systematic philosophical thinking about ethics. Students with majors in business, nursing, journalism and public administration, as well as those who plan to pursue legal careers, among others, may find that training in ethics is beneficial to their career goals.

The certificate program permits some flexibility regarding course selection, thereby facilitating particular student interests.

At a glance

- **College/school:** The College of Liberal Arts and Sciences
- **Location:** Tempe

Curriculum

View curriculum archives

2025-2026 Catalog Year

Open in separate page Expand all course lists

Requirement	Minimum Grade	Credit Hours
The certificate in ethics consists of 18 credit hours. All courses must be passed with a minimum grade of "C" (2.00 on a 4.00 scale). At least 12 credit hours must be upper division. At least six upper-division hours must be in courses offered by The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
PHI 335 History of Ethics (GCSI) **or** **PHI 337 Ethical Theory** **or** **PHI 338 Metaethics**	C	3

Requirement	Minimum Grade	Credit Hours
Upper Division Electives	C	9
Electives	C	6

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Not all courses for this program are available every term. Students should consult the class schedule prior to each term to confirm course availability.

Enrollment requirements

Incompatible Majors: BA in philosophy (morality, politics and law)

A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded before the completion of an undergraduate degree. A student who already holds an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Students will be able to evaluate how well different normative ethical theories such as consequentialism, deontology and virtue theory provide moral standards that dictate which (if any) actions are right and wrong or how well different metaethical theories such as realism, expressivism, relativism, nihilism, compatibilism or incompatibilism account for the meaning and truth of moral claims.
- Students will be able to apply leading ethical theories to practical ethical questions that arise in life.

Career opportunities

An undergraduate certificate can advance students' career options. Graduates are more marketable to employers when they have complemented their major program of study with this specialization in ethics. The certificate is evidence of analytical, reasoning and writing skills and competence in areas of increasing concern to employers, such as ethics, public policy and justice.

Graduates with this certificate often decide to pursue careers in business, law, policy or politics. Advanced degrees or certifications may be required for academic or clinical positions.

Contact information

Historical, Philosophical & Religious Studies, Sch | COOR 4591
SHPRSadvising@asu.edu
480-965-8364

BA/CERT Philosophy (Morality, Politics and Law) and Homeland Security (LAPHIMPBA and PPHSLCERT)

Program description:
The Bachelor of Arts program in philosophy with a concentration in morality, politics and law combines the basic analytical approaches of philosophy with an emphasis on the moral questions that arise in political theory and law. The foundations of political and legal systems are moral values, such as individual liberty, equality and justice. These are contested values, open to different understandings of their nature and implications.

Students explore the nature of morality, political theory, legal theory and the interconnections between them. Students complete philosophy courses and courses from disciplines related to philosophy to enrich and enliven their understanding of the intersections of morality, politics and law. This degree program is of special interest to students who plan to pursue postgraduate work in law, policy or politics.

The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security.

Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Graduates are prepared for career opportunities in law, policymaking and analysis, politics and intelligence work. For example, graduates may find employment with the U.S. Department of State, the Central Intelligence Agency or the U.S. Department of Justice. The program is excellent preparation for law school.

Graduates of the homeland security certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local), such as the Department of Homeland Security, U.S. Customs and Border Protection, and local- and state-level law enforcement departments. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Philosophy (Morality, Politics and Law), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAPHIMPBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
Check: Minimum 2.00 Major GPA		
Core Courses		
PHI 101 Introduction to Philosophy (HUAD) OR **PHI 103 Principles of Sound Reasoning (QTRS)** OR **PHI 105 Intro to Ethics (HUAD)** If planning to take PHI 333: Symbolic Logic in a later semester, take PHI 103, the prerequisite for PHI 333.	C	3
PHI 300 Philosophical Argument and Exposition	C	3
PHI 335 History of Ethics (GCSI) OR **PHI 337 Ethical Theory**	C	3

Requirement	Minimum Grade	Credit Hours
PHI 307 Philosophy of Law (AMIT) OR PHI 347 Philosophical Theories of Constitutional Law	C	3
Upper Division History of Philosophy Course (choose one) PHI 304 Existentialism (HUAD) PHI 328 History of Ancient Philosophy (GCSI) PHI 329 History of Modern Philosophy (GCSI) PHI 401 Rationalism PHI 402 Empiricism PHI 403 Contemporary Analytic Philosophy	C	3
Upper Division Epistemology, Metaphysics or Logic Course PHI 330 Theory of Knowledge (HUAD) PHI 331 Philosophy of Language PHI 332 Metaphysics (HUAD) PHI 333 Symbolic Logic PHI 334 Philosophy of Mind (HUAD)	C	3

Concentration Electives

Politics Elective (choose one) HST 315 Political History of the U. S.	C	3

Requirement	Minimum Grade	Credit Hours
HST 317 / POS 317 History of Postwar U.S. Conservatism		
HST 414 / POS 414 Political History and Leadership		
PHI 336 Social and Political Philosophy		
PHI 350 Philosophy, Politics and Economics (SOBE)		
PHI 394 Topic: Game Thry Market & Just: Intro Phil Politics, Econ		
POS 210 Political Ideologies (CIVI)		
POS 340 History of Political Philosophy I		
POS 341 History of Political Philosophy II		
POS 346 Problems of Democracy (HUAD)		
POS 368 Ethics and Human Rights (GCSI)		
POS 442 American Political Thought (HUAD)		
REL 319 Religion, Violence and America		
REL 378 Religion, War and Peace (CIVI)		
REL 388 / POS 388 Religion, Ethics, and International Politics (CIVI)		
Upper Division Ethics Elective (choose one)	C	3
PHI 335 or PHI 337 may be used as an Ethics Elective if not used as the required ethics core course.		
PHI 306 Applied Ethics (CIVI)		

Requirement	Minimum Grade	Credit Hours
PHI 310 Environmental Ethics (SUST)		
PHI 320 Bioethics (HUAD)		
PHI 335 History of Ethics (GCSI)		
PHI 337 Ethical Theory		
PHI 338 Metaethics		
PHI 370 Sports Ethics (HUAD)		
PHI 405 Moral Psychology		
PHI 408 Feminist Ethics (HUAD)		
REL 381 Religion and Moral Issues (HUAD)		
Upper Division Law Elective (choose one)	C	3
PHI 307 or PHI 347 may be used as a Law Elective if not used as the required law core course.		
HST 321 Constitutional History/US to 1865		
HST 322 Constitutional History of the United States Since 1865		
HST 323 Historical Studies in Race, Crime, and the Law		
HST 415 Debating the Constitution		
JUS 303 Justice Theory (CIVI)		
JUS 308 Courts and Society (SOBE)		
JUS 360 Law and Social Control (SOBE)		

Requirement	Minimum Grade	Credit Hours
JUS 410 Punishment: Logic and Approach		
JUS 463 Discretionary Justice		
JUS 465 Death Penalty in the United States		
PHI 307 Philosophy of Law (AMIT)		
PHI 347 Philosophical Theories of Constitutional Law		
POS 370 Law and Society (CIVI)		
POS 465 International Organization and Law (GCSI)		
POS 470 Law and the Political Order		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		

Philosophy Seminar and Advanced Course

PHI 420 Topics in Philosophy PHI 420 is a topical course that may be taken for credit more than once, so long as the topics are different.	C	3
Upper Division Advanced Philosophy Course (choose one)	C	3
PHI 401 Rationalism		
PHI 402 Empiricism		
PHI 403 Contemporary Analytic Philosophy		
PHI 405 Moral Psychology		
PHI 408 Feminist Ethics (HUAD)		

Requirement	Minimum Grade	Credit Hours
PHI 413 Advanced Symbolic Logic		
PHI 420 Topics in Philosophy		
PHI 452 Philosophy of Biology and Medicine		
Students may complete one topic of PHI 420 to satisfy the PHI 420 requirement above and a different topic of PHI 420 to satisfy the Advanced Philosophy Course requirement. A single PHI 420 course will not satisfy both requirements at once. PHI 401, 402, or 403 may satisfy either a History of Philosophy requirement or the Advanced Philosophy Course requirement, but not both.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar		

required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences **OR** **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go

to: https://silc.asu.edu/student-life/academic-advising/language-testing

If planning on law school, prepare to take the LSAT in your junior year.

Consider participating in an Undergraduate Research Experience through the School of Historical, Philosophical and Religious Studies or a research opportunity in the Humanities Lab.

Consider participating in an internship to gain valuable career experience and contacts. For help exploring internship opportunities related to your major, meet with an academic advisor.

Many General Studies requirements can overlap with major requirements, leaving more room for electives. Consult an academic advisor to select the best courses for your personal plan of study.

Not all courses in the course lists are available every term or available in both on-campus and online formats. Students should consult the class schedule prior to each term to confirm course availability.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Homeland Security, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPHSLCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The homeland security certificate program provides students with the skills and credentials they need to enter fields specializing in homeland security. Students receive extended education in topics such as domestic and international terrorism, cyberterrorism and advanced crime.		

Required Courses

CRJ 412 International Terrorism	C	3
CRJ 417 Cyber Terrorism	C	3
CRJ 419 Domestic Terrorism	C	3

Elective Courses

Upper Division Electives	C	6
CRJ 394 Special Topics		
CRJ 422 Violence in America		
CRJ 455 Police and International Terrorism		

Requirement	Minimum Grade	Credit Hours
CRJ 456 Etiology of Martyrdom		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 464 Organized Crime		
CRJ 494 Special Topics		
PAF 426 Intelligence Analysis and Homeland Security		
PAF 461 Homeland Security		

Only approved homeland security-related topics may be taken from Special Topics courses (CRJ 394 and CRJ 494).

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Bachelor of Science in criminology and criminal justice majors who are also pursuing the Homeland Security certificate may not use CRJ 412, CRJ 417, CRJ 419, CRJ 422, CRJ 455, CRJ 456, CRJ 462, CRJ 463, and CRJ 464 toward both their major and the certificate. These courses will only be used toward the certificate requirements.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Philosophy (Morality, Politics and Law) and Veterans, Society and Service (LAPHIMPBA and LAVSSCERT)

Program description:
The Bachelor of Arts program in philosophy with a concentration in morality, politics and law combines the basic analytical approaches of philosophy with an emphasis on the moral questions that arise in political theory and law. The foundations of political and legal systems are moral values, such as individual liberty, equality and justice. These are contested values, open to different understandings of their nature and implications.

Students explore the nature of morality, political theory, legal theory and the interconnections between them. Students complete philosophy courses and courses from disciplines related to philosophy to enrich and enliven their understanding of the intersections of morality, politics and law. This degree program is of special interest to students who plan to pursue postgraduate work in law, policy or politics.

Through the certificate program in veterans, society and service, students explore the history, representations, experiences and culture of military service and veterans.

Students study the veteran community with an interdisciplinary approach that combines history, politics, business, journalism, psychology, law, sociology and the arts through the intersectional lenses of gender, race, ethnicity and national identity. This program trains students to listen to, learn from, serve, research and advocate for veterans and their families.

Future professionals and current employees at government agencies, health provider organizations, nonprofit organizations and media industries can benefit from this multifaceted certificate program.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Tempe or Online

Career opportunities:
Graduates are prepared for career opportunities in law, policymaking and analysis, politics and intelligence work. For example, graduates may find employment with the U.S. Department of State, the Central Intelligence Agency or the U.S. Department of Justice. The program is excellent preparation for law school.

Students can advance their career options with an undergraduate certificate.

Graduates who have combined the certificate in veterans, society and service with their major program of study may become more marketable to employers.

Graduates often pursue employment as health care social workers, social and community service managers, or community health workers. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Philosophy (Morality, Politics and Law), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAPHIMPBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
Check: Minimum 2.00 Major GPA		
Core Courses		
PHI 101 Introduction to Philosophy (HUAD) OR **PHI 103 Principles of Sound Reasoning (QTRS)** OR **PHI 105 Intro to Ethics (HUAD)** If planning to take PHI 333: Symbolic Logic in a later semester, take PHI 103, the prerequisite for PHI 333.	C	3
PHI 300 Philosophical Argument and Exposition	C	3
PHI 335 History of Ethics (GCSI) OR **PHI 337 Ethical Theory**	C	3

Requirement	Minimum Grade	Credit Hours
PHI 307 Philosophy of Law (AMIT) OR PHI 347 Philosophical Theories of Constitutional Law	C	3
Upper Division History of Philosophy Course (choose one) PHI 304 Existentialism (HUAD) PHI 328 History of Ancient Philosophy (GCSI) PHI 329 History of Modern Philosophy (GCSI) PHI 401 Rationalism PHI 402 Empiricism PHI 403 Contemporary Analytic Philosophy	C	3
Upper Division Epistemology, Metaphysics or Logic Course PHI 330 Theory of Knowledge (HUAD) PHI 331 Philosophy of Language PHI 332 Metaphysics (HUAD) PHI 333 Symbolic Logic PHI 334 Philosophy of Mind (HUAD)	C	3

Concentration Electives

Politics Elective (choose one) HST 315 Political History of the U. S.	C	3

Requirement	Minimum Grade	Credit Hours
HST 317 / POS 317 History of Postwar U.S. Conservatism		
HST 414 / POS 414 Political History and Leadership		
PHI 336 Social and Political Philosophy		
PHI 350 Philosophy, Politics and Economics (SOBE)		
PHI 394 Topic: Game Thry Market & Just: Intro Phil Politics, Econ		
POS 210 Political Ideologies (CIVI)		
POS 340 History of Political Philosophy I		
POS 341 History of Political Philosophy II		
POS 346 Problems of Democracy (HUAD)		
POS 368 Ethics and Human Rights (GCSI)		
POS 442 American Political Thought (HUAD)		
REL 319 Religion, Violence and America		
REL 378 Religion, War and Peace (CIVI)		
REL 388 / POS 388 Religion, Ethics, and International Politics (CIVI)		
Upper Division Ethics Elective (choose one)	C	3
PHI 335 or PHI 337 may be used as an Ethics Elective if not used as the required ethics core course.		
PHI 306 Applied Ethics (CIVI)		

Requirement	Minimum Grade	Credit Hours
PHI 310 Environmental Ethics (SUST)		
PHI 320 Bioethics (HUAD)		
PHI 335 History of Ethics (GCSI)		
PHI 337 Ethical Theory		
PHI 338 Metaethics		
PHI 370 Sports Ethics (HUAD)		
PHI 405 Moral Psychology		
PHI 408 Feminist Ethics (HUAD)		
REL 381 Religion and Moral Issues (HUAD)		
Upper Division Law Elective (choose one)	C	3
PHI 307 or PHI 347 may be used as a Law Elective if not used as the required law core course.		
HST 321 Constitutional History/US to 1865		
HST 322 Constitutional History of the United States Since 1865		
HST 323 Historical Studies in Race, Crime, and the Law		
HST 415 Debating the Constitution		
JUS 303 Justice Theory (CIVI)		
JUS 308 Courts and Society (SOBE)		
JUS 360 Law and Social Control (SOBE)		

Requirement	Minimum Grade	Credit Hours
JUS 410 Punishment: Logic and Approach		
JUS 463 Discretionary Justice		
JUS 465 Death Penalty in the United States		
PHI 307 Philosophy of Law (AMIT)		
PHI 347 Philosophical Theories of Constitutional Law		
POS 370 Law and Society (CIVI)		
POS 465 International Organization and Law (GCSI)		
POS 470 Law and the Political Order		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		

Philosophy Seminar and Advanced Course

PHI 420 Topics in Philosophy PHI 420 is a topical course that may be taken for credit more than once, so long as the topics are different.	C	3
Upper Division Advanced Philosophy Course (choose one)	C	3
PHI 401 Rationalism		
PHI 402 Empiricism		
PHI 403 Contemporary Analytic Philosophy		
PHI 405 Moral Psychology		
PHI 408 Feminist Ethics (HUAD)		

Requirement	Minimum Grade	Credit Hours
PHI 413 Advanced Symbolic Logic		
PHI 420 Topics in Philosophy		
PHI 452 Philosophy of Biology and Medicine		
Students may complete one topic of PHI 420 to satisfy the PHI 420 requirement above and a different topic of PHI 420 to satisfy the Advanced Philosophy Course requirement. A single PHI 420 course will not satisfy both requirements at once. PHI 401, 402, or 403 may satisfy either a History of Philosophy requirement or the Advanced Philosophy Course requirement, but not both.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar		

required of all first-year students.		
LIA 101 Student Success in The College of Liberal Arts and Sciences **OR** **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq		
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr		
Mathematics Placement Assessment score determines placement in first mathematics course.		
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.		
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go		

to: https://silc.asu.edu/student-life/academic-advising/language-testing

If planning on law school, prepare to take the LSAT in your junior year.

Consider participating in an Undergraduate Research Experience through the School of Historical, Philosophical and Religious Studies or a research opportunity in the Humanities Lab.

Consider participating in an internship to gain valuable career experience and contacts. For help exploring internship opportunities related to your major, meet with an academic advisor.

Many General Studies requirements can overlap with major requirements, leaving more room for electives. Consult an academic advisor to select the best courses for your personal plan of study.

Not all courses in the course lists are available every term or available in both on-campus and online formats. Students should consult the class schedule prior to each term to confirm course availability.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Veterans, Society and Service, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LAVSSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires 18 credit hours, of which at least 12 credit hours must be completed at the upper-division level and nine must be completed at ASU. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Required Courses

MVS 100 Introduction to Military Studies	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals or **MVS 301 Experience of America's Modern Wars**	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3

Elective

Upper Division Electives	C	3
AFR 494 Topic: Black Military History		

Requirement	Minimum Grade	Credit Hours
CAP 316 Combat Trauma		
CAP 336 Counseling Military Veterans		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 414 Crisis Communication		
COM 420 Rhetoric and Community Advocacy		
HST 302 Topic: War and Political Thought		
HST 302 Topic: Women, War and Peace		
HST 306 Topic: World War II		
HST 340 American Military History (HUAD)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 372 Modern Middle East (GCSI)		
HST 456 The Vietnam War (HUAD)		
IAP 307 Art and War (GCSI)		
ISS 428 Religion and Global Violence (GCSI)		
ISS 441 Conflict and Conflict Resolution		
ISS 456 Culture, Conflict and War		
JST 346 Israeli Wars in Israeli Movies		
MCO 494 Topic: War and Media		
MVS 376 Writing a Personal History		
MVS 394 Special Topics		
MVS 395 Combat in Film		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		

Requirement	Minimum Grade	Credit Hours
MVS 494 Special Topics		
PAF 302 Public Service Research Methods		
POS 310 American National Government (AMIT)		
POS 316 American Political Institutions (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 346 Problems of Democracy (HUAD)		
POS 350 Comparative Politics (GCSI)		
POS 360 World Politics (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 378 / **REL 378 Religion, War and Peace (CIVI)**		
POS 414 Political History and Leadership		
POS 426 Elements of Public Policy		
POS 467 International Security (GCSI)		
SGS 394 Topic: Gender and Armed Conflict		

Internship

MVS 484 Internship All students must complete an internship and should review their internship options, including virtual, with the CISA internship coordinator. Prerequisite courses may be needed in order to complete the requirements of this certificate.	C	3

Notes

Prerequisite courses may be needed in order to complete the

requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Physics and Mathematical Concepts of Engineering (LAPHYBA and LAMACECERT)

Program description:
Physics is concerned with the nature, structure and interactions of matter and radiation. The Bachelor of Arts program in physics is a flexible and efficient option for students who are interested in a liberal arts degree that provides them a broad knowledge of physics. This degree program also is ideal for students seeking to complete two degrees, with physics as the second degree.

The program combines innovative learning methods with time-tested classroom and laboratory experiences for an education that is thorough in physics training and flexible enough to encourage interdisciplinary opportunities in areas such as chemistry, biology and materials science.

The certificate program in mathematical concepts of engineering is designed for students who seek a strong foundation in mathematics to support their interests in engineering. Combining a core foundation in the quantitative and analytical skills found in mathematics with related skills in engineering, the program provides students with a solid mathematical background well-suited for multiple career paths.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: Yes
First required math course: MAT 270 - Calc w/Analytic Geometry I
or MAT 265 Calculus for Engineers
Math intensity: Substantial

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates with a BA degree in physics may pursue such careers as:

- data analyst
- K--12 STEM teacher
- lab assistant
- patent scientist
- science writer
- technology support analyst

The certificate program in mathematical concepts of engineering complements many major programs of study. Graduates with this enhanced math background can become more marketable to employers.

Curriculum - Physics, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAPHYBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in Class Search.		
Major Core		
PHY 150 Physics I (SCIT) OR **PHY 121 University Physics I: Mechanics (SCIT)** AND **PHY 122 University Physics Laboratory I (SCIT)**	C	4
PHY 151 Physics II (SCIT) OR **PHY 131 University Physics II: Electricity and Magnetism (SCIT)** AND **PHY 132 University Physics Laboratory II (SCIT)**	C	4
PHY 201 Mathematical Methods in Physics I (MATH)	C	3
PHY 252 Physics III (SCIT) OR **PHY 241 University Physics III** AND **PHY 202**	C	4

Requirement	Minimum Grade	Credit Hours
Programming for Physicists		
PHY 302 Mathematical Methods in Physics II	C	3
PHY 310 Classical Particles, Fields, and Matter I	C	3
PHY 311 Classical Particles, Fields, and Matter II	C	3
PHY 314 Quantum Physics I	C	3

Major Electives

Upper Division Physics Electives	C	6
PHY 315 Quantum Physics II		
PHY 333 Electronic Circuits and Measurements		
PHY 334 Advanced Laboratory I		
PHY 361 Introductory Modern Physics		
PHY 432 Computational Methods in Physics		
PHY 452 Physical Optics		
PHY 462 Particle and Nuclear Physics		
PHY 480 Methods of Teaching Physics		
PHY 481 Materials Physics I		
PHY 494 Special Topics		
PHY 495 Project Research		
PHY 498 Pro-Seminar		

Requirement	Minimum Grade	Credit Hours
Courses other than those in the course list must be approved by the Department of Physics academic advisor.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a Second Language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

Additional Requirements

CHM 113 General Chemistry I (SCIT)	C	4
MAT 270 Calculus with Analytic Geometry I (MATH) OR **MAT 265 Calculus for Engineers I (MATH)**	C	3 - 4
MAT 271 Calculus with Analytic Geometry II (MATH) OR **MAT 266 Calculus for Engineers II (MATH)**	C	3 - 4
MAT 272 Calculus with Analytic Geometry III (MATH) OR **MAT 267 Calculus for Engineers III (MATH)**	C	3 - 4

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar

required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree will enroll in LIA 101. Students enrolled in an online degree will enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

PHY 191 will count as a lower-division elective credit and is recommended for students enrolled in a campus immersion degree. Students should speak with an academic advisor about

how the credits will fit into their total credit hours before enrollment.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. More information is available at: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Mathematical Concepts of Engineering, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAMACECERT

Minimum credit hours: 21

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The mathematical concepts of engineering certificate requires a minimum of 21 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.		

Required Courses

IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
MAT 266 Calculus for Engineers II (MATH) **or** **MAT 271 Calculus with Analytic Geometry II (MATH)**	C	3
MAT 267 Calculus for Engineers III (MATH) **or** **MAT 272 Calculus with Analytic Geometry III (MATH)**	C	3
MAT 275 Modern Differential Equations (MATH) **or** **MAT 274 Elementary Differential Equations (MATH)**	C	3
MAT 343 Applied Linear Algebra **or** **MAT 342 Linear Algebra**	C	3

Requirement	Minimum Grade	Credit Hours
MAT 343 and STP 420 must be completed with courses offered by the School of Mathematical and Statistical Sciences.		
STP 420 Introductory Applied Statistics (QTRS)	C	3

Elective (choose one)

Upper Division Mathematical Concepts of Engineering Electives

DAT 301 Exploring Data in R and Python	C	3
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
IEE 470 Stochastic Operations Research		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Political Science and Political History and Leadership (LAPOSBA and LAPTLCERT)

Program description:
The Bachelor of Arts program in political science uncovers politics and policy at the local, national and global levels. The program aims to provide students with the tools and skills they need to link theory with current problems and to produce well-rounded learners with strong research and writing skills.

Students study how citizens interact with their governments and how governments at all levels formulate policies to serve, or not serve, their citizens. They explore innovative approaches to today's emerging political challenges, such as those seen in elections and lobbying, and the international issues of terrorism, diplomacy and empowerment.

The certificate program in political history and leadership provides students with a strong foundation in the history of politics and political thought, with a special emphasis on the role of leadership and citizenship. Students come to understand the complexities of real decision-making beyond the abstractions. The program prepares students for leadership in their careers.

Required courses combine academic study and mentoring contact with political, media and business leaders from the wider Phoenix area and Arizona communities, while electives drawn from a variety of disciplines are used to broaden the scope of emphasis.

The program offers scholarship and internship or job placement opportunities.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates develop the skills to analyze and interpret the significance and dynamics of political events and governmental processes. This knowledge, combined with related skills, equips them for success in political or governmental careers, law school, graduate study, business and the nonprofit sector. Many program graduates have found positions in:

- the courts and judicial administration
- foreign service organizations
- legislative staff organizations
- lobbying and advocacy groups
- local and national media organizations
- local, national and global nonprofit organizations
- multinational corporations
- national, state and local government agencies
- political consulting
- research institutions

In addition, some graduates have gone on to other top-tier graduate and professional schools. These students have found a variety of employment opportunities in:

- communication
- education
- foreign service
- journalism
- law
- political science
- public service

Graduates become more marketable to employers and advance their career options when they have complemented their major program of study with this specialization in political history and leadership.

Graduates with this certificate often pursue employment as military officers, governor's office staff, members of congress, city council officials, county prosecutors, financial advisors and campaign strategists. Advanced degrees or certifications may be required for academic, clinical or other positions.

Curriculum - Political Science, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAPOSBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.		
POS 110 American Government and Politics (AMIT) OR **POS 150 Comparative Government (GCSI)** **or** **POS 160 Global Politics (GCSI)** POS 310, POS 350, and POS 360 can substitute for POS 110, POS 150 AND POS 160 and are recommended for transfer students.	C	6
POS 210 Political Ideologies (CIVI)	C	3
POS 301 Empirical Political Inquiry (SOBE)	C	3
Upper Division Political Science Career Requirement **POS 304 Professional Career Development** **POS 484 Topic: Arizona State Legislative Internship** **POS 484 Topic: ASU World Innovators**	C	3

Requirement	Minimum Grade	Credit Hours
POS 484 Topic: Capital Scholars Undergrad		
POS 484 Internship		
POS 484 Topic: Washington DC Apprenticeship		
POS 495 Jr. Fellows		
Upper Division **POS Elective**	C	9
POS Elective	C	6
Maximum of six hours of POS 484 and three hours of POS 499 (Individualized Instruction) may be applied toward the major.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

Additional Requirements

Students must complete 12 credit hours in courses drawn from related areas. Courses from the subjects listed below may be used.

Upper Division Related Area	C	6
AES Elective		
AFR Elective		
AIS Elective		
APA Elective		
ASB Elective		
ASM Elective		
COM Elective		
ECN Elective		
FAS Elective		
GCU Elective		
GPH Elective		
HST Elective		
JUS Elective		
MIS Elective		
PHI Elective		
PSY Elective		
REL Elective		
SGS Elective		

SOC Elective

TCL Elective

WST Elective

Related Area	C	6

AES Elective

AFR Elective

AIS Elective

APA Elective

ASB Elective

ASM Elective

COM Elective

ECN Elective

FAS Elective

GCU Elective

GPH Elective

HST Elective

JUS Elective

MIS Elective

PHI Elective

PSY Elective

REL Elective

SGS Elective

SOC Elective

TCL Elective

WST Elective

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Political History and Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAPTLCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires 15 credit hours, of which at least 12 must be upper division. At least six upper-division hours must be completed in courses offered by The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search. All courses must be completed in residence at ASU and with a grade of "C" (2.00 on a 4.00 scale) or higher.		
HST 112 Foundations of Democracy (CIVI) **or** **POS 112 Foundations of Democracy (CIVI)**	C	3
HST 414 Political History and Leadership **or** **POS 414 Political History and Leadership**	C	3
Upper Division Elective Courses	C	9
AFR 330 / **JUS 330 Survey of African American Politics**		
CEL 307 Reason and Revelation: Medieval Political Thought		
CEL 308 Liberty and Equality: Early Modern Political Thought (CIVI)		
CEL 334 Tocqueville's Democracy in America		
CEL 335 Lincoln: Rhetoric, Thought, Statesmanship (HUAD)		
CEL 345 Modern Economic Classics		

Requirement	Minimum Grade	Credit Hours
CEL 350 / PHI 350 Philosophy, Politics and Economics (SOBE)		
CEL 351 / ECN 304 Classical to Modern Economic Thought		
CEL 352 Debating Capitalism (SOBE)		
CEL 371 Classical Political Statecraft		
CEL 375 Politics and Leadership in the Age of Revolutions, 1776-1826		
HST 302 Topic: History of Money		
HST 306 Topic: American Political Conspiracy		
HST 306 Topic: Civil Rights to Black Lives Matter		
HST 306 Topic: Debating American Liberty		
HST 306 Topic: Jacksonian America: Pwer & Politics in US 1828-61		
HST 306 Topic: Liberal Revolution		
HST 306 Topic: The Civil War in Global Perspective		
HST 306 Topic: The U.S. Presidency		
HST 315 Political History of the U. S.		
HST 317 / POS 317 History of Postwar U.S. Conservatism		
HST 321 Constitutional History/US to 1865		
HST 322 Constitutional History of the United States Since 1865		
HST 323 / AFR 335 / TCL 335 Historical Studies in Race, Crime, and the Law		
HST 327 Women in U.S. History, 1600 to 1880 (HUAD)		
HST 328 Women in U.S. History, 1880-1980 (HUAD)		
HST 334 / AFR 364 African American History Since 1865 (HUAD)		

Requirement	Minimum Grade	Credit Hours
HST 354 Revolutionary Europe (GCSI)		
HST 356 Europe since 1945		
HST 370 Eastern Europe in Transition		
HST 374 / LAT 374 / SLC 374 Roman History II: The Roman Empire (GCSI)		
HST 405 Colonial American History to 1763		
HST 406 American Revolution/1763-1789		
HST 407 Early U.S. Republic/1789-1850		
HST 408 Civil War and Reconstruction (HUAD)		
HST 412 Contemporary U.S., 1973- Present		
HST 415 Debating the Constitution		
HST 426 The British Empire		
HST 427 French Revolution/Napoleonic Era		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 439 Athenian Democracy (CIVI)		
PHI 307 Philosophy of Law (AMIT)		
PHI 328 History of Ancient Philosophy (GCSI)		
PHI 329 History of Modern Philosophy (GCSI)		
PHI 335 History of Ethics (GCSI)		
PHI 336 Social and Political Philosophy		
PHI 347 Philosophical Theories of Constitutional Law		
PHI 401 Rationalism		
PHI 402 Empiricism		

Requirement	Minimum Grade	Credit Hours
POS 310 American National Government (AMIT)		
POS 313 The Congress (AMIT)		
POS 314 The American Presidency (AMIT)		
POS 315 The Supreme Court		
POS 316 American Political Institutions (AMIT)		
POS 332 American Political Parties		
POS 340 History of Political Philosophy I		
POS 341 History of Political Philosophy II		
POS 342 Political Theory		
POS 346 Problems of Democracy (HUAD)		
POS 352 European Democracies		
POS 356 European Union (GCSI)		
POS 417 Arizona Politics		
POS 435 Women and Politics (SOBE)		
POS 442 American Political Thought (HUAD)		
POS 470 Law and the Political Order		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		
POS 475 Morality and Politics		
POS 485 Political Economy (SOBE)		
REL 388 / POS 388 Religion, Ethics, and International Politics (CIVI)		
WST 440 Politics of Women's Health (CIVI)		

Requirement	Minimum Grade	Credit Hours
Additional upper-division courses with relevant content may be used with the approval of the certificate co-directors.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Not all courses for this program are available every term. Students should consult the class schedule prior to each term to confirm course availability.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Psychology and Cross-Sector Leadership (LAPGSBA and PPCSLDCERT)

Program description:
The Bachelor of Arts program in psychology offers students a deep understanding of human and animal behavior. Alongside distinguished faculty, students explore topics such as stress, emotions, conflict and the pivotal role of body image in shaping identity.

What sets this program apart is its robust support network that connects students to an engaged community of alumni. Internships complement classroom learning and provide practical experience that bridges psychology education with careers in various areas.

The program's rigorous curriculum hones students' practical skills in writing and public speaking, enabling them to apply psychological concepts and principles across various fields.

A foundation in psychology empowers students for personal and professional growth, paving the way for success in work, relationships and family roles.

The certificate program in cross-sector leadership provides a comprehensive overview of leading solutions to complex social challenges by integrating the public, private, nonprofit and military sectors.

Students engage in a systems-thinking approach to challenges faced by local and global communities, explore the diverse characteristics and motives of each sector in engaging in cross-sector collaborations, and master processes to formalize such partnerships. Students study values-based leadership and how individual, organizational and sector values can drive a leader's ability to act. Students gain leadership skills, such as leading change within and between organizations across multiple sectors; and they learn to use human-centered design, social entrepreneurship and other approaches when tackling community challenges.

Students end the program with a thesis or applied project that integrates the theories, procedures and concepts learned in the certificate courses with experiences from their internships in each sector.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 119 - Finite Mathematics
or MAT 170 Pre-Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
The BA program in psychology empowers graduates with a versatile skill set encompassing analytical thinking, effective communication, teamwork and leadership. Graduates are well-prepared for a wide array of career paths, including roles in law, business, health care and the helping professions, including social work and counseling. Graduates are also positioned to excel in competitive professional graduate degree programs in these areas.

Students can advance their career options with an undergraduate certificate.

Graduates of the certificate in cross-sector leadership have acquired a beneficial knowledge of cross-sector collaboration, advanced leadership skills, and an understanding of how to use these. These transferrable skills complement students' major program of study and may make them more marketable to employers.

Curriculum - Psychology, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAPGSBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Foundations of Psychology

PSY 101 Introduction to Psychology (SOBE)	C	3
PSY 230 Introduction to Statistics (QTRS)	C	3
PSY 290 Research Methods (SCIT)	C	4

Breadth within Psychology

Students must complete one course from four of the five Breadth categories in the course list below (four courses total). Categories are Cognitive/Learning, Developmental, Personality/Mental Health, Physiological, and Social.

Requirement	Minimum Grade	Credit Hours
Upper Division Breadth within Psychology Courses		
Cognitive/Learning		
PSY 320 Learning and Motivation		
PSY 323 Sensation and Perception		
PSY 324 Memory and Cognition		
NEU 323 Neuroscience of Perception		
NEU 327 Neuroscience of Learning		
Developmental		
PSY 341 Developmental Psychology (SOBE)	C	12
Personality/Mental Health		
PSY 315 Personality Theory and Research (SOBE)		
PSY 366 Psychological Disorders (SOBE)		
Physiological		
PSY 325 Physiological Psychology		
Social		
PSY 350 Social Psychology (SOBE)		
PSY 351 Honors Social Psychology		

Depth within Psychology

Requirement	Minimum Grade	Credit Hours
Students must complete two courses from the course list below. NOTE: PSY 498 Pro-Seminar must be offered by The College of Liberal Arts and Sciences - Department of Psychology.		
400-Level Depth	C	6
PSY 400 Topics in Neuroscience		
PSY 414 History of Psychology		
PSY 420 Analysis of Behavior		
PSY 424 Genetic Psychology		
PSY 425 Biological Bases of Behavior		
PSY 430 Industrial Psychology		
PSY 432 Embodied Cognition		
PSY 437 Human Factors		
PSY 441 Cognitive Development		
PSY 443 Child and Adolescent Psychological Disorders (SOBE)		
PSY 444 Adolescent Psychology and Psychopathology		
PSY 446 Social Development		
PSY 447 Psychology of Aging		
PSY 451 Stereotyping, Prejudice, and Discrimination		
PSY 458 Group Dynamics		
PSY 461 Interpersonal Influence		

Requirement	Minimum Grade	Credit Hours
PSY 462 Health Psychology		
PSY 465 Psychology of Stress and Coping		
PSY 468 Psychology and Law		
PSY 470 Psychopharmacology		
PSY 471 Psychological Testing		
PSY 472 Clinical Psychology		
PSY 498 Pro-Seminar		
NEU 426 Neuroanatomy		
NEU 433 Behavioral Neuroendocrinology		
NEU 456 Visual Cognitive Neuroscience		
NEU 460 Brain and Emotion		
NEU 494 Topic: Biotechnology Viruses as Tools		
NEU 494 Topic: Cognitive Neuroscience of Memory		
NEU 494 Topic: Data Analysis in Neuroscience		
NEU 494 Topic: Neural Basis of Learning and Memory		
NEU 494 Topic: Neuroeconomics		
NEU 494 Topic: Neuroscience of Social Cognition		
NEU 494 Topic: Psychiatric Medications		
NEU 494 Topic: The Social Brain		
NEU 494 Topic: Themes in Cognitive Neuroscience		

Requirement	Minimum Grade	Credit Hours
Psychology Major Electives		
Upper Division **PSY Elective** OR Upper Division **NEU Elective** No more than six hours (total) from the following course list may be used to fulfill the major elective requirement: PSY 384, PSY 399, PSY 484, PSY 492, PSY 493, PSY 499	C	6
PSY Elective OR **NEU Elective**	C	3
The College Requirements		
Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a Second Language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16
Additional Requirements		
MAT 119 Finite Mathematics (MATH) OR **MAT 170 Precalculus (MATH)**	C	3
Foundations of Behavior		

Foundations of Behavior: Students must complete at least 12 credit hours of coursework from disciplines related to psychology. Maximum 9 credit hours can be lower division. Select courses from ASB, ASM, BIO, GCU, HPS, PHI, SOC.

Upper Division Foundations of Behavior		
ASB Elective	C	3
ASM Elective		
BIO Elective		
GCU Elective		
HPS Elective		
PHI Elective		
SOC Elective		
Foundations of Behavior		
ASB Elective	C	9
ASM Elective		
BIO Elective		
GCU Elective		
HPS Elective		
PHI Elective		
SOC Elective		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
LIA 101 Student Success in The College of Liberal Arts and Sciences **OR** **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Cross-Sector Leadership, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPCSLDCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in cross-sector leadership is a requirement for, and is limited to, participants in the Public Service Academy's Next Generation Service Corps, a four-year leadership development track that engages future civilian leaders in the public, private and nonprofit sectors to engage in collaboration and change in the context of social challenges in which they hold interest. Students are required to demonstrate forward academic progress to maintain enrollment in the certificate as well as the Next Generation Service Corps. ROTC students also may pursue the certificate.		
PAF 215 NGSC Community Impact Lab	C	3
PAF 311 Leadership and Change (SOBE)	C	3
PAF 315 Cross-Sector Collaboration (CIVI)	C	3
PAF 415 Social Entrepreneurship	C	3
PAF 394 Topic: NGSC Leadership Instruction **or** **PAF 421 Leadership Capstone**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Psychology and Russian and East European Studies (LAPGSBA and LAREECERT)

Program description:
The Bachelor of Arts program in psychology offers students a deep understanding of human and animal behavior. Alongside distinguished faculty, students explore topics such as stress, emotions, conflict and the pivotal role of body image in shaping identity.

What sets this program apart is its robust support network that connects students to an engaged community of alumni. Internships complement classroom learning and provide practical experience that bridges psychology education with careers in various areas.

The program's rigorous curriculum hones students' practical skills in writing and public speaking, enabling them to apply psychological concepts and principles across various fields.

A foundation in psychology empowers students for personal and professional growth, paving the way for success in work, relationships and family roles.

The certificate program in Russian and East European studies encourages students to develop competency in Russian or another East European or Eurasian language as well as the culture and politics of the region.

Coursework leading to the certificate is offered by outstanding faculty members in diverse fields of study including architecture, economics, film studies, geography, history, international business, literature, music, political science and religious studies.

A one-credit, student-led capstone course is completed in the student's junior or senior year; with the support of an advisor, students can write a research paper on the Russian and East European studies topic of their choice, prepare a writing sample or a graduate school application, or work on a creative project.

A student with a major in any school or department may pursue this certificate and develop a personalized plan of study in cooperation with an advisor at The Melikian Center: Russian, Eurasian and East European Studies.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 119 - Finite Mathematics
or MAT 170 Pre-Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
The BA program in psychology empowers graduates with a versatile skill set encompassing analytical thinking, effective communication, teamwork and leadership. Graduates are well-prepared for a wide array of career paths, including roles in law, business, health care and the helping professions, including social work and counseling. Graduates are also positioned to excel in competitive professional graduate degree programs in these areas.

Students who complete the Russian and East European studies certificate enhance their prospects for highly competitive study abroad scholarships, including Fulbright, Boren and Critical Language Scholarship Program, and for selective graduate programs. Certificate holders may also qualify for distinct internships and entry-level government employment opportunities at agencies such as the U.S. Department of State and the National Security Agency.

Curriculum - Psychology, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LAPGSBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Foundations of Psychology

PSY 101 Introduction to Psychology (SOBE)	C	3
PSY 230 Introduction to Statistics (QTRS)	C	3
PSY 290 Research Methods (SCIT)	C	4

Breadth within Psychology

Students must complete one course from four of the five Breadth categories in the course list below (four courses total). Categories are Cognitive/Learning, Developmental, Personality/Mental Health, Physiological, and Social.

Requirement	Minimum Grade	Credit Hours
Upper Division Breadth within Psychology Courses		
Cognitive/Learning		
PSY 320 Learning and Motivation		
PSY 323 Sensation and Perception		
PSY 324 Memory and Cognition		
NEU 323 Neuroscience of Perception		
NEU 327 Neuroscience of Learning		
Developmental		
PSY 341 Developmental Psychology (SOBE)	C	12
Personality/Mental Health		
PSY 315 Personality Theory and Research (SOBE)		
PSY 366 Psychological Disorders (SOBE)		
Physiological		
PSY 325 Physiological Psychology		
Social		
PSY 350 Social Psychology (SOBE)		
PSY 351 Honors Social Psychology		

Depth within Psychology

Requirement	Minimum Grade	Credit Hours
Students must complete two courses from the course list below. NOTE: PSY 498 Pro-Seminar must be offered by The College of Liberal Arts and Sciences - Department of Psychology.		
400-Level Depth	C	6
PSY 400 Topics in Neuroscience		
PSY 414 History of Psychology		
PSY 420 Analysis of Behavior		
PSY 424 Genetic Psychology		
PSY 425 Biological Bases of Behavior		
PSY 430 Industrial Psychology		
PSY 432 Embodied Cognition		
PSY 437 Human Factors		
PSY 441 Cognitive Development		
PSY 443 Child and Adolescent Psychological Disorders (SOBE)		
PSY 444 Adolescent Psychology and Psychopathology		
PSY 446 Social Development		
PSY 447 Psychology of Aging		
PSY 451 Stereotyping, Prejudice, and Discrimination		
PSY 458 Group Dynamics		
PSY 461 Interpersonal Influence		

Requirement	Minimum Grade	Credit Hours
PSY 462 Health Psychology		
PSY 465 Psychology of Stress and Coping		
PSY 468 Psychology and Law		
PSY 470 Psychopharmacology		
PSY 471 Psychological Testing		
PSY 472 Clinical Psychology		
PSY 498 Pro-Seminar		
NEU 426 Neuroanatomy		
NEU 433 Behavioral Neuroendocrinology		
NEU 456 Visual Cognitive Neuroscience		
NEU 460 Brain and Emotion		
NEU 494 Topic: Biotechnology Viruses as Tools		
NEU 494 Topic: Cognitive Neuroscience of Memory		
NEU 494 Topic: Data Analysis in Neuroscience		
NEU 494 Topic: Neural Basis of Learning and Memory		
NEU 494 Topic: Neuroeconomics		
NEU 494 Topic: Neuroscience of Social Cognition		
NEU 494 Topic: Psychiatric Medications		
NEU 494 Topic: The Social Brain		
NEU 494 Topic: Themes in Cognitive Neuroscience		

Requirement	Minimum Grade	Credit Hours
Psychology Major Electives		
Upper Division **PSY Elective** OR Upper Division **NEU Elective** No more than six hours (total) from the following course list may be used to fulfill the major elective requirement: PSY 384, PSY 399, PSY 484, PSY 492, PSY 493, PSY 499	C	6
PSY Elective OR **NEU Elective**	C	3
The College Requirements		
Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a Second Language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16
Additional Requirements		
MAT 119 Finite Mathematics (MATH) OR **MAT 170 Precalculus (MATH)**	C	3
Foundations of Behavior		

Foundations of Behavior: Students must complete at least 12 credit hours of coursework from disciplines related to psychology. Maximum 9 credit hours can be lower division. Select courses from ASB, ASM, BIO, GCU, HPS, PHI, SOC.

Upper Division Foundations of Behavior		
ASB Elective	C	3
ASM Elective		
BIO Elective		
GCU Elective		
HPS Elective		
PHI Elective		
SOC Elective		
Foundations of Behavior		
ASB Elective	C	9
ASM Elective		
BIO Elective		
GCU Elective		
HPS Elective		
PHI Elective		
SOC Elective		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
LIA 101 Student Success in The College of Liberal Arts and Sciences **OR** **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Russian and East European Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAREECERT

Minimum credit hours: 19

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate in Russian and East European studies requires a minimum of 19 credit hours, of which at least three must be a language course and at least 12 must be upper division. A grade of "C" (2.00 on a 4.00 scale) or higher is required in all courses used toward the certificate.		

Language Requirement

Students may complete one language course from BCS, PLC, ROM, or RUS, or they may complete the Albanian, Armenian, BCS (Bosnian/Croatian/Serbian), Kazakh, Macedonian, Persian, Polish, Russian, Tatar, Turkish, Ukrainian, and Uzbek courses offered by the Critical Languages Institute to fulfill the language requirement. See https://melikian.asu.edu/cli

Language Requirement	C	3 - 5
BCS 101 Elementary Serbo-Croatian		
BCS 102 Elementary Serbo-Croatian		
BCS 201 Intermediate Serbo-Croatian		
BCS 202 Intermediate Serbo-Croatian		

Requirement	Minimum Grade	Credit Hours
BCS 311 Bosnian/Croatian/Serbian Composition and Conversation I		
BCS 312 Bosnian/Croatian/Serbian Composition and Conversation II		
PLC 101 Elementary Polish		
PLC 102 Elementary Polish		
PLC 201 Intermediate Polish		
PLC 202 Intermediate Polish		
PLC 311 Advanced Polish I		
PLC 312 Advanced Polish II		
ROM 101 Elementary Romanian Language and Culture I		
ROM 102 Elementary Romanian Language and Culture II		
ROM 201 Intermediate Romanian Language and Culture I		
ROM 202 Intermediate Romanian Language and Culture II		
ROM 313 Romanian Composition and Conversation		
ROM 314 Romanian Composition and Conversation		
ROM 411 Advanced Spoken and Written Romanian I		
ROM 412 Advanced Spoken and Written Romanian II		
RUS 101 Elementary Russian I		
RUS 102 Elementary Russian II		
RUS 201 Intermediate Russian I		
RUS 202 Intermediate Russian II		
RUS 211 Conversational Russian I		
RUS 212 Conversational Russian II		

Requirement	Minimum Grade	Credit Hours
RUS 311 Russian Society I		
RUS 312 Russian Society II		
RUS 411 Russian Language, History and Culture I		
RUS 412 Russian Language, History and Culture II		

Native speakers of a language must complete four credit hours in a different language to fulfill this requirement.

Required Electives

Upper Division Required Electives	C	6
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 370 Eastern Europe in Transition		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
POS 352 European Democracies		

Requirement	Minimum Grade	Credit Hours
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		
RUS 323 Russian Literature and Revolution: The Twentieth Century		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		

Other HST 304 topics appropriate to the certificate's regional focus may be used with the approval of the certificate advisor. Courses shown that are not used to satisfy a Required Certificate Elective may be used as an Area-Related Elective.

Area-Related Electives

Area-Related Electives	C	3
ARC 330 World and Western Architecture for Nonmajors		
ARC 331 World and Western Architecture I		
ARC 332 World and Western Architecture II		
ASB 345 Culture and Society Transformation (GCSI)		
CEL 394 Topic: War&Culture Cntrl Europe: Empire or Lib Democracy		
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
CEL 494 Topic: Putin and Russia's Dead Souls		
COM 691 Topic: Strategic Communication and Disinformation		
ENG 332 Topic: Jewish Writers & The Cold War		
ENG 333 Topic: American Jewish Literature during the Cold War		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		

Requirement	Minimum Grade	Credit Hours
ENG 435 Literatures and Cultures of Immigration and Diaspora		
GCU 325 Geography of Europe (GCSI)		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
GSC 598 Topic: Post-Soviet Geopolitics		
HON 394 Topic: Amazons to Fighter Pilots:HistoryofWarSex&Gender		
HON 394 Topic: Archaeology of the Silk Roads		
HON 394 Topic: Dictatorship & the Twentieth Century		
HON 394 Topic: Love,Hospitality,Belonging:LivesBetweenEurope&Asia		
HON 394 Topic: Mummies and Marauders, Merchants and Monks		
HON 394 Topic: Points of Entry:Space&Place in Eurasian Borderland		
HON 394 Topic: The Cold War World:Conflict,Vitriol,&Globalization		
HST 302 Topic: War and Political Thought		
HST 302 Topic: WWII in Comparative Perspective		
HST 304 Topic: A Survey of Soviet History		
HST 304 Topic: Black Death:Pandemic Disease in the Medieval World		
HST 304 Topic: Fascism: Italy, Germany, and Beyond		
HST 304 Topic: Nazi Germany		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		

Requirement	Minimum Grade	Credit Hours
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 304 / JST 304 Topic: Exiles, Migrants, Refugees in Jewish History		
HST 350 Later Middle Ages (GCSI)		
HST 354 Revolutionary Europe (GCSI)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 356 Europe since 1945		
HST 359 Jewish History from 1492 to 1948		
HST 369 History and Memory of the Holocaust		
HST 370 Eastern Europe in Transition		
HST 429 Modern Germany		
HST 430 The Ottoman Empire in the Classical Period		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
HST 454 / REL 454 / FOR 454 History of Genocide (GCSI)		
HST 460 World War II (HUAD)		
HST 598 / WWS 598 Topic: Eastern Front: War of Annihilation		
IDS 313 Topic: Identity and Conflict in Europe		
IGD 598 Topic: Global Capitalism and Inclusive Development		

Requirement	Minimum Grade	Credit Hours
JHR 501 Proseminar in Social Justice and Human Rights		
JHR 598 Topic: Social Inequality		
JUS 374 The Holocaust, Genocide, and Human Rights		
LIA 194 Topic: DiscSem: The Law of Armed Conflict & War Crimes		
MHL 445 Music of the Silk Road (HUAD)		
MHL 598 Topic: Shostakovich, his life and times		
POS 305 Topic: Conflict and Film (HUAD) **or** POS 305 Politics and Film (HUAD)		
POS 352 European Democracies		
POS 394 Topic: Gender and Armed Conflict		
POS 394 Topic: Model UN		
POS 394 Topic: Violence and Politics		
POS 485 Political Economy (SOBE)		
POS 486 International Political Economy (GCSI)		
POS 494 / SGS 494 Topic: Democratic Erosion		
POS 598 Topic: Politics of Authoritarian Rule		
REL 301 Comparative Mysticism (HUAD)		
REL 365 Islamic Civilization (HUAD)		
REL 366 Islam in the Modern World (GCSI)		
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)		
ROM 343 Culture and Society Transformation (GCSI)		

Requirement	Minimum Grade	Credit Hours
RUS 141 / HST 141 / SLC 141 Russian Civilization: From Tsars to Putin (GCSI)		
RUS 241 / HST 241 / SLC 241 / HON 294 Topic: Russian Pop Culture: Protest and Propaganda		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		
RUS 323 Russian Literature and Revolution: The Twentieth Century		
RUS 394 Topic: Russian Grammar and Lexicology		
RUS 421 Pushkin		
RUS 423 Dostoevsky and Tolstoy (HUAD)		
RUS 425 Chekhov and Russian Drama (HUAD)		
RUS 430 Russian Short Story (HUAD)		
RUS 439 / SLC 439 Art in Exile: VladÃmir VladÃmirovich Nabokov		
RUS 440 Russian Mass Media		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		
SGS 370 Geopolitics (GCSI)		
SGS 394 Topic: Greece and Macedonia		
SGS 394 Topic: Politics of Global Justice		
SGS 494 Topic: International Criminal Tribunals & Global Security		
SLC 202 Exploring Cultures: Words, Images, Stories (HUAD)		

Requirement	Minimum Grade	Credit Hours
SLC 212 Language and Culture Clash (SOBE)		
SLC 294 / RUS 294 / SLV 294 Topic: Eastern European Science Fiction		
SLC 304 / SLV 304 Digital Humanities for Language Majors		
SLC 429 / CEL 429 Topic: Politics & Culture in European Short Fiction or SLC 598 Topic: Politics and Culture in European Short Fiction or ENG 429 Topic: Politics & Culture in European Short Fiction		
SLC 442 / ROM 442 Dracula and Vampire Lore (HUAD)		
SLC 494 Topic: Society and Culture in Modern Europe		
SLV 440 History of Slavic Languages (SOBE)		
Upper Division Area-Related Electives	C	6
ARC 330 World and Western Architecture for Nonmajors		
ARC 331 World and Western Architecture I		
ARC 332 World and Western Architecture II		
ASB 345 Culture and Society Transformation (GCSI)		
CEL 394 Topic: War&Culture Cntrl Europe: Empire or Lib Democracy		
CEL 394 Topic: Russian Political Thought from Peter I to Putin		
CEL 494 Topic: Putin and Russia's Dead Souls		
COM 691 Topic: Strategic Communication and Disinformation		
ENG 332 Topic: Jewish Writers & The Cold War		
ENG 333 Topic: American Jewish Literature during the Cold War		
ENG 429 / SLC 429 / CEL 429 / SLC 598 Topic: What is Europe?		

Requirement	Minimum Grade	Credit Hours
ENG 435 Literatures and Cultures of Immigration and Diaspora		
GCU 325 Geography of Europe (GCSI)		
GCU 426 Geography of Russia and Surroundings		
GSC 509 Emerging Technologies and Global Security		
GSC 598 Topic: Post-Soviet Geopolitics		
HON 394 Topic: Amazons to Fighter Pilots:HistoryofWarSex&Gender		
HON 394 Topic: Archaeology of the Silk Roads		
HON 394 Topic: Dictatorship & the Twentieth Century		
HON 394 Topic: Love,Hospitality,Belonging:LivesBetweenEurope&Asia		
HON 394 Topic: Mummies and Marauders, Merchants and Monks		
HON 394 Topic: Points of Entry:Space&Place in Eurasian Borderland		
HON 394 Topic: The Cold War World:Conflict,Vitriol,&Globalization		
HST 302 Topic: War and Political Thought		
HST 302 Topic: WWII in Comparative Perspective		
HST 304 Topic: A Survey of Soviet History		
HST 304 Topic: Black Death:Pandemic Disease in the Medieval World		
HST 304 Topic: Fascism: Italy, Germany, and Beyond		
HST 304 Topic: Nazi Germany		
HST 304 Topic: Revolutionary Russia: Communism, War and Dissent		

Requirement	Minimum Grade	Credit Hours
HST 304 Topic: Topic: Totalitarianism: Hitler & Stalin.		
HST 304 Topic: Russia & Ukraine: Understanding the Crisis		
HST 304 Topic: Russia: Empire of the Tsars, 1650-1917		
HST 304 Topic: Stalin to Putin		
HST 304 Topic: Stalinism: Society & Culture in Sov Un, 1924-1953		
HST 304 / JST 304 Topic: Exiles, Migrants, Refugees in Jewish History		
HST 350 Later Middle Ages (GCSI)		
HST 354 Revolutionary Europe (GCSI)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 356 Europe since 1945		
HST 359 Jewish History from 1492 to 1948		
HST 369 History and Memory of the Holocaust		
HST 370 Eastern Europe in Transition		
HST 429 Modern Germany		
HST 430 The Ottoman Empire in the Classical Period		
HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)		
HST 436 Rise & Fall of Soviet Communism		
HST 454 / REL 454 / FOR 454 History of Genocide (GCSI)		
HST 460 World War II (HUAD)		
HST 598 / WWS 598 Topic: Eastern Front: War of Annihilation		
IDS 313 Topic: Identity and Conflict in Europe		
IGD 598 Topic: Global Capitalism and Inclusive Development		

Requirement	Minimum Grade	Credit Hours
JHR 501 Proseminar in Social Justice and Human Rights		
JHR 598 Topic: Social Inequality		
JUS 374 The Holocaust, Genocide, and Human Rights		
MHL 445 Music of the Silk Road (HUAD)		
MHL 598 Topic: Shostakovich, his life and times		
POS 305 Topic: Conflict and Film (HUAD) **or** POS 305 Politics and Film (HUAD)		
POS 352 European Democracies		
POS 394 Topic: Gender and Armed Conflict		
POS 394 Topic: Model UN		
POS 394 Topic: Violence and Politics		
POS 485 Political Economy (SOBE)		
POS 486 International Political Economy (GCSI)		
POS 494 / SGS 494 Topic: Democratic Erosion		
POS 598 Topic: Politics of Authoritarian Rule		
REL 301 Comparative Mysticism (HUAD)		
REL 365 Islamic Civilization (HUAD)		
REL 366 Islam in the Modern World (GCSI)		
REL 379 Religion, Nationalism, and Ethnic Conflict (GCSI)		
REL 379 / SGS 343 Religion, Nationalism, and Ethnic Conflict (GCSI)		
ROM 343 Culture and Society Transformation (GCSI)		
RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel		

Requirement	Minimum Grade	Credit Hours
RUS 323 Russian Literature and Revolution: The Twentieth Century		
RUS 394 Topic: Russian Grammar and Lexicology		
RUS 421 Pushkin		
RUS 423 Dostoevsky and Tolstoy (HUAD)		
RUS 425 Chekhov and Russian Drama (HUAD)		
RUS 430 Russian Short Story (HUAD)		
RUS 439 / SLC 439 Art in Exile: VladÃmir VladÃmirovich Nabokov		
RUS 440 Russian Mass Media		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 341 Humanitarian Crisis and International Intervention		
SGS 344 Facing the Past: Truth, Memory, Denial After Atrocities		
SGS 370 Geopolitics (GCSI)		
SGS 394 Topic: Greece and Macedonia		
SGS 394 Topic: Politics of Global Justice		
SGS 494 Topic: International Criminal Tribunals & Global Security		
SLC 304 / SLV 304 Digital Humanities for Language Majors		
SLC 429 / CEL 429 Topic: Politics & Culture in European Short Fiction **or** SLC 598 Topic: Politics and Culture in European Short Fiction **or** ENG 429 Topic: Politics & Culture in European Short Fiction		
SLC 442 / ROM 442 Dracula and Vampire Lore (HUAD)		
SLC 494 Topic: Society and Culture in Modern Europe		

Requirement	Minimum Grade	Credit Hours
SLV 440 History of Slavic Languages (SOBE)		

Arranged honors theses and upper-division colloquia with Melikian Center faculty affiliates may also be used toward this requirement.

Capstone Project

LIA 485 REES Certificate Capstone In their junior or senior year, students will complete the 1-credit REES Certificate Capstone. This can be in the form of a reading course offered by the Melikian Center OR a project chosen in cooperation with a Melikian Center faculty affiliate. The project should represent an extended, research-based focus on some dimension of the region's languages, cultures, religions, histories, and/or politics. It may take the form of an extended research paper, honors thesis, translation project, research assistantship, or internship. Other courses may be used with the approval of the certificate advisor.	C	1

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Psychology and Working with Military Families (LAPGSBS and LAWWMFCERT)

Program description:
The Bachelor of Science program in psychology emphasizes the scientific study of human behavior, cognition and more. The program combines innovative learning methods with classroom and laboratory experiences for an education that encourages interdisciplinary opportunities.

Students gain a strong foundation in psychological theory and practice, honing research analysis and critical thinking skills. They engage with esteemed faculty, exploring human and animal behavior, and they learn to effectively interact with diverse groups across scientific interests and disciplines.

This program connects students to a robust support network, internships and engaged alumni.

Students in the working with military families certificate program complete academic coursework to enhance their knowledge of human development, marital and familial relationships, and family dynamics in the context of military culture.

Students learn about the complex challenges that military personnel, military families and veterans face, such as dealing with multiple deployments, war, combat, trauma and death. They study normative family processes, stress and coping with military culture.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 119 - Finite Mathematics
or MAT 170 Pre-Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates have diverse career options. They have gained foundational psychology knowledge that enhance their work, relationships and family roles. Graduates have a strong foundation for immediate entry into science-based career fields, such as health care or research and development in an academic or business environment.

Graduates are well positioned for a pathway into medical school. They are also well prepared for rewarding careers in pre-med and health fields as well as research and graduate study in psychology, health sciences, law and other graduate-level degree programs.

Graduates may be more marketable to employers and advance their career options when they complement their major with this undergraduate certificate specialization in working with military families.

Graduates understand and appreciate the similarities and differences between civilian and military culture, making them more inclusive coworkers, managers and community members with regard to the military community. Students who complete this undergraduate certificate often decide to pursue employment in health care, counseling, social work, sociology or education.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Psychology, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LAPGSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Foundations of Psychology

PSY 101 Introduction to Psychology (SOBE)	C	3
PSY 230 Introduction to Statistics (QTRS)	C	3
PSY 290 Research Methods (SCIT)	C	4

Breadth within Psychology

Students must complete one course from four of the five Breadth categories in the course list below (four courses total). Categories are Cognitive/Learning, Developmental, Personality/Mental Health, Physiological, and Social.

Requirement	Minimum Grade	Credit Hours
Upper Division Breadth within Psychology Courses		
Cognitive/Learning		
PSY 320 Learning and Motivation		
PSY 323 Sensation and Perception		
PSY 324 Memory and Cognition		
Developmental		
PSY 341 Developmental Psychology (SOBE)		
Personality/Mental Health	C	12
PSY 315 Personality Theory and Research (SOBE)		
PSY 366 Psychological Disorders (SOBE)		
Physiological		
PSY 325 Physiological Psychology		
Social		
PSY 350 Social Psychology (SOBE)		
PSY 351 Honors Social Psychology		

Depth within Psychology

Students must complete two courses from the course list below. NOTE: PSY 498 Pro-Seminar must be offered by The College of Liberal Arts and Sciences - Department of Psychology.

Requirement	Minimum Grade	Credit Hours
Upper Division Depth	C	6
NEU 426 Neuroanatomy		
NEU 433 Behavioral Neuroendocrinology		
NEU 456 Visual Cognitive Neuroscience		
NEU 460 Brain and Emotion		
NEU 494 Topic: Biotechnology Viruses as Tools		
NEU 494 Topic: Cognitive Neuroscience of Memory		
NEU 494 Topic: Data Analysis in Neuroscience		
NEU 494 Topic: Neural Basis of Learning and Memory		
NEU 494 Topic: Psychiatric Medications		
PSY 400 Topics in Neuroscience		
PSY 414 History of Psychology		
PSY 420 Analysis of Behavior		
PSY 424 Genetic Psychology		
PSY 425 Biological Bases of Behavior		
PSY 430 Industrial Psychology		
PSY 432 Embodied Cognition		
PSY 434 Cognitive Psychology		
PSY 437 Human Factors		
PSY 441 Cognitive Development		

Requirement	Minimum Grade	Credit Hours
PSY 443 Child and Adolescent Psychological Disorders (SOBE)		
PSY 444 Adolescent Psychology and Psychopathology		
PSY 446 Social Development		
PSY 447 Psychology of Aging		
PSY 451 Stereotyping, Prejudice, and Discrimination		
PSY 458 Group Dynamics		
PSY 461 Interpersonal Influence		
PSY 462 Health Psychology		
PSY 465 Psychology of Stress and Coping		
PSY 468 Psychology and Law		
PSY 470 Psychopharmacology		
PSY 471 Psychological Testing		
PSY 472 Clinical Psychology		
PSY 498 Pro-Seminar		

Psychology Major Electives

Upper Division **PSY Elective** **OR** Upper Division **NEU Elective** No more than six hours (total) from the following course list may be used to fulfill the major elective requirement: PSY 384, PSY 399, PSY 484, PSY 492, PSY 493, PSY 499	C	6

Requirement	Minimum Grade	Credit Hours
PSY Elective OR **NEU Elective**	C	3

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Upper Division Science and Society Elective	C	3
Science and Society Elective	C	3

Additional Requirements

MAT 119 Finite Mathematics (MATH) OR **MAT 170 Precalculus (MATH)**	C	3

Foundations of Behavior

Foundations of Behavior: Students must complete at least 12 credit hours of coursework from disciplines related to

psychology. Maximum 9 credit hours can be lower division. Select courses from ASB, ASM, BIO, GCU, HPS, PHI, SOC.

Upper Division Foundations of Behavior		
ASB Elective	C	3
ASM Elective		
BIO Elective		
GCU Elective		
HPS Elective		
PHI Elective		
SOC Elective		
Foundations of Behavior		
ASB Elective	C	9
ASM Elective		
BIO Elective		
GCU Elective		
HPS Elective		
PHI Elective		
SOC Elective		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Working with Military Families, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAWWMFCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate requires 18 credit hours. At least 12 credit hours must be completed at the upper-division level and a grade of "C" (2.00 on a 4.00 scale) or higher is required in all courses.		

Required Courses

CDE 232 Human Development (SOBE)	C	3
FAS 101 Personal Growth and Relationships (SOBE)	C	3
FAS 331 Modern Family Relationships (SOBE)	C	3
FAS 410 Military Family Systems in a Democracy	C	3
SOC 415 Families and Social Policy	C	3

Internship Requirement

FAS 484 Internship Students are required to complete a capstone internship project that includes a field work experience, a written integrative paper and an oral presentation.	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Psychology (Forensic Psychology) and Domestic Violence and Evidence-based Practice (ASPGSFPBA and PPDVEPCERT)

Program description:
Forensic psychology is the application of psychology to the law. The concentration in forensic psychology within the Bachelor of Science program in psychology combines general training in psychology and specialized coursework in criminal law, criminal behavior, the diagnosis and treatment of mental disorders, and legal decision-making.

When courts are faced with cases in which a psychology-related question arises, they may turn to psychologists for help. For example, psychologists might assist the court in understanding a criminal's mental state at the time of a crime or whether a particular jury might have been biased against a defendant based on his or her race. This is the realm of forensic psychology.

Students learn about the various roles of psychologists in the legal system, which helps them to discover which roles they might like to pursue through careers in mental health or criminal justice, or through graduate training.

All New College psychology programs have a quantitative research focus, equipping students with skills in critical thinking, statistical analysis and academic writing. The BS degree differs from the Bachelor of Arts degree in that it requires additional lab science coursework and advanced statistical training, both of which are increasingly important for destinations in research or clinical practice. The BA degree allows for exposure to a wider breadth of psychological and related topics through additional elective coursework. Both pathways provide a strong foundation for future graduate studies.

The certificate program in domestic violence intervention and victim advocacy provides students with the experience and knowledge they need to intervene safely and effectively on behalf of the survivors of gender-based violence, a vulnerable group that helping professionals are likely to encounter in all areas of practice. Those knowledgeable about the dynamics of intimate partner violence are better equipped to assist those suffering its negative physical and mental health consequences.

Evidence-based care is crucial in domestic violence settings. Certificate program students engage in service-based and classroom learning to understand the role of evidence-based interventions in promoting survivor safety and client empowerment.

Upon completion of the program, certificate holders become verified advocates for victims of domestic violence in the state of Arizona

BA At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: West Valley Western, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 119 - Finite Mathematics
or MAT 170 Precalculus or a higher level MAT course
Math intensity: Moderate

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Graduates of the BA program in psychology with a concentration in forensic psychology are prepared for careers in the criminal justice and mental health fields. Many careers in psychology require graduate training, and the program's graduates are prepared for master's degree and doctoral programs in legal, clinical and forensic psychology.

Graduates are prepared to work with domestic violence survivors. Prospective administrators, helping professionals and community activists possess the practical knowledge to implement interventions backed by evidence and develop the tools and networks that create change for survivors, families and communities.

Career examples include:
- domestic violence or lay legal advocate
- domestic violence support group facilitator
- shelter case manager

Curriculum - Psychology (Forensic Psychology), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: New College of Interdisciplinary Arts and Sciences
Plan Code: ASPGSFPBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from the New College of Interdisciplinary Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		

Psychology Core

PSY 101 Introduction to Psychology (SOBE)	C	3
PSY 230 Introduction to Statistics (QTRS)	C	3
PSY 290 Research Methods (SCIT)	C	4
Upper Division Cognitive Science Electives	C	6

- **PSY 320 Learning and Motivation**
- **PSY 323 Sensation and Perception**
- **PSY 324 Memory and Cognition**
- **PSY 325 Physiological Psychology**

Requirement	Minimum Grade	Credit Hours
PSY 360 Cognitive Science		
PSY 369 Biology of Human Sexuality		
PSY 394 Topic: Developmental Neuroscience		
PSY 434 Cognitive Psychology		
PSY 470 Psychopharmacology		
Upper Division Social and Developmental Psychology Electives		
PSY 315 Personality Theory and Research (SOBE)		
PSY 341 Developmental Psychology (SOBE)		
PSY 350 Social Psychology (SOBE)	C	3
PSY 441 Cognitive Development		
PSY 443 Child and Adolescent Psychological Disorders (SOBE)		

Forensic Psychology Concentration

CRJ 260 Criminal Law I: Introduction to Substantive Criminal Law	C	3
CRJ 309 Criminology (SOBE)	C	3
PSY 211 The Criminal Mind (SOBE)	C	3
PSY 366 Psychological Disorders (SOBE)	C	3
PSY 368 Forensic Psychology	C	3

Requirement	Minimum Grade	Credit Hours
PSY 467 Psychology of Criminal Investigation	C	3
PSY 468 Psychology and Law	C	3
PSY 474 Correctional Psychology	C	3
Upper Division Global and Civic Engagement Requirement: satisfied through completion of six credits of upper-division courses with a Global Communities, Societies and Individuals (GCSI) or Governance and Civic Engagement (CIVI) designation, in addition to the courses used to meet the university general studies requirements; or completion of three credits from an ASU-approved global education program. Adjustment to upper-division and elective hours is required if a lower-division global education course is used.	C	6
Mathematics Proficiency Requirement: all New College students in a Bachelor of Arts or Bachelor of Science degree program are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		

Interdisciplinary Requirements

ACO 100 All About Data: Design, Query, and Visualization (QTRS) OR **CIS 105 Computer Applications and Information Technology (QTRS)** OR **CSE 180 Computer Literacy (QTRS)** OR **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**	C	3

MAT 119 Finite Mathematics (MATH) OR **MAT 170 Precalculus (MATH)**	C	3
Psychology Related Area Electives ASB Elective COM Elective JHR Elective POS Elective PSY Elective SBS Elective SOC Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

NEW 101 The ASU New College Experience OR **IAS 300 Career Strategies and Personal Resilience** NEW 101 (or other ASU college equivalent) is required for all first-year students. IAS 300 is required for all transfer students in New College.		1 - 3

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition**	C	6

OR **ENG 107 First-Year Composition** AND **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

For student resources, including academic advising appointment scheduling, forms and policies, internship information, involvement and research opportunities, and more, visit: https://newcollege.asu.edu/

Students interested in pursuing health-related professional and graduate programs should explore pre-health resources, including Pre-Health 101 Workshops and Pre-Health Advising. For more information, visit: https://prehealth.asu.edu/

Students interested in pursuing law-related professional and graduate programs should explore pre-law resources. For more information, visit: https://prelaw.asu.edu/

Career preparation resources are available through Career Services. For more information, visit: https://career.asu.edu/

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Domestic Violence Intervention and Victim Advocacy, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPDVEPCERT

Minimum credit hours: 15

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
A grade of B or better is required in each course to satisfy the certificate.		

Required Course

SWU 416 Domestic Violence Prevention and Intervention During their first semester in the certificate, students enroll in SWU 416.	B	3

Electives

Upper Division Electives	B	12
SWU 417 Technology, Interpersonal Relationships and Abuse		
SWU 418 Global Violence Against Women		
SWU 420 Domestic Violence Fatality Review		
SWU 484 Internship or **SWU 412 Social Work Practicum I**		
SWU 484 Internship or **SWU 414 Social Work Practicum II**		

Requirement	Minimum Grade	Credit Hours
SWU 494 Topic: Intersecting Domestic Violence Child Maltreatment		

Other internship credit may be substituted with department approval.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Psychology (Forensic Psychology) and Law and Human Behavior (ASPGSFPBS and PPLWHBCERT)

Program description:
Forensic psychology is the application of psychology to the law. The concentration in forensic psychology within the Bachelor of Science program in psychology combines general training in psychology and specialized coursework in criminal law, criminal behavior, the diagnosis and treatment of mental disorders, and legal decision-making.

When courts are faced with cases in which a psychology-related question arises, they may turn to psychologists for help. For example, psychologists might assist the court in understanding a criminal's mental state at the time of a crime or whether a particular jury might have been biased against a defendant based on his or her race. This is the realm of forensic psychology.

Students learn about the various roles of psychologists in the legal system, which helps them to discover which roles they might like to pursue through careers in mental health or criminal justice, or through graduate training.

All New College psychology programs have a quantitative research focus, equipping students with skills in critical thinking, statistical analysis and academic writing. The BS degree differs from the Bachelor of Arts degree in that it requires additional lab science coursework and advanced statistical training, both of which are increasingly important for destinations in research or clinical practice. The BA degree allows for exposure to a wider breadth of psychological and related topics through additional elective coursework. Both pathways provide a strong foundation for future graduate studies.

Law and human behavior is an umbrella term that encompasses various aspects of the rapidly emerging field of forensic psychology, law and justice.

This certificate program focuses on the criminal justice aspects of forensic psychology, emphasizing victimology, offender treatment, criminal incapacity, mental health law, juvenile justice and delinquency, and the dynamics of how the criminal justice system intersects with behavioral science.

The program is designed to provide students of social services and social sciences with an understanding of important but understudied areas where justice policy is in desperate need of empirical, psychological research.

BS At a Glance:
College/school: New College of Interdisciplinary Arts and Sciences
Location: West Valley, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 170 - Precalculus
or a higher level MAT course
Math intensity: Moderate

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, Tempe, West Valley

Career opportunities:
Graduates are prepared for careers in the criminal justice and mental health fields. The advanced statistical training further prepares students for careers and graduate training that involve psychological research, clinical research and legal policy research. Many careers in psychology require graduate training, and this program also is designed to prepare students for master's degree and doctoral programs in legal, clinical and forensic psychology.

Graduates of the law and human behavior certificate program find a strong job market in the public and private sectors. Employment opportunities include supervisory and management positions in criminal justice agencies (federal, state and local), such as:

- evidence and crime scene supervisor (crime scene investigation activities)
- forensic psychologist
- intelligence analyst
- law enforcement officer

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Psychology (Forensic Psychology), BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: New College of Interdisciplinary Arts and Sciences
Plan Code: ASPGSFPBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from the New College of Interdisciplinary Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		

Psychology Core

PSY 101 Introduction to Psychology (SOBE)	C	3
PSY 230 Introduction to Statistics (QTRS)	C	3
PSY 290 Research Methods (SCIT)	C	4
PSY 330 Statistical Methods (QTRS)	C	3
Upper Division Cognitive Science Electives	C	3

- **PSY 320 Learning and Motivation**
- **PSY 323 Sensation and Perception**
- **PSY 324 Memory and Cognition**

Requirement	Minimum Grade	Credit Hours
PSY 325 Physiological Psychology		
PSY 360 Cognitive Science		
PSY 369 Biology of Human Sexuality		
PSY 394 Topic: Developmental Neuroscience		
PSY 434 Cognitive Psychology		
PSY 470 Psychopharmacology		
Upper Division Social and Developmental Psychology Electives		
PSY 315 Personality Theory and Research (SOBE)		
PSY 341 Developmental Psychology (SOBE)		
PSY 350 Social Psychology (SOBE)	C	3
PSY 441 Cognitive Development		
PSY 443 Child and Adolescent Psychological Disorders (SOBE)		

Forensic Psychology Concentration

PSY 211 The Criminal Mind (SOBE)	C	3
CRJ 260 Criminal Law I: Introduction to Substantive Criminal Law	C	3
CRJ 309 Criminology (SOBE)	C	3
PSY 366 Psychological Disorders (SOBE)	C	3

Requirement	Minimum Grade	Credit Hours
PSY 368 Forensic Psychology	C	3
PSY 467 Psychology of Criminal Investigation	C	3
PSY 468 Psychology and Law	C	3
PSY 474 Correctional Psychology	C	3
Upper Division Global and Civic Engagement Requirement: satisfied through completion of six credits of upper-division courses with a Global Communities, Societies and Individuals (GCSI) or Governance and Civic Engagement (CIVI) designation, in addition to the courses used to meet the university general studies requirements; or completion of three credits from an ASU-approved global education program. Adjustment to upper-division and elective hours is required if a lower-division global education course is used.	C	6
Mathematics Proficiency Requirement: all New College students in a Bachelor of Arts or Bachelor of Science degree program are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		

Interdisciplinary Requirements

ACO 100 All About Data: Design, Query, and Visualization (QTRS) OR **CIS 105 Computer Applications and Information Technology (QTRS)** OR **CSE 180 Computer Literacy (QTRS)**	C	3

OR **EDT 180 Technology Literacy: Problem Solving using Digital Technology Applications (QTRS)**		
Life Science Lecture and Lab BCH Elective BIO Elective FOR Elective LSC Elective MIC Elective	C	4
AND Scientific Thinking in Natural Sciences (SCIT) Students must complete a lecture and lab combination with the General Studies SCIT designation from one of the above subject codes.		
Scientific Thinking in Natural Sciences (SCIT) Recommended: **FOR 105** OR **FOR 106** PSY 290 does not count towards this requirement.	C	4
MAT 170 Precalculus (MATH)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

NEW 101 The ASU New College Experience OR **IAS 300 Career Strategies and Personal Resilience** NEW 101 (or other ASU college equivalent) is required for all first-year students. IAS 300 is required for all transfer students in New College.	1 - 3

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Psychology BS majors are required to complete a minimum of three SCIT courses: PSY 290, a Life Science lecture/lab course from the BCH, BIO, FOR, LSC, or MIC subjects, and one additional SCIT course of their choosing.

For student resources, including academic advising appointment scheduling, forms and policies, internship information, involvement and research opportunities, and more, visit: https://newcollege.asu.edu/

Students interested in pursuing health-related professional and graduate programs should explore pre-health resources, including Pre-Health 101 Workshops and Pre-Health Advising. For more information, visit: https://prehealth.asu.edu/

Students interested in pursuing law-related professional and graduate programs should explore pre-law resources. For more information, visit: https://prelaw.asu.edu/

Career preparation resources are available through Career Services. For more information, visit: https://career.asu.edu/

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Law and Human Behavior, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPLWHBCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Required Courses		
CRJ 260 Criminal Law I: Introduction to Substantive Criminal Law	C	3
CRJ 410 Criminal Procedure I: The Law of Investigations	C	3
PSY 366 Psychological Disorders (SOBE)	C	3
PSY 468 Psychology and Law	C	3
Elective Course		
Upper Division Electives	C	3
CRJ 309 Criminology (SOBE)		
CRJ 403 Victims and the Criminal Justice System		
CRJ 406 Sex Crimes		
CRJ 434 Drugs of Abuse		
CRJ 435 Crime and Forensic Mental Health (SOBE)		
CRJ 484 Internship		
CRJ 494 Special Topics		

Requirement	Minimum Grade	Credit Hours
PSY 341 Developmental Psychology (SOBE)		
PSY 368 Forensic Psychology		
PSY 443 Child and Adolescent Psychological Disorders (SOBE)		
PSY 472 Clinical Psychology		
PSY 474 Correctional Psychology		
PSY 494 Special Topics		
Special Topics courses (CRJ 494 and PSY 494) will be designated and approved by departments and schools. Students will need to work with an advisor in order to select appropriate special topics courses that are approved for credit in the law and human behavior certificate program.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.		
At least 12 credit hours must be taken in residence at ASU.		
Bachelor of Science in criminology and criminal justice majors who are also pursuing the Law and Human Behavior certificate may not use CRJ 309, CRJ 403, CRJ 406, CRJ 410, CRJ 434, CRJ 435, CRJ 484, and CRJ 494 towards both their degree and certificate.		

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Recreational Therapy and Nonprofit Professional (PPRECTBS and PPNPYCERT)

Program description:
The Bachelor of Science program in recreational therapy prepares students to apply for the national professional certification through the National Council for Therapeutic Recreation Certification: https://nctrc.org/about-certification/ctrs-the-qualified-provider.

The program prepares competent, entry-level recreational therapists with the requisite knowledge, skills and abilities needed to improve functional outcomes and increase participation in life activities for individuals experiencing health conditions. Students learn to conduct assessments, develop service plans, implement therapeutic interventions, and evaluate and document outcomes of care. They gain skills to effectively provide comprehensive therapeutic recreation services that include program design and evaluation, individual and group service provision, and advocacy. The required fieldwork component of the program facilitates the development of competencies to provide quality recreational therapy services.

Students who choose this degree program are committed to improving people's lives and contributing to their communities. This degree program is one of two such programs in Arizona, both offered by the School of Community Resources and Development. This program has a heavier emphasis on health care settings such as hospitals and human service agencies, while the BS in parks and recreation with a concentration in therapeutic recreation prepares students to provide recreational therapy services in community settings such as youth programs, adaptive sports, or parks and recreation.

This nationally recognized certificate program awards qualified students from diverse academic fields with the national Certified Nonprofit Professional credential. The CNP credential is awarded through the Nonprofit Leadership Alliance (formerly American Humanics, Inc.), a consortium of universities, nonprofits and funders that are committed to preparing students for management careers in the nonprofit sector. More information is available on the NLA website. https://nla1.org/

The NLA and ASU joint program provides curricular and cocurricular programs that prepare students through its competency-based, experiential educational framework, which includes curriculum instruction in management of nonprofit elements (fundraising, volunteers, organizational management) and field experience.

The program is ideal for students wishing to complement their majors with a strong core of nonprofit management knowledge and skills through professional affiliation with and certification by the Nonprofit Leadership Alliance, the nation's leader in education for nonprofit careers. NLA collaborates with a number of national nonprofit organizations as well as locally based grassroots organizations that actively seek NLA and ASU program interns and job candidates.

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix

Career opportunities:
Recreational therapy is a rapidly growing field, given the rising number of returning veterans and an aging population. Graduates are prepared for work in a wide variety of clinical settings, including hospitals, rehabilitation centers and extended care facilities. Graduates also are qualified to work in community settings such as parks and recreation departments.

The nonprofit professional credential opens up career opportunities across a range of diverse nonprofit areas, such as arts and culture; environmental, health and human services; and youth development.

Curriculum - Recreational Therapy, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPRECTBS
Minimum credit hours: 120
Upper division minimum credit hours: 46

Requirement	Minimum Grade	Credit Hours
Unit Core		
CRD 210 Community Services and Professions	C	3
CRD 301 Sustainable Communities (SUST)	C	3
CRD 302 Inclusive Community Development (SOBE)	C	3
CRD 402 Assessment and Evaluation of Community Services (QTRS)	C	3
Professional Core		
CRD 435 Service Learning for Community Development	C	1
RTH 413 Leadership and Professional Development in Recreational Therapy	C	3
RTH 463 Recreational Therapy Senior Internship	C	12
Major Core		
PRM 120 Leisure and the Quality of Life (SOBE)	C	3

Requirement	Minimum Grade	Credit Hours
PRM 203 Program Planning OR PRM 306 Advanced Programming and Facilitation	C	3
PRM 304 Recreation and Sport Planning and Facilities OR CRD 401 Managing Tourism and Leisure Enterprises	C	3
RTH 250 Therapeutic Recreation and Community Health (CIVI)	C	3
RTH 364 Foundations in Recreational Therapy (SOBE)	C	3
RTH 384 Recreational Therapy Practicum	C	3
RTH 400 Intervention Techniques in Recreational Therapy AND RTH 284 Recreational Therapy Lab	C	4
RTH 406 Program Design and Administration in Recreational Therapy	C	3
RTH 460 Assessment and Documentation in Recreational Therapy AND RTH 284 Recreational Therapy Lab	C	4

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of PRM 203, CRD 301, CRD 402, or RTH 463 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	3

Area 1: Criminology and Criminal Justice

CRJ Elective

Area 2: Public Affairs

PAF Elective

Area 3: Public Service and Community Solutions

CPP Elective

Students are required to complete coursework from Watts interdisciplinary areas. SWU 183 satisfies part of the college's interdisciplinary requirement. Students must choose one additional course from the interdisciplinary areas to complete the requirement.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Recreational Therapy Electives

Recreational Therapy Elective	C	6

CHS 400 Adaptive Exercise Program Practical Experience

CRD 350 Tourism, Recreation and Sports Marketing

DST 101 Introduction to Disability Studies (CIVI)

NLM 310 Volunteer Management (CIVI)

PRM 145 Special Events Management

PRM 201 Introduction to Parks, Recreation and Sport Management	
PRM 294 Special Topics	
RTH 294 Special Topics	
RTH 394 Special Topics	
RTH 440 Advocacy in Therapeutic Recreation (GCSI)	
RTH 453 Inclusive Community Sport	
RTH 455 Recreational Therapy and Play with Children, Youth and Families	
RTH 494 Special Topics	

Related Area

BIO 160 Introduction to Anatomy and Physiology (SCIT) OR BIO 201 Human Anatomy and Physiology I (SCIT)		4
CDE 232 Human Development (SOBE)	C	3
EXW 215 Resistance Training and Recovery Techniques OR EXW 217 Cardiorespiratory and Flexibility Training		3
PSY 101 Introduction to Psychology (SOBE)	C	3
PSY 366 Psychological Disorders (SOBE)	C	3
SWU 183 Introductory Ethics: A Social Issues Perspectives (HUAD)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Nonprofit Professional, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPNPYCERT

Minimum credit hours: 17

Upper division minimum credit hours: 14

Requirement	Minimum Grade	Credit Hours
The program includes active participation by nonprofit professionals who offer workshops, seminars, mentoring and field trips. The certified nonprofit professional credential can be earned in conjunction with any bachelor's degree and requires successful participation in co-curricular, experiential activities in addition to required academic coursework. For more information on the credential, please visit https://nla1.org/cnp/.		

Required Courses

NLM 220 Introduction to Nonprofit Organizations	C	3
NLM 320 Professional Development Seminar NLM 320 is taken twice, over two semesters, for a total of four credits.	C	4
NLM 420 Nonprofit Leadership Alliance Institute NLM 420 is offered fall semester only.	C	3
NLM 440 Nonprofit Professional Certification	C	1

Elective Courses

Upper Division **NLM Elective**	C	6

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Standards

17 hours of graded coursework.

Minimum "C" (2.00 on a 4.00 scale) grade required for all courses in the certificate.

Minimum GPA of 2.00 for those pursuing the certificate.

Students should be at least a junior to take 400-level courses.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Religious Studies (Religion, Culture and Public Life) and Veterans, Society and Service (LARELCPBA and LAVSSCERT)

Program description:
The Bachelor of Arts program in religious studies with a concentration in religion, culture and public life approaches religion as a mode of human culture, as constituted in intellect, language, emotion, practice, art and everyday life.

The program focuses on the role religions play in the formation of cultural identities, traditions, norms and memories, and it examines in particular the impact that religions have on culturally specified ways that people reason, communicate, socialize, work, entertain, dress, eat, live and die. Special consideration is given to the influence of religion on gender roles and sexual norms; the formation of images of the body and the moral assessment of medical practices; and the reflection and reproduction of religion in film, popular culture and conventional, digital and social media.

Through the certificate program in veterans, society and service, students explore the history, representations, experiences and culture of military service and veterans.

Students study the veteran community with an interdisciplinary approach that combines history, politics, business, journalism, psychology, law, sociology and the arts through the intersectional lenses of gender, race, ethnicity and national identity. This program trains students to listen to, learn from, serve, research and advocate for veterans and their families.

Future professionals and current employees at government agencies, health provider organizations, nonprofit organizations and media industries can benefit from this multifaceted certificate program.

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Tempe or Online

Career opportunities:
Religious studies majors seek jobs in many professional areas, including:

- chaplaincy
- diversity management
- education
- foreign service
- health care, including mental health and counseling
- journalism
- law
- nonprofit and nongovernmental organizations
- public service and public policy
- publishing

Religious studies is an excellent foundation for graduate and professional studies in:

- anthropology
- gender studies
- health care
- history
- justice studies
- law
- philosophy
- political science
- sociology
- theology

The concentration addresses present-day interests and prepares students for jobs in a variety of professions. In addition to the fields listed above, students also pursue employment in media studies, migration and international studies.

Students can advance their career options with an undergraduate certificate.

Graduates who have combined the certificate in veterans, society and service with their major program of study may become more marketable to employers.

Graduates often pursue employment as health care social workers, social and community service managers, or community health workers. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Religious Studies (Religion, Culture and Public Life), BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LARELCPBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
Check: Minimum 2.5 Major GPA		
Core		
REL 101 Religion, Culture and Public Life (HUAD)	C	3
REL 307 Religion: Theory and Practice (HUAD)	C	3
REL 405 Problems in Religious Studies OR **REL 406 Religious Studies Capstone I** **AND** **REL 407 Religious Studies Capstone II** REL 405 is offered to on-campus students, while REL 406 and 407 are offered to ASU Online students. These courses are typically offered only in Spring semesters.	C	3

Requirement	Minimum Grade	Credit Hours
Concentration		
Religion, Culture and Public Life Concentration Courses	C	6
REL 100 Religions of the World (HUAD)		
REL 200 Exploring the World's Religions		
REL 202 Religion and Popular Culture (HUAD)		
REL 205 Life, Sex and Death (GCSI)		
REL 207 Ritual, Symbol, and Myth (HUAD)		
REL 210 Introduction to Judaism		
REL 211 Jews and Judaism in America		
REL 260 Introduction to Islam (GCSI)		
REL 270 Introduction to Christianity		
REL 272 Heretics, Saints and Emperors: Christianity in the Ancient World (HUAD)		
REL 287 Topics in Film, Media, and Religion (GCSI)		
REL 294 Topic: Religious Freedom		
REL 301 Comparative Mysticism (HUAD)		
REL 310 Western Religious Traditions		
REL 315 Hebrew Bible (Old Testament) (HUAD)		
REL 320 American Religious Traditions (HUAD)		
REL 321 Religion in America (HUAD)		

Requirement	Minimum Grade	Credit Hours
REL 323 African American Religion		
REL 324 Sacred Healing and Arts of the Africana World		
REL 326 Hispanic Religion, Culture and Healing		
REL 330 Native American Worldviews (HUAD)		
REL 343 Daoism (HUAD)		
REL 346 Chinese Religions (GCSI)		
REL 350 Hinduism (GCSI)		
REL 351 Buddhism (GCSI)		
REL 353 Zen and Japanese Culture		
REL 357 Theravada Buddhism in South and Southeast Asia		
REL 365 Islamic Civilization (HUAD)		
REL 367 Religion, Philosophy and Culture in Japan (GCSI)		
REL 371 New Testament (GCSI)		
REL 382 Magick, Religion and Science		
REL 383 Religion and Sports (HUAD)		
REL 390 Women, Gender and Religion (GCSI)		
REL 393 Religion and Sex		
REL 394 Topic: Art & Religion in Jain Culture		

Requirement	Minimum Grade	Credit Hours
Upper Division Religion, Culture and Public Life Concentration Courses	C	9
REL 301 Comparative Mysticism (HUAD)		
REL 310 Western Religious Traditions		
REL 315 Hebrew Bible (Old Testament) (HUAD)		
REL 320 American Religious Traditions (HUAD)		
REL 321 Religion in America (HUAD)		
REL 323 African American Religion		
REL 324 Sacred Healing and Arts of the Africana World		
REL 326 Hispanic Religion, Culture and Healing		
REL 330 Native American Worldviews (HUAD)		
REL 343 Daoism (HUAD)		
REL 346 Chinese Religions (GCSI)		
REL 350 Hinduism (GCSI)		
REL 351 Buddhism (GCSI)		
REL 353 Zen and Japanese Culture		
REL 357 Theravada Buddhism in South and Southeast Asia		
REL 365 Islamic Civilization (HUAD)		
REL 367 Religion, Philosophy and Culture in Japan (GCSI)		

Requirement	Minimum Grade	Credit Hours
REL 371 New Testament (GCSI)		
REL 382 Magick, Religion and Science		
REL 383 Religion and Sports (HUAD)		
REL 390 Women, Gender and Religion (GCSI)		
REL 393 Religion and Sex		
REL 394 Topic: Art & Religion in Jain Culture		
REL Outside Concentration Course		
Any REL course that is NOT listed in the Religion, Culture and Public Life concentration list, except for REL 100, REL 294: Religious Freedom and REL 321, which may be used either inside or outside the concentration, but not both.	C	3
REL 100 Religions of the World (HUAD)		
REL 294 Topic: Religious Freedom		
REL 321 Religion in America (HUAD)		
Upper Division REL Outside Concentration Course		
Any REL course that is NOT listed in the Religion, Culture and Public Life concentration list, except for REL 100, REL 294: Religious Freedom and REL 321, which may be used either inside or outside the concentration, but not both.	C	3
REL 321 Religion in America (HUAD)		

The REL Outside Concentration courses are any REL courses NOT on the Religion, Culture and Public Life concentration list.

Requirement	Minimum Grade	Credit Hours
Due to their broad content, REL 100, REL 294: Religious Freedom, and REL 321 may count as either Religion, Culture and Public Life concentration courses, or as REL Outside Concentration courses, but each course will satisfy only ONE requirement, not both.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite.	C	16

Additional Requirements

Related Area Courses	C	6
AFR Elective		
AIS Elective		
AMS Elective		
APA Elective		
APH Elective		

ARS Elective

ASB Elective

GCU Elective

HPS Elective

HST Elective

HUL Elective

JUS Elective

PHI Elective

POS Elective

SGS Elective

SOC Elective

TCL Elective

WST Elective

ARB 250 / SLC 250 Middle East Culture in a Global Perspective (GCSI)

ARB 331 Arabic/Islamic Culture and Literature (GCSI)

ARB 335 Arabic Culture and Islam (GCSI)

ARB 336 Introduction to the Qur'an (GCSI)

ARB 337 Hadith and Prophetic Tradition

ARB 341 Quran Text and Women (GCSI)

ARB 351 Classical Arabic Literature (HUAD)

ARB 352 Modern Arabic Literature in Translation (HUAD)

ARB 360 Islamic Philosophical Literature

ARB 427 Arabic Prose: Reading the Arabian Nights

ARB 428 / SLC 428 Gender and Sexuality Discourse in the Middle East

BIO 312 Bioethics (HUAD)

BIO 315 / ENG 370 Science, Values, and the Public

BIO 318 History of Medicine (HUAD)

CHI 120 / SLC 120 Introduction to Chinese Culture (HUAD)

CHI 294 / SLC 294 Topic: Chinese Ghost Stories

CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)

CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation

CHI 345 Chinese Film and Civilization

CHI 394 / SLC 394 Topic: I Know Kung-fu: Chinese Martial Arts, Lit and Film

CHI 451 / SLC 451 Chinese Cultural History I

CHI 452 / SLC 452 Chinese Cultural History II

ENG 315 Medieval Literature in Translation

ENG 333 American Ethnic Literature

ENG 353 African American Literature: Beginnings

through the Harlem Renaissance (HUAD)

ENG 354 African American Literature: Harlem Renaissance to the Present (HUAD)

ENG 356 The Bible as Literature

ENG 359 Indigenous American Literature

GER 315 Germanic Mythology

HEB 316 / ENG 316 Literary Readings of the Hebrew Bible

HEB 347 / SLC 347 Modern Israeli Literature in Translation (HUAD)

HEB 348 / SLC 348 Israeli Society and Culture (HUAD)

HEB 375 Contemporary Culture of Israel

HEB 411 Judaism and the Beginnings of Christianity (HUAD)

HON 171 The Human Event (GCSI)

HON 272 The Human Event (CIVI)

HON 370 History of Ideas (GCSI)

HON 379 Romantics, Victorians, and Moderns

IAS 430 Science and Religion (HUAD)

JPN 115 / SLC 115 Japanese Popular Culture: Anime, Manga and Film (GCSI)

JPN 333 Japanese Civilization from the Ice Age to Last Thursday

JPN 354 / SLC 354 Zen and Japanese Culture

JPN 355 / SLC 355 Religious Practice of People in Modern Japan (GCSI)

JPN 367 / SLC 367 Religion, Philosophy and Culture in Japan (GCSI)

JPN 370 / SLC 370 Japanese Aesthetics: Art and Beauty in Japan

JPN 394 / SLC 394 Topic: Anime, Manga, and Religion in Japan

JPN 424 / SLC 424 The Art of the Ninja (GCSI)

JPN 445 Readings in Modern Japanese Letters and Culture

JPN 494 / SLC 494 Topic: Film and Religion in Japan

JST Elective (not from JST 133, 233, 333, or 334)

KOR 250 Korean Culture and Society

KOR 321 Modern Korean Literature

KOR 347 Korean Film and Literature (HUAD)

KOR 350 Women of Korea

KOR 354 Religions of Korea

KOR 375 / SLC 375 Intercultural Communication in Korea (SOBE)

KOR 415 / SLC 415 Korean Popular Culture

KOR 420 / SLC 420 Emotions Across Languages, Cultures and History (SOBE)

KOR 457 / SLC 457 Premodern Korea in a Global Context

MUS 347 Jazz in America (HUAD)

MUS 354 Popular Music

MUS 355 American Music (HUAD)

MUS 371 World Music (GCSI)

POR 472 Transatlantic Encounters: Brazil and Portugal (GCSI)

PSY 350 Social Psychology (SOBE)

SLC 142 / GRK 142 Ancient Greek Civilization (HUAD)

SLC 223 / GRK 223 / LAT 223 Introduction to Greek and Roman Mythology (HUAD)

SLC 294 / VTN 294 Topic: Vietnam: Beyond the War

SLC 320 Compassion: A Dialogue Between the Humanities, the Sciences and the Arts (HUAD)

SLC 361 / LAT 361 Roman Religion

SLC 362 / GRK 362 Ancient Greek Religion

SLC 444 / GRK 444 / LAT 444 Heroes, Ancient and Modern

SLC 455 / GER 455 Berlin: Migration, Arts and Activism

SLC 494 Topic: Religions and Conflicts in Southeast Asia

SPA 325 Introduction to Hispanic Literature (HUAD)

SPA 427 Colonial and Postcolonial Latin American Literature (HUAD)

SPA 471 Civilization of the Indohispanomexicano Southwest (HUAD)

TCL 328 Hispanic Religion, Culture and Healing

Upper Division Related Area Courses	C	9

AFR Elective

AIS Elective

AMS Elective

APA Elective

APH Elective

ARS Elective

ASB Elective

GCU Elective

HPS Elective

HST Elective

HUL Elective

JUS Elective

PHI Elective

POS Elective

SGS Elective

SOC Elective

TCL Elective

WST Elective

ARB 331 Arabic/Islamic Culture and Literature (GCSI)

ARB 335 Arabic Culture and Islam (GCSI)

ARB 336 Introduction to the Qur'an (GCSI)

ARB 337 Hadith and Prophetic Tradition

ARB 341 Quran Text and Women (GCSI)

ARB 351 Classical Arabic Literature (HUAD)

ARB 352 Modern Arabic Literature in Translation (HUAD)

ARB 360 Islamic Philosophical Literature

ARB 427 Arabic Prose: Reading the Arabian Nights

ARB 428 / SLC 428 Gender and Sexuality Discourse in the Middle East

BIO 312 Bioethics (HUAD)

BIO 315 / ENG 370 Science, Values, and the Public

BIO 318 History of Medicine (HUAD)

CHI 321 Power and Poetry: Classical Chinese Literature in Translation (HUAD)

CHI 322 Self, Society and the Drive for Modernity: Classical Chinese Literature in Translation

CHI 345 Chinese Film and Civilization

CHI 394 / SLC 394 Topic: I Know Kung-fu: Chinese Martial Arts, Lit and Film

CHI 451 / SLC 451 Chinese Cultural History I

CHI 452 / SLC 452 Chinese Cultural History II

ENG 315 Medieval Literature in Translation

ENG 333 American Ethnic Literature

ENG 353 African American Literature: Beginnings through the Harlem Renaissance (HUAD)

ENG 354 African American Literature: Harlem Renaissance to the Present (HUAD)

ENG 356 The Bible as Literature

ENG 359 Indigenous American Literature

GER 315 Germanic Mythology

HEB 316 / ENG 316 Literary Readings of the Hebrew Bible

HEB 347 / SLC 347 Modern Israeli Literature in Translation (HUAD)

HEB 348 / SLC 348 Israeli Society and Culture (HUAD)

HEB 375 Contemporary Culture of Israel

HEB 411 Judaism and the Beginnings of Christianity (HUAD)

HON 370 History of Ideas (GCSI)

HON 379 Romantics, Victorians, and Moderns

IAS 430 Science and Religion (HUAD)

JPN 333 Japanese Civilization from the Ice Age to Last Thursday

JPN 354 / SLC 354 Zen and Japanese Culture

JPN 355 / SLC 355 Religious Practice of People in Modern Japan (GCSI)

JPN 367 / SLC 367 Religion, Philosophy and Culture in Japan (GCSI)

JPN 370 / SLC 370 Japanese Aesthetics: Art and Beauty in Japan

JPN 394 / SLC 394 Topic: Anime, Manga, and Religion in Japan

JPN 424 / SLC 424 The Art of the Ninja (GCSI)

JPN 445 Readings in Modern Japanese Letters and Culture

JPN 494 / SLC 494 Topic: Film and Religion in Japan

JST Elective (not from JST 133, 233, 333, or 334)

KOR 321 Modern Korean Literature

KOR 347 Korean Film and Literature (HUAD)

KOR 350 Women of Korea

KOR 354 Religions of Korea

KOR 375 / SLC 375 Intercultural Communication in Korea (SOBE)

KOR 415 / SLC 415 Korean Popular Culture

KOR 420 / SLC 420 Emotions Across Languages, Cultures and History (SOBE)

KOR 457 / SLC 457 Premodern Korea in a Global Context

MUS 347 Jazz in America (HUAD)

MUS 354 Popular Music

MUS 355 American Music (HUAD)

MUS 371 World Music (GCSI)

POR 472 Transatlantic Encounters: Brazil and Portugal (GCSI)

PSY 350 Social Psychology (SOBE)

SLC 320 Compassion: A Dialogue Between the Humanities, the Sciences and the Arts (HUAD)

SLC 361 / **LAT 361 Roman Religion**

SLC 362 / **GRK 362 Ancient Greek Religion**

SLC 444 / **GRK 444** / **LAT 444 Heroes, Ancient and Modern**

SLC 455 / **GER 455 Berlin: Migration, Arts and Activism**

SLC 494 Topic: Religions and Conflicts in Southeast Asia

SPA 325 Introduction to Hispanic Literature (HUAD)

SPA 427 Colonial and Postcolonial Latin American Literature (HUAD)

SPA 471 Civilization of the Indohispanomexicano Southwest (HUAD)

TCL 328 Hispanic Religion, Culture and Healing

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq
All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr
Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go

to: https://silc.asu.edu/student-life/academic-advising/language-testing
If planning on law school, prepare to take the LSAT in your junior year.
Consider participating in an Undergraduate Research Experience through the School of Historical, Philosophical and Religious Studies or a research opportunity in the Humanities Lab.
Consider participating in an internship to gain valuable career experience and contacts. For help exploring internship opportunities related to your major, meet with an academic advisor.
Many General Studies requirements can overlap with major requirements, leaving more room for electives. Consult an academic advisor to select the best courses for your personal plan of study.
Not all courses in the course lists are available every term or available in both on-campus and online formats. Students should consult the class schedule prior to each term to confirm course availability.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Veterans, Society and Service, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LAVSSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires 18 credit hours, of which at least 12 credit hours must be completed at the upper-division level and nine must be completed at ASU. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Required Courses

MVS 100 Introduction to Military Studies	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals or **MVS 301 Experience of America's Modern Wars**	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3

Elective

Upper Division Electives	C	3
AFR 494 Topic: Black Military History		

Requirement	Minimum Grade	Credit Hours
CAP 316 Combat Trauma		
CAP 336 Counseling Military Veterans		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 414 Crisis Communication		
COM 420 Rhetoric and Community Advocacy		
HST 302 Topic: War and Political Thought		
HST 302 Topic: Women, War and Peace		
HST 306 Topic: World War II		
HST 340 American Military History (HUAD)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 372 Modern Middle East (GCSI)		
HST 456 The Vietnam War (HUAD)		
IAP 307 Art and War (GCSI)		
ISS 428 Religion and Global Violence (GCSI)		
ISS 441 Conflict and Conflict Resolution		
ISS 456 Culture, Conflict and War		
JST 346 Israeli Wars in Israeli Movies		
MCO 494 Topic: War and Media		
MVS 376 Writing a Personal History		
MVS 394 Special Topics		
MVS 395 Combat in Film		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		

Requirement	Minimum Grade	Credit Hours
MVS 494 Special Topics		
PAF 302 Public Service Research Methods		
POS 310 American National Government (AMIT)		
POS 316 American Political Institutions (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 346 Problems of Democracy (HUAD)		
POS 350 Comparative Politics (GCSI)		
POS 360 World Politics (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 378 / **REL 378 Religion, War and Peace (CIVI)**		
POS 414 Political History and Leadership		
POS 426 Elements of Public Policy		
POS 467 International Security (GCSI)		
SGS 394 Topic: Gender and Armed Conflict		

Internship

MVS 484 Internship All students must complete an internship and should review their internship options, including virtual, with the CISA internship coordinator. Prerequisite courses may be needed in order to complete the requirements of this certificate.	C	3

Notes

Prerequisite courses may be needed in order to complete the

requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Russian and Teaching English to Speakers of Other Languages (TESOL) (LARUSBA and LATESLCERT)

Program description:
The Bachelor of Arts program in Russian explores Russia's language, literature, history and more. As part of a small community of program participants with the resources of a large university, students gain intermediate to advanced reading, writing and speaking skills in Russian. They also study Russian civilization, popular culture, protest and propaganda, and classical Russian works.

Faculty members mentor students throughout the program to win prestigious paid internships in places such as Washington, D.C., and scholarships from U.S. government entities, including the Department of Defense, the Department of Education, the Department of Justice and the Department of State.

The program partners with the Melikian Center for Russian, Eurasian and East European Studies to offer a certificate in agribusiness, anthropology, architecture, economics, geography, history, political science, religious studies, Russian, sociology or women's studies.

The teaching English to speakers of other languages certificate program consists of key courses that provide students with the practical skills and confidence necessary to teach English as a second or other language anywhere in the world. This certificate can be added to any degree program and includes a supervised internship to gain valuable hands-on experience before graduation.

This certificate does not certify students to teach in Arizona public schools (K--12).

BA At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe
Second language requirement: Yes
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates of the program have intermediate to advanced Russian language and cultural proficiency.

Internship opportunities available through the program open doors to a variety of fulfilling career possibilities. Graduates are prepared to pursue advanced degrees or careers in:

- business
- diplomacy
- education
- global security
- international law
- journalism
- military
- public policy
- translation
- travel

The TESOL certificate is useful for graduates who are interested in careers in this increasingly important field. It also serves as excellent preparation for students who wish to pursue graduate studies in the Master of Teaching English to Speakers of Other Languages program at ASU or in a similar program at another institution.

Students who combine this TESOL certificate with their major program of study may become more marketable to employers.

Students who complete this undergraduate certificate often decide to pursue employment in teaching abroad. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Russian, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: The College of Liberal Arts and Sciences
Plan Code: LARUSBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.		
RUS 141 Russian Civilization: From Tsars to Putin (GCSI) OR **RUS 241 Russian Pop Culture: Protest and Propaganda (GCSI)**	C	3
RUS 211 Conversational Russian I	C	3
RUS 212 Conversational Russian II	C	3
RUS 311 Russian Society I	C	3
RUS 312 Russian Society II	C	3
RUS 411 Russian Language, History and Culture I OR **RUS 412 Russian Language, History and Culture II**	C	3
RUS 430 Russian Short Story (HUAD)	C	3

Requirement	Minimum Grade	Credit Hours
SLV 304 Digital Humanities for Language Majors OR SLV 440 History of Slavic Languages (SOBE)	C	3
Upper Division Restricted Electives RUS 322 Scandals and Scoundrels: The Nineteenth-Century Russian Novel RUS 323 Russian Literature and Revolution: The Twentieth Century RUS 421 Pushkin RUS 425 Chekhov and Russian Drama (HUAD) RUS 439 Art in Exile: VladÃmir VladÃmirovich Nabokov	C	6
Upper Division Russian Electives RUS 394 Special Topics RUS 421 Pushkin RUS 425 Chekhov and Russian Drama (HUAD) RUS 439 Art in Exile: VladÃmir VladÃmirovich Nabokov RUS 440 Russian Mass Media RUS 493 Honors Thesis RUS 494 Special Topics RUS 499 Individualized Instruction	C	3

School of International Letters and Cultures Requirements

Requirement	Minimum Grade	Credit Hours
SLC 201 Introduction to Linguistics (SOBE) OR **SLC 202 Exploring Cultures: Words, Images, Stories (HUAD)**	C	3

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Second Language Requirement: All students pursuing a BA degree in The College of Liberal Arts and Sciences must demonstrate proficiency in a second language. Proficiency is demonstrated by completion of a language course at the intermediate level (202 or equivalent) or higher, having 202 or its equivalent as a prerequisite. It is recommended that students complete this requirement with Russian (RUS) courses.	C	20

Additional Requirements

Related Area Courses **GCU 426 Geography of Russia and Surroundings** **HST 304 Studies in European History** **HST 355 Total War and the Crisis of Modernity (HUAD)** **HST 435 Russian Empire: From Ivan the Terrible to 1917 (GCSI)**	C	3

HST 436 Rise & Fall of Soviet Communism		
MHL 363 Survey of Russian Music		
POS 360 World Politics (GCSI)		
POS 467 International Security (GCSI)		
POS 486 International Political Economy (GCSI)		
REL 364 Islam in Eurasia and Central Asia		
SLC 340 Approaches to International Cinema (GCSI)		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences OR **ASU 101-LA The ASU Experience** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** AND **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Please go to: https://silc.asu.edu/student-life/academic-advising/language-testing

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Teaching English to Speakers of Other Languages (TESOL), Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LATESLCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate program in teaching English as a second language requires 18 credit hours, of which 12 must be completed at the upper-division level. At least six credit hours must be completed from courses offered by The College of Liberal Arts and Sciences. Each course must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		
Core		
ENG 213 Introduction to the Study of Language (SOBE)	C	3
ENG 484 Topic: TESOL Internship	C	3
Theory/Methods		
ENG 404 Studies in Second Language Acquisition ENG 404 is repeatable for credit and must be completed twice.	C	6
Linguistics Electives		
Upper Division Group 1	C	3

Requirement	Minimum Grade	Credit Hours
ENG 403 Semantics		
ENG 404 Studies in Second Language Acquisition		
ENG 414 Studies in Linguistics		
Group 2		
ENG 214 English Grammar and Usage		
ENG 312 English in its Social Setting (SOBE)		
ENG 313 Phonology and Morphology	C	3
ENG 314 Modern Grammar		
ENG 413 History of English Language		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSW/CERT Social Work and Peace Corps Prep (PPSWUSWU and LSPCPRCERT)

Program description:
The curriculum for this undergraduate program leads to a Bachelor of Social Work degree.

Students focus on social work courses in social policy and services, human behavior in the social environment, social work practice, research and practicum instruction in community agencies. In addition, majors take elective courses in related areas.

Students interested in completing the BSW program in Tucson are encouraged to complete a MyPath2ASU®. The Tucson location option is only available to transfer students.

The Peace Corps prep certificate program fosters intellectual curiosity while building the competitiveness of Peace Corps applicants.

Six sectors --- education, youth development, health, environment, community and economic development, and agriculture --- comprise the program, unified by the mandatory course OGL 358 Peace Corps Seminar. To enhance the three core competencies of sector-specific skills, intercultural competence and leadership, students are encouraged to participate in service learning, internship opportunities and study abroad experiences.

BSW At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, ASU Sync, ASU at Tucson, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Downtown Phoenix, Polytechnic, Tempe, West Valley

Career opportunities:
Graduates are prepared to be generalist social work practitioners who focus on advocacy, referrals, case management and problem-solving functions with individuals, groups, families, organizations and the community.

Employment in social work is expected to increase commensurately with the needs of a growing and diverse population. Social workers are employed in public and private agencies and deal with a wide variety of social issues, including:

- adoption and teen pregnancy
- aging
- child abuse and foster care
- corrections and delinquency
- disability
- discrimination
- domestic violence and family dysfunction
- health and mental health
- homelessness and poverty
- substance abuse

Social work skills such as problem-solving, resource utilization, counseling, group work and community organization are also useful for employee relations and mediation positions in industry.

Students can advance their career options with an undergraduate certificate. Those who have complemented their major program of study with this specialization in Peace Corps prep may be more marketable to employers.

Graduates with this undergraduate certificate often pursue employment in the foreign service, nongovernmental agencies, relief organizations, community-based organizations and government positions. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Social Work, BSW

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Social Work, BSW
College/School: Watts College of Public Service & Community Solut
Plan Code: PPSWUSWU
Minimum credit hours: 120
Upper division minimum credit hours: 48

Requirement	Minimum Grade	Credit Hours
Major Courses		
SWU 171 Introduction to Social Work (SOBE)	C	3
SWU 291 Social Service Delivery Systems	C	3
SWU 295 Foundations of Social Work Practice	C	3
SWU 302 Human Biology for Social Workers Students who have already completed a human anatomy course may need to take an elective in place of SWU 302. See advisor for permission.		3
SWU 303 Micro Human Behavior and the Social Environment (SOBE)	C	3
SWU 306 Ethics in Social Services (HUAD)	C	3
SWU 311 Integrative Social Work Practice	C	3
SWU 312 Integrative Social Work Practice Skills	C	3
SWU 320 Research Methods in Social Work	C	3
SWU 321 Statistics for Social Workers (QTRS)		3

Requirement	Minimum Grade	Credit Hours
SWU 340 Macro Human Behavior and the Social Environment (SOBE)	C	3
SWU 374 Diversity and Oppression in a Social Work Context (CIVI)	C	3
SWU 432 Social Policy and Services	C	3

Professional Practicum Courses

BSW advancement into practicum courses requires completion of the following:		
1) Successful completion of SWU 171, SWU 291, SWU 295, SWU 303, SWU 306, SWU 311, SWU 312, SWU 340, SWU 374		
2) Documented completion of 40 hours human services experience		
3) Level 1 Fingerprint Clearance Card		
4) Signed Standards of Professional and Ethical Behavior form		
For more information, please visit https://socialwork.asu.edu/field-education		
SWU 410 Social Work Practice II	C	3
SWU 411 Social Work Practice III	C	3
SWU 412 Social Work Practicum I	C	3
SWU 413 Practicum Seminar	C	3
SWU 414 Social Work Practicum II	C	3

Requirement	Minimum Grade	Credit Hours
SWU 415 Integrative Practicum Seminar	C	3

BSW Area of Interest

BSW Area of Interest Course	C	3

- SWU 404 Social Work Practice in Health Care Settings
- SWU 416 Domestic Violence Prevention and Intervention
- SWU 417 Technology, Interpersonal Relationships and Abuse
- SWU 418 Global Violence Against Women
- SWU 442 Child Welfare Practice
- SWU 450 Mastering Mindfulness
- SWU 454 Overview of Addictions
- SWU 456 Immigrants and Refugees (CIVI)
- SWU 457 Southwest Borderland Immigration Issues (CIVI)
- SWU 458 Behavioral Health Services
- SWU 460 Legal Issues in Social Work
- SWU 461 LGBTQ+ Communities: Practice and Policy (CIVI)
- SWU 462 Global Social Welfare (GCSI)
- SWU 488 Advocacy Strategies

Requirement	Minimum Grade	Credit Hours
SWU 494 Topic: Pathways to Global Social Wrk Travl abroad Intensv		
SWU 494 Topic: Intersecting Domestic Violence Child Maltreatment		
SWU 498 Topic: Indigenous Social Policy & Advocacy		
SWU 498 Topic: Aging in Context		

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of SWU 291, SWU 412, or SWU 414 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	
RTH Elective	
TDM Elective	
Area 2: Criminology and Criminal Justice	

CRJ Elective
Area 3: Public Affairs
PAF Elective
Area 4: Public Service and Community Solutions
CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Introductory Courses

ECN 211 Macroeconomic Principles (SOBE) OR **SWU 181 Economics: A Social Issues Perspective**	3
PHI 101 Introduction to Philosophy (HUAD) OR **PHI 105 Intro to Ethics (HUAD)** OR **SWU 183 Introductory Ethics: A Social Issues Perspectives (HUAD)**	3
POS 110 American Government and Politics (AMIT) OR **SWU 182 Social Services Perspective of Government (AMIT)**	3
PSY 101 Introduction to Psychology (SOBE) OR **SOC 101 Introductory Sociology (SOBE)**	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Peace Corps Prep, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LSPCPRCERT

Minimum credit hours: 21

Upper division minimum credit hours: 15

Requirement	Minimum Grade	Credit Hours
The Peace Corps prep certificate requires a minimum of 21 credit hours as outlined. However, students are able to double count credits from their current major, minor, general studies requirements, or other certificates where applicable. Students are encouraged to take courses that develop breadth within their sector rather than limiting their selection to courses in one particular subject area.		

Required Courses

OGL 358 Peace Corps Seminar (GCSI)	C	3
Upper Division any 484 Internship course **or** **IDS 401 Integration: Experiential Learning** **or** **OGL 484 Internship** Students will complete a three credit hour internship and can do so by taking any internship course so long as their internship relates to their chosen sector. Internship hours may be completed locally, out of state or through an international study abroad program. The internship must be completed in the same program sector as the affiliated program sector electives completed for a minimum of three credit hours. Students from any major have permission to register for OGL 484 in order to complete an internship related to their sector. Students may also meet the internship requirement by completing an internship experience through a study abroad program.	C	3

Requirement	Minimum Grade	Credit Hours

Global Communities, Societies and Individuals (GCSI) courses

Global Communities, Societies, and Individuals (GCSI) Students complete two additional "GCSI" (Global Communities, Society and Individuals) courses, excluding OGL 358 and the nine credit hours of sector-related electives. Sector-related electives in excess of nine credit hours may count toward this GCSI requirement. Courses can be either lower or upper division.	C	6

Program Sector Electives

Upper Division Agriculture Sector 9

- **AGB 302 International Management and Agribusiness (GCSI)**
- **AGB 425 Food Supply Networks**
- **AGB 452 Global Food and Agricultural Trade**
- **ASB 300 Food and Culture (SOBE)**

or **Upper Division Community and Economic Development Sector**

- **ABS 364 Urban Forestry**
- **BIO 324 Environmental Ethics (SUST)**
- **BIO 434 People and Nature: Ecosystem Services**
- **ECN 360 Economic Development (GCSI)**
- **GCU 364 Energy in the Global Arena**
- **SOS 327 Sustainable Food and Farms**

or **Upper Division Education Sector**

- **AFR 350 Inequality and Diversity in Education (CIVI)**
- **ECD 321 Foundations in Language, Literacy and Culture in Early Childhood (SOBE)**

Requirement	Minimum Grade	Credit Hours
ECS 315 Classroom Organization and Child Guidance		
HCR 402 Advocacy for Health and Health Education		
SOC 421 Education and Society (SOBE)		
SPF 301 Culture and Schooling		
or Upper Division Environment Sector		
ASB 375 Humans and the Environment: What's the Connection?		
BIO 320 Fundamentals of Ecology		
BIO 322 Conservation of Biodiversity (SUST)		
GPH 314 Global Change (SUST)		
SOS 326 Sustainable Ecosystems		
or Upper Division Health Sector		
ASB 301 Global History of Health (HUAD)		
ASB 305 Poverty and Global Health (CIVI)		
ASM 345 Disease and Human Evolution		
EXW 450 Social Drivers of Health (CIVI)		
HSC 310 Health Communication		
or Upper Division Youth Development Sector		
ASB 346 Marriage and Family Diversity (SOBE)		
NLM 300 Fund Raising and Resource Development		
NLM 310 Volunteer Management (CIVI)		
PRM 315 Creating Community Through Park and Recreation Systems		
SWU 456 Immigrants and Refugees (CIVI)		

Requirement	Minimum Grade	Credit Hours
Students will select nine upper-division credit hours from one of the six program sectors of agriculture, community and economic development, education, environment, health, or youth development. Students should see their academic advisor for a complete list of sector-specific courses		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Foreign language study to at least the 200-level is encouraged but not required. For Peace Corps placements in Spanish of French-speaking countries, foreign language proficiency at the 200-level is often required.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSW/CERT Social Work and Recreational Therapy (PPSWUSWU and PPRECTCERT)

Program description:
The curriculum for this undergraduate program leads to a Bachelor of Social Work degree.

Students focus on social work courses in social policy and services, human behavior in the social environment, social work practice, research and practicum instruction in community agencies. In addition, majors take elective courses in related areas.

Students interested in completing the BSW program in Tucson are encouraged to complete a MyPath2ASU®. The Tucson location option is only available to transfer students.

Students enrolled in the recreational therapy certificate program gain knowledge and requisite competencies to lead recreation-based therapeutic programs as a strategy to improve individual and community health. Through curriculum foundational to the field, students learn the systematic process of conducting assessments, developing service plans, implementing therapeutic interventions, and evaluating and documenting outcomes of care. Students examine the holistic benefits of recreational therapy through exposure to creative and expressive arts, adapted exercise and sport, aquatic therapy, therapeutic riding, horticulture therapy, community integration, leisure education and structured play.

The certificate program is an ideal choice for individuals who value the importance of a healthy leisure lifestyle for all, want to advocate for accessible recreation opportunities, and are dedicated to the use of recreation-based interventions to improve well-being.

The certificate is a valuable supplement to degrees in related fields. It helps students develop a unique set of competencies and also serves as a pathway to credentialing as a qualified provider of recreational therapy.

Students seeking professional certification in recreational therapy have the option to select specific recreational therapy content courses to contribute a portion of the requirements necessary for eligibility with the National Council for Therapeutic Recreation Certification. Further information is available on its website. https://www.nctrc.org/about-certification/ctrs-the-qualified-provider

BSW At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, ASU Sync, ASU at Tucson, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Graduates are prepared to be generalist social work practitioners who focus on advocacy, referrals, case management and problem-solving functions with individuals, groups, families, organizations and the community.

Employment in social work is expected to increase commensurately with the needs of a growing and diverse population. Social workers are employed in public and private agencies and deal with a wide variety of social issues, including:

- adoption and teen pregnancy
- aging
- child abuse and foster care
- corrections and delinquency
- disability
- discrimination
- domestic violence and family dysfunction
- health and mental health
- homelessness and poverty
- substance abuse

Social work skills such as problem-solving, resource utilization, counseling, group work and community organization are also useful for employee relations and mediation positions in industry.

Recreational therapists practice in settings such as inpatient and outpatient physical rehabilitation, inpatient and outpatient mental health, and skilled nursing facilities, as well as in assisted living and adult day programs, parks and recreation and adapted sports programs, acute care hospitals, pediatric hospitals and programs, and school systems.

Curriculum - Social Work, BSW

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Social Work, BSW
College/School: Watts College of Public Service & Community Solut
Plan Code: PPSWUSWU
Minimum credit hours: 120
Upper division minimum credit hours: 48

Requirement	Minimum Grade	Credit Hours
Major Courses		
SWU 171 Introduction to Social Work (SOBE)	C	3
SWU 291 Social Service Delivery Systems	C	3
SWU 295 Foundations of Social Work Practice	C	3
SWU 302 Human Biology for Social Workers Students who have already completed a human anatomy course may need to take an elective in place of SWU 302. See advisor for permission.		3
SWU 303 Micro Human Behavior and the Social Environment (SOBE)	C	3
SWU 306 Ethics in Social Services (HUAD)	C	3
SWU 311 Integrative Social Work Practice	C	3
SWU 312 Integrative Social Work Practice Skills	C	3
SWU 320 Research Methods in Social Work	C	3
SWU 321 Statistics for Social Workers (QTRS)		3

Requirement	Minimum Grade	Credit Hours
SWU 340 Macro Human Behavior and the Social Environment (SOBE)	C	3
SWU 374 Diversity and Oppression in a Social Work Context (CIVI)	C	3
SWU 432 Social Policy and Services	C	3

Professional Practicum Courses

BSW advancement into practicum courses requires completion of the following:		
1) Successful completion of SWU 171, SWU 291, SWU 295, SWU 303, SWU 306, SWU 311, SWU 312, SWU 340, SWU 374		
2) Documented completion of 40 hours human services experience		
3) Level 1 Fingerprint Clearance Card		
4) Signed Standards of Professional and Ethical Behavior form		
For more information, please visit https://socialwork.asu.edu/field-education		
SWU 410 Social Work Practice II	C	3
SWU 411 Social Work Practice III	C	3
SWU 412 Social Work Practicum I	C	3
SWU 413 Practicum Seminar	C	3
SWU 414 Social Work Practicum II	C	3

Requirement	Minimum Grade	Credit Hours
SWU 415 Integrative Practicum Seminar	C	3

BSW Area of Interest

BSW Area of Interest Course	C	3

- SWU 404 Social Work Practice in Health Care Settings
- SWU 416 Domestic Violence Prevention and Intervention
- SWU 417 Technology, Interpersonal Relationships and Abuse
- SWU 418 Global Violence Against Women
- SWU 442 Child Welfare Practice
- SWU 450 Mastering Mindfulness
- SWU 454 Overview of Addictions
- SWU 456 Immigrants and Refugees (CIVI)
- SWU 457 Southwest Borderland Immigration Issues (CIVI)
- SWU 458 Behavioral Health Services
- SWU 460 Legal Issues in Social Work
- SWU 461 LGBTQ+ Communities: Practice and Policy (CIVI)
- SWU 462 Global Social Welfare (GCSI)
- SWU 488 Advocacy Strategies

Requirement	Minimum Grade	Credit Hours
SWU 494 Topic: Pathways to Global Social Wrk Travl abroad Intensv		
SWU 494 Topic: Intersecting Domestic Violence Child Maltreatment		
SWU 498 Topic: Indigenous Social Policy & Advocacy		
SWU 498 Topic: Aging in Context		

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of SWU 291, SWU 412, or SWU 414 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	
RTH Elective	
TDM Elective	
Area 2: Criminology and Criminal Justice	

CRJ Elective
Area 3: Public Affairs
PAF Elective
Area 4: Public Service and Community Solutions
CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Introductory Courses

ECN 211 Macroeconomic Principles (SOBE) **OR SWU 181 Economics: A Social Issues Perspective**	3
PHI 101 Introduction to Philosophy (HUAD) **OR PHI 105 Intro to Ethics (HUAD)** **OR SWU 183 Introductory Ethics: A Social Issues Perspectives (HUAD)**	3
POS 110 American Government and Politics (AMIT) **OR SWU 182 Social Services Perspective of Government (AMIT)**	3
PSY 101 Introduction to Psychology (SOBE) **OR SOC 101 Introductory Sociology (SOBE)**	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Recreational Therapy, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPRECTCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The recreational therapy certificate requires completion of 18 credit hours: six credit hours of required courses and 12 credit hours of electives. Students seeking the national credential in therapeutic recreation should select electives from that list.		

Required Courses

RTH 364 Foundations in Recreational Therapy (SOBE)	C	3
RTH 413 Leadership and Professional Development in Recreational Therapy	C	3

Elective Courses

Choose four courses from Blocks A and B if interested in the ASU certificate, but not seeking the National Council for Therapeutic Recreation (NCTRC) credential. Choose four courses from only Block B if interested in taking support courses for NCTRC credential: https://www.nctrc.org/about-certification/ctrs-the-qualified-provider/

Elective Courses	C	6
Upper Division Elective Courses	C	6

Requirement	Minimum Grade	Credit Hours

Block A

Choose 4 courses from Block A and B if interested in only ASU certificate. Please note that Block A classes do not meet NCTRC credential requirements.

CDE 244 Children Facing Health Care Challenges

CDE 312 Adolescence (SOBE)

CDE 414 The School-Aged Child: Development in the Elementary Years

CDE 418 Aging and the Life Course (SOBE)

CDE 430 Infant and Toddler Development in the Family (SOBE)

CDE 450 Childhood Disorders and Family Functioning

DST 101 Introduction to Disability Studies (CIVI)

PRM 120 Leisure and the Quality of Life (SOBE)

RTH 453 Inclusive Community Sport

Block B

Students seeking the national credentialing through the National Council for Therapeutic Recreation (NCTRC) should select four courses from this list.

RTH 250 Therapeutic Recreation and Community Health (CIVI)

RTH 400 Intervention Techniques in Recreational Therapy

RTH 440 Advocacy in Therapeutic Recreation (GCSI)

RTH 455 Recreational Therapy and Play with Children, Youth and Families

RTH 460 Assessment and Documentation in Recreational Therapy

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSW/CERT Social Work and Veterans, Society and Service (PPSWUSWU and LAVSSCERT)

Program description:
The curriculum for this undergraduate program leads to a Bachelor of Social Work degree.

Students focus on social work courses in social policy and services, human behavior in the social environment, social work practice, research and practicum instruction in community agencies. In addition, majors take elective courses in related areas.

Students interested in completing the BSW program in Tucson are encouraged to complete a MyPath2ASU®. The Tucson location option is only available to transfer students.

Through the certificate program in veterans, society and service, students explore the history, representations, experiences and culture of military service and veterans.

Students study the veteran community with an interdisciplinary approach that combines history, politics, business, journalism, psychology, law, sociology and the arts through the intersectional lenses of gender, race, ethnicity and national identity. This program trains students to listen to, learn from, serve, research and advocate for veterans and their families.

Future professionals and current employees at government agencies, health provider organizations, nonprofit organizations and media industries can benefit from this multifaceted certificate program.

BSW At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix, West Valley, ASU Sync, ASU at Tucson, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Tempe or Online

Career opportunities:
Graduates are prepared to be generalist social work practitioners who focus on advocacy, referrals, case management and problem-solving functions with individuals, groups, families, organizations and the community.

Employment in social work is expected to increase commensurately with the needs of a growing and diverse population. Social workers are employed in public and private agencies and deal with a wide variety of social issues, including:

- adoption and teen pregnancy
- aging
- child abuse and foster care
- corrections and delinquency
- disability
- discrimination
- domestic violence and family dysfunction
- health and mental health
- homelessness and poverty
- substance abuse

Social work skills such as problem-solving, resource utilization, counseling, group work and community organization are also useful for employee relations and mediation positions in industry.

Students can advance their career options with an undergraduate certificate.

Graduates who have combined the certificate in veterans, society and service with their major program of study may become more marketable to employers.

Graduates often pursue employment as health care social workers, social and community service managers, or community health workers. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Social Work, BSW

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Social Work, BSW
College/School: Watts College of Public Service & Community Solut
Plan Code: PPSWUSWU
Minimum credit hours: 120
Upper division minimum credit hours: 48

Requirement	Minimum Grade	Credit Hours
Major Courses		
SWU 171 Introduction to Social Work (SOBE)	C	3
SWU 291 Social Service Delivery Systems	C	3
SWU 295 Foundations of Social Work Practice	C	3
SWU 302 Human Biology for Social Workers Students who have already completed a human anatomy course may need to take an elective in place of SWU 302. See advisor for permission.		3
SWU 303 Micro Human Behavior and the Social Environment (SOBE)	C	3
SWU 306 Ethics in Social Services (HUAD)	C	3
SWU 311 Integrative Social Work Practice	C	3
SWU 312 Integrative Social Work Practice Skills	C	3
SWU 320 Research Methods in Social Work	C	3
SWU 321 Statistics for Social Workers (QTRS)		3

Requirement	Minimum Grade	Credit Hours
SWU 340 Macro Human Behavior and the Social Environment (SOBE)	C	3
SWU 374 Diversity and Oppression in a Social Work Context (CIVI)	C	3
SWU 432 Social Policy and Services	C	3

Professional Practicum Courses

BSW advancement into practicum courses requires completion of the following:		
1) Successful completion of SWU 171, SWU 291, SWU 295, SWU 303, SWU 306, SWU 311, SWU 312, SWU 340, SWU 374		
2) Documented completion of 40 hours human services experience		
3) Level 1 Fingerprint Clearance Card		
4) Signed Standards of Professional and Ethical Behavior form		
For more information, please visit https://socialwork.asu.edu/field-education		
SWU 410 Social Work Practice II	C	3
SWU 411 Social Work Practice III	C	3
SWU 412 Social Work Practicum I	C	3
SWU 413 Practicum Seminar	C	3
SWU 414 Social Work Practicum II	C	3

Requirement	Minimum Grade	Credit Hours
SWU 415 Integrative Practicum Seminar	C	3

BSW Area of Interest

BSW Area of Interest Course	C	3

- SWU 404 Social Work Practice in Health Care Settings
- SWU 416 Domestic Violence Prevention and Intervention
- SWU 417 Technology, Interpersonal Relationships and Abuse
- SWU 418 Global Violence Against Women
- SWU 442 Child Welfare Practice
- SWU 450 Mastering Mindfulness
- SWU 454 Overview of Addictions
- SWU 456 Immigrants and Refugees (CIVI)
- SWU 457 Southwest Borderland Immigration Issues (CIVI)
- SWU 458 Behavioral Health Services
- SWU 460 Legal Issues in Social Work
- SWU 461 LGBTQ+ Communities: Practice and Policy (CIVI)
- SWU 462 Global Social Welfare (GCSI)
- SWU 488 Advocacy Strategies

Requirement	Minimum Grade	Credit Hours
SWU 494 Topic: Pathways to Global Social Wrk Travl abroad Intensv		
SWU 494 Topic: Intersecting Domestic Violence Child Maltreatment		
SWU 498 Topic: Indigenous Social Policy & Advocacy		
SWU 498 Topic: Aging in Context		

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of SWU 291, SWU 412, or SWU 414 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Community Resources and Development	
CRD Elective	
NLM Elective	
PRM Elective	
RTH Elective	
TDM Elective	
Area 2: Criminology and Criminal Justice	

CRJ Elective
Area 3: Public Affairs
PAF Elective
Area 4: Public Service and Community Solutions
CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

Introductory Courses

ECN 211 Macroeconomic Principles (SOBE) **OR SWU 181 Economics: A Social Issues Perspective**	3
PHI 101 Introduction to Philosophy (HUAD) **OR PHI 105 Intro to Ethics (HUAD)** **OR SWU 183 Introductory Ethics: A Social Issues Perspectives (HUAD)**	3
POS 110 American Government and Politics (AMIT) **OR SWU 182 Social Services Perspective of Government (AMIT)**	3
PSY 101 Introduction to Psychology (SOBE) **OR SOC 101 Introductory Sociology (SOBE)**	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition**		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General

Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Veterans, Society and Service, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LAVSSCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
This certificate requires 18 credit hours, of which at least 12 credit hours must be completed at the upper-division level and nine must be completed at ASU. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Required Courses

MVS 100 Introduction to Military Studies	C	3
MVS 202 Exploring Veteran Culture	C	3
MVS 300 Fighting for American Ideals **or** **MVS 301 Experience of America's Modern Wars**	C	3
MVS 302 Representations and Self-Representations of Veterans in the Media and the Arts (HUAD)	C	3

Elective

Upper Division Electives	C	3
AFR 494 Topic: Black Military History		

Requirement	Minimum Grade	Credit Hours
CAP 316 Combat Trauma		
CAP 336 Counseling Military Veterans		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 414 Crisis Communication		
COM 420 Rhetoric and Community Advocacy		
HST 302 Topic: War and Political Thought		
HST 302 Topic: Women, War and Peace		
HST 306 Topic: World War II		
HST 340 American Military History (HUAD)		
HST 355 Total War and the Crisis of Modernity (HUAD)		
HST 372 Modern Middle East (GCSI)		
HST 456 The Vietnam War (HUAD)		
IAP 307 Art and War (GCSI)		
ISS 428 Religion and Global Violence (GCSI)		
ISS 441 Conflict and Conflict Resolution		
ISS 456 Culture, Conflict and War		
JST 346 Israeli Wars in Israeli Movies		
MCO 494 Topic: War and Media		
MVS 376 Writing a Personal History		
MVS 394 Special Topics		
MVS 395 Combat in Film		
MVS 401 The Military: Law, Ethics and Culture		
MVS 402 Technology and Warfare		

Requirement	Minimum Grade	Credit Hours
MVS 494 Special Topics		
PAF 302 Public Service Research Methods		
POS 310 American National Government (AMIT)		
POS 316 American Political Institutions (AMIT)		
POS 325 Public Policy Development (CIVI)		
POS 346 Problems of Democracy (HUAD)		
POS 350 Comparative Politics (GCSI)		
POS 360 World Politics (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 378 / **REL 378 Religion, War and Peace (CIVI)**		
POS 414 Political History and Leadership		
POS 426 Elements of Public Policy		
POS 467 International Security (GCSI)		
SGS 394 Topic: Gender and Armed Conflict		

Internship

MVS 484 Internship All students must complete an internship and should review their internship options, including virtual, with the CISA internship coordinator. Prerequisite courses may be needed in order to complete the requirements of this certificate.	C	3

Notes

Prerequisite courses may be needed in order to complete the

requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Sociology and Socio-Legal Studies (LASOCBS and LASLSTCERT)

Program description:
Sociology is the study of social life, social change and the social causes and consequences of human behavior.

The Bachelor of Science program in sociology offers courses on contemporary social phenomena such as crime, population trends and technology. Students also explore social institutions such as family, health, sports, law and the workplace. They develop proficiency in written communication, statistical analysis and research methodology, and gain computer skills.

The distinction between law on the books and law in action, which refers to how people experience law in their everyday lives, is a cornerstone of the undergraduate certificate program in socio-legal studies.

The program offers a model for educating and training students in the study of legal ideas, institutions and practices from the perspectives of the social sciences, law and the humanities.

BS At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
Graduates with a BS degree in sociology are prepared for direct entry into positions in:

- business
- government
- social service

The degree also provides excellent preparation for future graduate and postbaccalaureate studies in:

- health care
- law
- social work and counseling
- sociological research

Graduates who have combined the certificate in socio-legal studies with their major program of study may be more marketable to employers. They often decide to pursue employment in law, education, public service, and human welfare and social work. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Sociology, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: The College of Liberal Arts and Sciences
Plan Code: LASOCBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours

Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.

Major Core

SOC 101 Introductory Sociology (SOBE)	C	3
SOC 201 Careers in Sociology	C	1
SOC 290 Introduction to Social Science Research	C	3
SOC 483 Sociological Theories (SOBE)	C	3

Statistics

SOC 390 Social Statistics I (QTRS) OR **STP 226 Elements of Statistics (QTRS)**	C	3

Requirement	Minimum Grade	Credit Hours
Capstone Course		
SOC 490 Advanced Sociological Research Methods OR **SOC 491 Advanced Sociological Perspectives**	C	3
Major Electives		
200-Level **SOC Elective**	C	3
Upper Division **SOC Elective** A maximum of six credits combined of SOC 399, SOC 484, and SOC 499 may apply to major electives.	C	12
SOC Elective	C	6
The College Requirements		
Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count		

towards any major, minor, related fields and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

Related Area Subjects	C	9

- AIS Elective
- AFR Elective
- APA Elective
- ASB Elective
- CAP Elective
- CDE Elective
- CRJ Elective
- DST Elective
- ECN Elective
- FAS Elective
- GCU Elective
- HSC Elective
- JHR Elective
- JUS Elective
- LAW Elective

OGL Elective

POS Elective

PSY Elective

SOC Elective

SOS Elective

SWU Elective

TCL Elective

WST Elective

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

An internship is recommended but not required.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Socio-Legal Studies, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LASLSTCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in socio-legal studies requires 15 credit hours with at least 12 credit hours completed at the upper-division level. A minimum grade of "C" (2.00 on a 4.00 scale) is required for a course to count toward the certificate.		

Socio-Legal Studies Core (choose two)

Upper Division Core Theory and Foundation Courses	C	6
JUS 303 Justice Theory (CIVI)		
JUS 308 Courts and Society (SOBE)		
JUS 360 / CRJ 350 Law and Social Control (CIVI)		
JUS 410 Punishment: Logic and Approach		
JUS 463 / CRJ 470 Discretionary Justice (SOBE)		
JUS 465 Death Penalty in the United States		
PHI 307 Philosophy of Law (AMIT)		
PHI 336 Social and Political Philosophy		
PHI 408 Feminist Ethics (HUAD)		

Requirement	Minimum Grade	Credit Hours
POS 315 The Supreme Court		
POS 465 International Organization and Law (GCSI)		
POS 471 Constitutional Law I (AMIT)		
POS 472 Constitutional Law II		

Interdisciplinary Electives

Interdisciplinary electives must be taken from at least two different academic disciplines. Any course listed below may count towards this requirement. Other courses can be approved by contacting the School of Social Transformation Advising.

Electives	C	3
AFR 215 / JUS 215 Bob Marley and Reggae: Lyrics of Resistance (GCSI)		
AFR 301 Race and Racism in Africa/African Diaspora (HUAD)		
AFR 304 / JUS 304 Islands of Globalization: Caribbean Politics and Political Economy		
AFR 420 / JUS 421 Race Ethnicity and Politics in the African Diaspora		
AFR 428 / JUS 428 Critical Race Theory		
CRJ 305 Gender, Crime, and Criminal Justice (SOBE)		
CRJ 306 Race, Ethnicity, Crime, and Criminal Justice (CIVI)		
JUS 329 Domestic Violence (SOBE)		
JUS 350 Immigration and Justice (SOBE)		
JUS 374 The Holocaust, Genocide, and Human Rights		
JUS 422 / WST 422 Women, Law, and Social Control		
JUS 425 Race, Gender, and Justice (CIVI)		

Requirement	Minimum Grade	Credit Hours
JUS 430 Social Protest, Conflict, and Change (CIVI)		
JUS 432 Racial Justice (CIVI)		
JUS 467 Terrorism, War, and Justice (CIVI)		
JUS 469 Political Deviance and the Law		
JUS 470 Alternative Dispute Resolution		
JUS 484 / SST 484 Internship		
JUS 498 / SST 498 Topic: Research Apprenticeship		
POS 370 Law and Society (CIVI)		
POS 470 Law and the Political Order		
PSY 468 Psychology and Law		
SOC 340 Social Deviance		
SOC 445 Globalization, Development, and Resistance		
TCL 335 / HST 323 / AFR 335 Historical Studies in Race, Crime, and the Law		
TCL 340 Chicana/o and Latina/o Politics and Policy		
Upper Division Electives	C	6
AFR 301 Race and Racism in Africa/African Diaspora (HUAD)		
AFR 304 / JUS 304 Islands of Globalization: Caribbean Politics and Political Economy		
AFR 420 / JUS 421 Race Ethnicity and Politics in the African Diaspora		
AFR 428 / JUS 428 Critical Race Theory		
CRJ 305 Gender, Crime, and Criminal Justice (SOBE)		
CRJ 306 Race, Ethnicity, Crime, and Criminal Justice (CIVI)		

Requirement	Minimum Grade	Credit Hours
JUS 329 Domestic Violence (SOBE)		
JUS 350 Immigration and Justice (SOBE)		
JUS 374 The Holocaust, Genocide, and Human Rights		
JUS 422 / WST 422 Women, Law, and Social Control		
JUS 425 Race, Gender, and Justice (CIVI)		
JUS 430 Social Protest, Conflict, and Change (CIVI)		
JUS 432 Racial Justice (CIVI)		
JUS 467 Terrorism, War, and Justice (CIVI)		
JUS 469 Political Deviance and the Law		
JUS 470 Alternative Dispute Resolution		
JUS 484 / SST 484 Internship		
JUS 498 / SST 498 Topic: Research Apprenticeship		
POS 370 Law and Society (CIVI)		
POS 470 Law and the Political Order		
PSY 468 Psychology and Law		
SOC 340 Social Deviance		
SOC 445 Globalization, Development, and Resistance		
TCL 335 / HST 323 / AFR 335 Historical Studies in Race, Crime, and the Law		
TCL 340 Chicana/o and Latina/o Politics and Policy		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Software Engineering and Computer Gaming (TSSERBS and ESSCICERT)

Program description:
The Bachelor of Science program in software engineering blends engineering, computing, project leadership and software construction.

Students learn how to create innovative software solutions to today's problems. Software systems are complex, often including millions of lines of code. Graduates of this program have the knowledge and skills of a defined engineering approach to complex systems analysis, planning, design and construction.

The program has a unique, project-driven curriculum, establishing a new model for software engineering education. The program is built around the concepts of engaged learning, discovery-based education, and learning by doing. Students learn by solving engaging projects, commonly as a member of a development team. In each semester of the program, students complete projects that emphasize communication, teamwork, critical thinking and professionalism. They have flexibility in designing their course of study and select technical electives from a pool of courses in different software engineering application areas; these include web and mobile applications, embedded systems and other interdisciplinary areas.

Accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Software Engineering Program Criteria.

The computer gaming certificate program provides students with a game development skill set that they can apply to domain-specific applications in their major. The skill set includes architecture of game engines, art design and computer graphics for gaming, and game software development.

Students learn to apply gaming technology to the rapidly growing video game industry and to fields including business, medicine, geography, biotechnology and education. Examples of projects are:

- building a game that teaches linear algebra by incorporating trigonometric rules into the game design
- creating a game that teaches correct sentence construction to beginning learners of English
- creating a game to help patients with physical therapy
- creating an interactive virtual world for corporate training
- designing a game platform that incorporates geographic information systems
- inventing a surgical simulation to educate medical students

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Tempe

Career opportunities:
Software engineers solve a broad set of transdisciplinary problems and apply new technologies to improve quality of life.

Graduates are prepared for advanced study in computing or an allied field, or to enter the computing profession, most commonly as application software engineers. They design and engineer innovative systems that may include mechanical and electrical components that interact with software.

According to the Bureau of Labor Statistics, software engineers are highly paid, and there is significant growth in the number of employment opportunities. Software engineering jobs may include:

- creating applications for mobile devices
- creating web applications
- designing, creating and validating software for avionics, robotics and similar systems

Students can advance their career options with an undergraduate certificate. Those who add this computer gaming specialization as a complement to their major program of study may be more marketable to employers in the gaming industry.

Curriculum - Software Engineering, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: TSSERBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Not all courses are available through ASU Online campus.		
Some ASU Online courses are only offered in specific sessions. Please see advising for course planning. Please see our degree requirements website for links to our flowcharts and our most up to date course lists. Polytechnic Campus: https://scai.engineering.asu.edu/software-engineering-degree-requirements-ground-campus/ ASU Online campus: https://scai.engineering.asu.edu/software-engineering-degree-requirements-online/		

Software Engineering Enterprise Requirements

SER 216 Software Enterprise: Personal Process and Quality	C	3
SER 315 Software Enterprise: Design and Process	C	3
SER 316 Software Enterprise: Construction and Transition	C	3
SER 415 Software Enterprise: Inception and Elaboration	C	3
SER 416 Software Enterprise: Project and Process	C	3

Requirement	Minimum Grade	Credit Hours
Management		
Software Engineering Upper Division Core		
SER 321 Principles of Distributed Software Systems	C	3
SER 322 Principles of Database Management	C	3
SER 334 Operating Systems and System Programming	C	3
SER 335 Engineering Secure Software Systems	C	3
Software Engineering Enterprise and Focus Project Requirements		
SER 401 Computing Capstone Project I	C	3
SER 402 Computing Capstone Project II	C	3
Software Engineering Electives		
400-Level **SER Elective**	C	9
Software Engineering Major GPA		
Check: Minimum 2.0 Major GPA		

Not all courses are available through ASU Online campus

Interdisciplinary Requirements

Lab Science Sequence

BIO 181 General Biology I (SCIT)		
BIO 182 General Biology II (SCIT)		
BIO 201 Human Anatomy and Physiology I (SCIT) **AND** **BIO 202 Human Anatomy and Physiology II (SCIT)**		
CHM 113 General Chemistry I (SCIT) **AND** **CHM 116 General Chemistry II (SCIT)**		
GLG 101 Introduction to Geology I (Physical) (SCIT) **AND** **GLG 103 Introduction to Geology I: Laboratory (SCIT)**		8
GLG 102 Introduction to Geology II (Historical) (SCIT) **AND** **GLG 104 Introduction to Geology II: Laboratory (SCIT)**		
GLG 110 Dangerous World (SCIT) **AND** **GLG 111 Dangerous World Laboratory (SCIT)**		
MIC 205 Microbiology (SCIT) **AND** **MIC 206 Microbiology Laboratory (SCIT)**		
PHY 131 University Physics II: Electricity and Magnetism (SCIT) **AND** **PHY 132 University Physics Laboratory II (SCIT)**		

AND Scientific Thinking in Natural Sciences (SCIT)

FSE 100 Introduction to Engineering	C	2

MAT 243 Discrete Mathematical Structures	C	3
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH) OR MAT 275 Modern Differential Equations (MATH)	C	3
MAT 343 Applied Linear Algebra	C	3
PHY 121 University Physics I: Mechanics (SCIT) AND PHY 122 University Physics Laboratory I (SCIT)	C	4
IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3

Software Engineering Lower Division Core Requirements

CSE 110 Principles of Programming (QTRS)	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
CSE 230 Computer Organization and Assembly Language Programming	C	3
CSE 240 Introduction to Programming Languages	C	3
SER 222 Design and Analysis of Data Structures and Algorithms	C	3
SER 232 Computer Systems Fundamentals (QTRS)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CAI The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Computer Gaming, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Ira A. Fulton Schools of Engineering

Plan Code: ESSCICERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Students will complete nine credit hours of core courses (including a final capstone project) and nine credit hours of elective courses. The certificate requires 12 credit hours of upper-division coursework. All courses must be passed with a "C" or better. Students need to allow at least three years to complete the certificate program due to the prerequisite structure.		

Computer Gaming Certificate Requirements

CPI 111 Game Development I (QTRS)	C	3
CPI 211 Game Development II	C	3
CPI 441 Gaming Capstone CPI 441 is only offered in Spring semesters	C	3
Upper Division Elective Courses (choose three)	C	9
CPI 311 Game Engine Development **OR** **SER 332 Introduction to Graphics and Game Development**		
CPI 321 Fundamentals of Game Art		
CPI 394 Topic: Game Design Fundamentals		

Requirement	Minimum Grade	Credit Hours
CPI 411 Graphics for Games OR SER 432 Game Engine Architecture		
CPI 421 3-D Modeling and Texturing		
CPI 462 Design for Learning in Virtual Worlds		
CPI 484 Internship		
FMS 365 Video Games and Narrative		
SER 431 Advanced Graphics		

CPI 411 is only offered in the spring semester. CPI 421 is only offered in the fall semester. CPI 462 and SER 431 are offered infrequently.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Software Engineering and Project Management Essentials (TSSERBS and LSPMGECERT)

Program description:
The Bachelor of Science program in software engineering blends engineering, computing, project leadership and software construction.

Students learn how to create innovative software solutions to today's problems. Software systems are complex, often including millions of lines of code. Graduates of this program have the knowledge and skills of a defined engineering approach to complex systems analysis, planning, design and construction.

The program has a unique, project-driven curriculum, establishing a new model for software engineering education. The program is built around the concepts of engaged learning, discovery-based education, and learning by doing. Students learn by solving engaging projects, commonly as a member of a development team. In each semester of the program, students complete projects that emphasize communication, teamwork, critical thinking and professionalism. They have flexibility in designing their course of study and select technical electives from a pool of courses in different software engineering application areas; these include web and mobile applications, embedded systems and other interdisciplinary areas.

Accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Software Engineering Program Criteria.

In the stackable undergraduate certificate program in project management essentials, students gain the skills to lead successful projects. This program covers key areas of project management including: project leadership, strategy, sustainability and organizational behavior. The program is ideal for those looking to enhance their project management expertise and drive positive change in any industry.

This certificate program can be completed as a standalone certificate, completed alongside a degree program, or it can stack into a future bachelor's degree.

BS At a Glance:
College/school: Ira A. Fulton Schools of Engineering
Location: Polytechnic, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 265 - Calculus for Engineers I
Math intensity: Substantial

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic, Tempe or Online

Career opportunities:
Software engineers solve a broad set of transdisciplinary problems and apply new technologies to improve quality of life.

Graduates are prepared for advanced study in computing or an allied field, or to enter the computing profession, most commonly as application software engineers. They design and engineer innovative systems that may include mechanical and electrical components that interact with software.

According to the Bureau of Labor Statistics, software engineers are highly paid, and there is significant growth in the number of employment opportunities. Software engineering jobs may include:

- creating applications for mobile devices
- creating web applications
- designing, creating and validating software for avionics, robotics and similar system

This certificate in project management essentials opens doors to a wide variety of entry-level career opportunities. Graduates can pursue roles such as project coordinator, project assistant, junior project manager and project scheduler, among others. These positions offer the chance to support senior project managers, manage project schedules, assist with administrative tasks, and help ensure the smooth execution of projects.

Curriculum - Software Engineering, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Ira A. Fulton Schools of Engineering
Plan Code: TSSERBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Not all courses are available through ASU Online campus.		
Some ASU Online courses are only offered in specific sessions. Please see advising for course planning. Please see our degree requirements website for links to our flowcharts and our most up to date course lists. Polytechnic Campus: https://scai.engineering.asu.edu/software-engineering-degree-requirements-ground-campus/ ASU Online campus: https://scai.engineering.asu.edu/software-engineering-degree-requirements-online/		

Software Engineering Enterprise Requirements

SER 216 Software Enterprise: Personal Process and Quality	C	3
SER 315 Software Enterprise: Design and Process	C	3
SER 316 Software Enterprise: Construction and Transition	C	3
SER 415 Software Enterprise: Inception and Elaboration	C	3
SER 416 Software Enterprise: Project and Process	C	3

Requirement	Minimum Grade	Credit Hours
Management		
Software Engineering Upper Division Core		
SER 321 Principles of Distributed Software Systems	C	3
SER 322 Principles of Database Management	C	3
SER 334 Operating Systems and System Programming	C	3
SER 335 Engineering Secure Software Systems	C	3
Software Engineering Enterprise and Focus Project Requirements		
SER 401 Computing Capstone Project I	C	3
SER 402 Computing Capstone Project II	C	3
Software Engineering Electives		
400-Level **SER Elective**	C	9
Software Engineering Major GPA		
Check: Minimum 2.0 Major GPA		

Not all courses are available through ASU Online campus

Interdisciplinary Requirements

Lab Science Sequence

BIO 181 General Biology I (SCIT)		
BIO 182 General Biology II (SCIT)		
BIO 201 Human Anatomy and Physiology I (SCIT) **AND** **BIO 202 Human Anatomy and Physiology II (SCIT)**		
CHM 113 General Chemistry I (SCIT) **AND** **CHM 116 General Chemistry II (SCIT)**		
GLG 101 Introduction to Geology I (Physical) (SCIT) **AND** **GLG 103 Introduction to Geology I: Laboratory (SCIT)**		8
GLG 102 Introduction to Geology II (Historical) (SCIT) **AND** **GLG 104 Introduction to Geology II: Laboratory (SCIT)**		
GLG 110 Dangerous World (SCIT) **AND** **GLG 111 Dangerous World Laboratory (SCIT)**		
MIC 205 Microbiology (SCIT) **AND** **MIC 206 Microbiology Laboratory (SCIT)**		
PHY 131 University Physics II: Electricity and Magnetism (SCIT) **AND** **PHY 132 University Physics Laboratory II (SCIT)**		

AND Scientific Thinking in Natural Sciences (SCIT)

FSE 100 Introduction to Engineering	C	2

MAT 243 Discrete Mathematical Structures	C	3
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH) OR MAT 275 Modern Differential Equations (MATH)	C	3
MAT 343 Applied Linear Algebra	C	3
PHY 121 University Physics I: Mechanics (SCIT) AND PHY 122 University Physics Laboratory I (SCIT)	C	4
IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3

Software Engineering Lower Division Core Requirements

CSE 110 Principles of Programming (QTRS)	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
CSE 230 Computer Organization and Assembly Language Programming	C	3
CSE 240 Introduction to Programming Languages	C	3
SER 222 Design and Analysis of Data Structures and Algorithms	C	3
SER 232 Computer Systems Fundamentals (QTRS)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CAI The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is

applied according to the designation the course carries at the time the class is taken.

Curriculum - Project Management Essentials, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LSPMGECERT

Minimum credit hours: 15

Upper division minimum credit hours: 3

Requirement	Minimum Grade	Credit Hours
OGL 220 Behavioral Dynamics in Organizations (SOBE)	C	3
PMG 101 Navigating Project Management: Successes, Failures, and Leadership Dynamics	C	3
PMG 203 Project Management for People, Planet and Prosperity	C	3
PMG 240 Introduction to Project Management	C	3
PMG 321 Project Leadership, Strategy and Scope	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Speech and Hearing Science and Interdisciplinary Health Humanities (LASHSBS and LAIHHUCERT)

Program description:
The Bachelor of Science program in speech and hearing science engages students in study of the normal aspects of the communication process, with emphasis on:

the human communication system, including the anatomy and physiology of the hearing and speech mechanisms
normal development of speech and language production and perception
speech, language and hearing science
The curriculum enables students to develop knowledge and skills to evaluate and determine speech and language deficits and disorders. Upper-division coursework introduces clinical methods and disorders of speech, language and hearing.

The interdisciplinary health humanities certificate program brings humanities methodologies to analyses of health and medicine to address challenges in health policy and health care practice and to advance understandings of the cultural formations of health, illness and the body.

The curriculum includes courses in history of medicine, bioethics, disability studies, sociocultural aspects of health and narrative medicine. It includes critical analyses of representations of health and illness in literature and other media, as well as training in narrative and structural competency for health care professionals. A capstone course, internship or applied project offers experiential or project-based learning in this field.

BS At a Glance:
College/school: College of Health Solutions
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 117 - College Algebra
or MAT 170 Precalculus
Math intensity: Moderate

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, West Valley

Career opportunities:
Positions in speech-language pathology and audiology are in high demand, rated as careers with bright outlooks by the U.S. Department of Labor's Occupational Information Network. Potential employment opportunities for program graduates include these positions:

- audiology assistant
- hearing aid or cochlear implant company representative
- research assistant or associate in a behavioral discipline
- speech-language pathology assistant
- support staff member in a rehabilitation or health facility

Many graduates of speech and hearing sciences gain entrance to graduate-level programs in speech-language pathology or audiology. In both fields, a graduate degree is required for employment.

The undergraduate degree in speech and hearing science is also excellent preparation for those who wish to enter professional or graduate programs in fields such as:

- counseling
- education
- medicine
- rehabilitation
- social work
- special education
- teaching for the deaf

Graduates work with a variety of populations, including people on the autism spectrum, bilingual language learners, those with delayed or disordered speech and language or those experiencing hearing impairment or stuttering, patients recovering from strokes, or patients with degenerative or neurological disease. Graduates work with patients and clients

across the life span, from infants to geriatrics, in a variety of settings.

Students can become more marketable and can advance their career options when they complement their major with this methodological specialization in interdisciplinary health humanities.

Graduates who have completed this undergraduate certificate often decide to pursue employment in the health professions. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Speech and Hearing Science, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: College of Health Solutions
Plan Code: LASHSBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Courses		
SHS 205 Exploring Communication Disorders in Children and Adults	C	3
SHS 250 Introduction to Phonetics	C	3
SHS 310 Anatomical and Physiological Bases of Speech	C	3
SHS 311 Hearing Science	C	3
SHS 367 Language Science (SOBE)	C	3
SHS 375 Speech Science	C	3
SHS 401 Principles of Audiology	C	3
SHS 402 Clinical Methods and Treatment of Communication Disorders	C	3
SHS 465 Speech and Language Acquisition (SOBE)	C	3
SHS 470 Developmental Speech and Language Disorders	C	3
SHS 485 Acquired Speech and Language Disorders	C	3

Requirement	Minimum Grade	Credit Hours
SHS 496 Aural Rehabilitation	C	3

College of Health Solutions Requirements

CHS 100 Optimizing Your Health and Performance (SOBE) OR **CHS 300 An Exploration of Well-Being (SOBE)** First-year students should take CHS 100. Students who enter with more than 30 credits should take CHS 300.	C	3
Experiential Learning Course **CHS 280 Experiential Community Health and Research** **CHS 394 Topic: Facilitator Seminar** **CHS 484 Topic: Applied Health Experience** **CHS 484 Topic: Citizen Science in Health** **CHS 484 Topic: Translational Research** **CHS 493 Honors Thesis** **CHS 494 Topic: Undergraduate Research** **CHS 494 Topic: Undergraduate Teaching Assistant** **MED 325 Elements of Hospice and Palliative Care** **MED 375 Alzheimer's and Other Dementias** **MED 475 Palliative Care: Managing Complex Serious Illness** **SHS 484 Internship** **SHS 484 Topic: Pre-Audiology Experience**	C	3

SHS 484 Topic: SLPA Certificate

SHS 498 Topic: Advanced Research Experience in Speech/Hearing Sci

The list provided includes courses that are most relevant to the Speech and Hearing Science, BS program. To view additional options, visit: https://chs.asu.edu/current-students/experiential-learning.

Foundational Courses

BIO 160 Introduction to Anatomy and Physiology (SCIT)	C	4
ENG 301 Writing for the Professions	C	3
HCD 300 Biostatistics (QTRS) OR **PSY 230 Introduction to Statistics (QTRS)** OR **STP 226 Elements of Statistics (QTRS)**	C	3
MAT 117 College Algebra (MATH) OR **MAT 170 Precalculus (MATH)**	C	3
PHY 101 Introduction to Physics (SCIT)	C	4
PSY 101 Introduction to Psychology (SOBE)	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

CHS 101 The ASU Experience for Health Solutions Students	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** OR **ENG 105 Advanced First-Year Composition** OR **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

In order to be competitive for speech and hearing science graduate programs, it is recommended that students maintain a minimum ASU cumulative GPA of 3.5 or higher. For information on speech and hearing science graduate program application procedures and career opportunities, visit: https://www.asha.org/students.

For student resources, including academic advising appointment scheduling, forms and policies, internship information, involvement/research opportunities and more, visit: https://chs.asu.edu/.

Students interested in pursuing health-related professional and graduate programs should explore pre-health resources,

including Pre-Health 101 Workshops and Pre-Health Advising. For more information, visit: https://prehealth.asu.edu/.

Career preparation resources are available through Career Services. For more information, visit: https://career.asu.edu/.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Interdisciplinary Health Humanities, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAIHHUCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The interdisciplinary health humanities certificate requires a total of 15 credit hours. A minimum of 12 upper-division credit hours are required, with at least nine of those credit hours taken in courses offered by The College of Liberal Arts and Sciences for students on the Tempe campus, or by the School of Humanities, Arts and Cultural Studies in the New College of Interdisciplinary Arts and Sciences on the West Valley campus. All courses must be completed with a grade of "C" (2.00 on a 4.00 scale) or higher.		

Interdisciplinary Health Humanities Core

ENG 203 Introduction to Health Humanities ENG 203 is available on the Tempe and West Valley campuses.	C	3
ENG 484 Internship **or** **ENG 498 Topic: Interdisciplinary Health Humanities Projects** **or** **ENG 499 Individualized Instruction**	C	3

Electives

Upper Division Electives	C	9
AFR 383 Blacks in Science, Medicine and Public Health		

Requirement	Minimum Grade	Credit Hours
ASB 301 Global History of Health (HUAD)		
ASB 305 Poverty and Global Health (CIVI)		
ASB 353 / SOC 353 Death and Dying in Cross-Cultural Perspective (GCSI)		
ASB 355 Traditional Medicine and Healing (HUAD)		
BIO 312 / IAS 340 / PHI 320 Bioethics (HUAD)		
BIO 315 Science, Values, and the Public		
ENG 469 Science and Literature		
FIS 498 Topic: Stem Cell Policy Research		
FOR 406 / IAS 406 / PHI 406 Moral Dilemmas		
HCI 313 Philosophy of Science in Health Care: Understanding Paradigms of Health and Healing		
HPS 314 / PHI 314 Philosophy of Science (HUAD)		
HPS 331 / BIO 318 History of Medicine (HUAD)		
LSC 363 Genes, Race, Gender, and Society		
MED 300 Historical and Contemporary Issues in Health		
PHI 306 Applied Ethics (CIVI)		
REL 381 Religion and Moral Issues (HUAD)		
SOC 400 Perspectives on Aging		
SOC 448 Epidemics and Society (GCSI)		
TCL 323 Latina/o Health Issues (SOBE)		
TCL 410 Race, Medicine, and the Body		
WST 444 Gender, Health, and Bodies (SOBE)		

Requirement	Minimum Grade	Credit Hours
Some elective courses may be available only on the Tempe campus or the West Valley campus.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Supply Chain Management and Applied Business Data Analytics (BASCMBS and BABDACERT)

Program description:
Supply chain managers play a crucial role in coordinating the seamless flow of goods and services, from raw material procurement to the delivery of final products to consumers. In today's globalized marketplace, where supply chains span multiple vendors and geographical regions, effective supply chain management is essential for ensuring timely delivery, cost efficiency and customer satisfaction.

The Bachelor of Science program in supply chain management offers students a comprehensive understanding of integrated supply chain management principles and practices. Rooted in theoretical frameworks and practical applications, the curriculum encompasses a wide variety of topics, including:

- execution systems
- logistics
- negotiations
- operations management
- planning
- procurement
- strategy development

By integrating these topics with quantitative methodologies such as statistical modeling, data warehousing, data mining, programming, forecasting, operations research techniques, optimization, stochastic modeling, operations analysis, and design and prototyping, students gain a comprehensive understanding of how to leverage data-driven insights. They also acquire advanced analytical tools to optimize supply chain performance and drive strategic decision-making.

Classes are kept small to foster a collaborative learning environment, enabling students to engage actively with faculty and peers. Through hands-on projects and practical case studies, students have the opportunity to apply theoretical concepts to practical scenarios, bringing the material to life and gaining valuable insights into industry best practices.

The certificate program in applied business data analytics is for students who are interested in practical uses for computer-based tool suites that are capable of managing vast amounts of data. Students learn sophisticated but easy-to-use means of managing and analyzing such data. They leverage the tools for making good decisions about projects, process designs and fundamental tasks.

Exposure to predictive analytics and modeling, big data techniques, and visualization provides significant insight into the advanced uses of the computer-based tools. Critical thinking is an important skill and mindset; it is needed to establish and evaluate evidence-based benchmarks in order to make good data decisions that lead to high-quality outcomes.

BS At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: Yes
First required math course: MAT 210 - Brief Calculus
Math intensity: Moderate

CERT At a Glance:
College/school: W. P. Carey School of Business
Location: Tempe or Online

Career opportunities:
Career track progression could lead to the vice president level in supply chain-related areas. Graduates of this program are recruited by firms around the world and in all sectors of the economy, including:

- health care
- manufacturing
- public and private
- retail
- service

Graduates of this program are highly sought-after and have excellent placements. Positions that supply chain management graduates have obtained include:

- buyer or planner
- distribution manager
- internet marketing analyst
- inventory specialist
- logistics planner
- materials manager
- operations planner or analyst
- planner or analyst
- production coordinator
- supply management analyst

Students can advance their career options with an undergraduate certificate. With this specialization as a complement to their major program of study, graduates are more attractive to future employers.

Graduates with this certificate often decide to pursue employment in management, business analysis or marketing. Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Supply Chain Management, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: W. P. Carey School of Business
Plan Code: BASCMBS
Minimum credit hours: 120
Upper division minimum credit hours: 50.5

Requirement	Minimum Grade	Credit Hours
Career Navigation		
WPC 148 First-Year Introduction to Career Development	C	0.25
WPC 248 Sophomore Career Narrative Design OR **WPC 347 Intermediate Career Management** Career Navigation Course Sequence: Continuing first-year students will take WPC 248, after completing WPC 148. New transfer students will take WPC 347.	C	0.25
WPC 348 Junior Networking Foundations	C	0.25
WPC 448 Senior Career Transition Management	C	0.25
Business Core Courses		
FIN 300 Fundamentals of Finance	C	3
LES 305 Business Law and Ethics for Managers	C	3
MKT 300 Marketing and Business Performance	C	3
MGT 300 Principles of Management and Leadership	C	3

Requirement	Minimum Grade	Credit Hours
SCM 300 Global Supply Operations (SUST)	C	3
WPC 300 Problem Solving and Actionable Analytics (QTRS)	C	3
Upper Division International Business Course AGB 302 International Management and Agribusiness (GCSI) ECN 306 Survey of International Economics (GCSI) MGT 302 Principles of International Business (GCSI) MKT 425 Global Marketing Management (GCSI) SCM 463 Global Supply Chain Management (GCSI)	C	3
AND Global Communities, Societies, and Individuals (GCSI)		

Major Courses

SCM 315 Supply Chain Analytics	C	3
SCM 345 Logistics Management	C	3
SCM 355 Procurement and Supply Management	C	3
SCM 432 Operations Management	C	3
SCM 455 Research and Negotiation	C	3
SCM 479 Supply Chain Strategy	C	3

Business Capstone

Requirement	Minimum Grade	Credit Hours
WPC 480 W. P. Carey Capstone Course All upper-division Business Core classes (including International Business course) must be completed before enrolling in WPC 480.	C	3

Business Skills Courses

CIS 105 Computer Applications and Information Technology (QTRS)	C	3
ACC 231 Uses of Accounting Information I	C	3
ACC 241 Uses of Accounting Information II	C	3
ECN 211 Macroeconomic Principles (SOBE)	C	3
ECN 212 Microeconomic Principles (SOBE)	C	3
MAT 210 Brief Calculus (MATH)	C	3
MAT 211 Mathematics for Business Analysis	C	3
ECN 221 Business Statistics (QTRS)	C	3

Other Business Courses

ENG 302 Business Writing		3
COM 259 Communication in Business and the Professions (CIVI)		3
PSY Elective **AND** Social and Behavioral Sciences (SOBE)		3

SOC Elective **AND** Social and Behavioral Sciences (SOBE)		3
WPC 150 Business and Society WPC 150 is required of all first-year business students. Transfer students will not be required to complete WPC 150 and instead will complete three hours of elective credit.	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

WPC 101 Student Success in Business WPC 101 is the W. P. Carey School of Business course that satisfies ASU 101.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.
Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.
Students must earn a 2.0 GPA in all courses offered by the W. P. Carey School of Business.
Students must earn a 2.0 GPA in major courses.
Students must complete a minimum of 31 credit hours of W. P. Carey School of Business courses taken at ASU.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Applied Business Data Analytics, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: W. P. Carey School of Business

Plan Code: BABDACERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in applied business data analytics requires 18 credit hours with at least 12 upper division credit hours. To earn the certificate, students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
CIS 105 Computer Applications and Information Technology (QTRS)	C	3
CIS 308 Advanced Excel in Business	C	3
CIS 309 Business Process Management	C	3
CIS 310 Business Data Visualization	C	3
CIS 405 Business Intelligence	C	3
Any Statistics Course **or** **CIS 313 Location Analytics in Business**	C	3

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Sustainability and Environmental Humanities (SUSUSTBA and LAENHCERT)

Program description:
Students in ASU's School of Sustainability are reinventing the future of a world at risk. Students gain career preparation through experiential learning, study abroad programs, research with faculty, community engagement and leadership development. Their knowledge and innovations will shape the social and environmental quality of life for future generations.

The School of Sustainability offers a Bachelor of Arts and a Bachelor of Science program in sustainability. Students focus on developing practical solutions to some of the most pressing environmental, economic and social challenges of sustainability, honing their skills in resilience and systems thinking. They learn to manage trade-offs, engage with diverse stakeholders, utilize future-visioning tools, and assess the ethics and values associated with different solution pathways.

The BA program is geared toward students with interests in the social dimensions of sustainability, in local to global contexts, with an emphasis on governance, policy, urban systems and international development.

The environmental humanities certificate program is for students who are interested in humanities-based approaches to the current global environmental crisis, a vital area of study.

Courses are focused on the human relationship to the environment and the relationship between nature and culture. To gain practical experience, students also complete an internship in environmental activism, policy development, education or another pertinent area.

BA At a Glance:
College/school: College of Global Futures
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: Yes
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe

Career opportunities:
The growing emphasis on sustainability extends beyond corporate and governmental sectors, offering diverse career opportunities in nonprofits, nongovernmental organizations, community development, justice equity and inclusion efforts. Opportunities encompass sustainability coordination, management, leadership and more. Students can explore alumni employment data for career insights on the College of Global Futures employment data page.

Individuals with a BA in sustainability distinctly contribute to these fields. Their education equips them with a comprehensive approach to addressing sustainability challenges, making them valuable to employers and graduate programs. These graduates possess a deep understanding of complex systems drawn from diverse disciplines, and they excel in forward-thinking strategies and stakeholder engagement.

Their strong communication skills, honed through coursework and authentic experiences, enable them to effectively convey sustainability concepts. Additionally, their expertise in teamwork and relationship-building empowers seamless collaboration in diverse settings. Armed with these skills, graduates are well prepared to make a lasting impact on the environment, society and global sustainability efforts.

Graduates with this certificate have gained a multidisciplinary knowledge base and practical skill set that enable them to enact social and environmental change. They are well prepared for careers in sustainability, environmental science and public policy, and they are better equipped to implement environmentally responsible practices in their own lives.

Curriculum - Sustainability, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: College of Global Futures
Plan Code: SUSUSTBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Sustainability Quantitative Courses		
SOS 102 Quantitative Reasoning for Sustainability	C	3
STP 226 Elements of Statistics (QTRS)	C	3
Sustainability Introductory Courses		
SOS 110 Building a Sustainable World (SUST)	C	3
SOS 111 Sustainable Cities (SUST)	C	3
Sustainability Core Competency and Skill Courses		
SOS 220 Systems Thinking	C	3
SOS 232 Professional Skills in Sustainability Practice	C	3
SOS 310 Equity, Justice and Sustainability (HUAD)	C	3
SOS 311 Future Thinking and Strategies	C	3

Requirement	Minimum Grade	Credit Hours
Sustainability Track Courses Students must select a single Sustainability Track. This track selection impacts the course options for the Sustainability Track Course requirement and the Sustainability Track Electives requirement. Students should select their track and notify their academic advisor by the end of sophomore year or as early as possible.		
BA sustainability students must select one of the following tracks: Society and Sustainability, Policy and Governance in Sustainable Systems, International Development and Sustainability, or Sustainable Urban Dynamics.		
Students complete the required course of their chosen track. Society and Sustainability Track - Required Course: SOS 320; Policy and Governance in Sustainable Systems Track - Required Course: SOS 321; International Development and Sustainability Track - Required Course: SOS 322; Sustainable Urban Dynamics Track - Required Course: SOS 323		
SOS 320 Society and Sustainability (SOBE) OR **SOS 321 Policy and Governance in Sustainable Systems** OR **SOS 322 International Development and Sustainability** OR **SOS 323 Sustainable Urban Dynamics**	C	3
Students complete three additional track courses, beyond their required track course, from the following:		
SOS 320 Society and Sustainability (SOBE) OR **SOS 321 Policy and Governance in Sustainable Systems**	C	9

Requirement	Minimum Grade	Credit Hours
OR **SOS 322 International Development and Sustainability**		
OR **SOS 323 Sustainable Urban Dynamics**		
OR **SOS 324 Sustainable Energy Technology and Systems**		
OR **SOS 325 The Economics of Sustainability**		
OR **SOS 326 Sustainable Ecosystems**		
OR **SOS 327 Sustainable Food and Farms**		
OR **SOS 328 Sustainability and Enterprise**		

Sustainability Track Electives

Take two elective courses from your selected track. At least one course (3 credit hours) must be upper division.

Society and Sustainability	C	3
ASB 202 Immigration and Ethnic Relations in the U.S. (CIVI)		
ASB 211 Women in Other Cultures		
ASB 311 Principles of Social Anthropology (GCSI)		
ASB 326 Human Impacts on Ancient Environments (SUST)		
ASB 344 Technology and Society (SOBE)		
ASB 370 Ethics of Eating (SUST)		
BIO 311 Biology and Society		
BIO 434 People and Nature: Ecosystem Services		

Requirement	Minimum Grade	Credit Hours
ENG 367 Environmental Issues in Literature and Film		
FIS 111 Welcome to the Future (CIVI)		
FIS 334 Science, Technology and Inequality (GCSI)		
GCU 350 The Geography of World Crises (GCSI)		
GCU 357 Social Geography		
GCU 441 Economic Geography		
GCU 442 Geographical Analysis of Transportation		
GPH 210 Society and Environment		
JUS 320 Community and Social Justice		
JUS 321 Wealth Distribution and Poverty (SOBE)		
JUS 405 Inequality, Economy and Justice (HUAD)		
JUS 430 Social Protest, Conflict, and Change (CIVI)		
JUS 444 Environment and Justice		
PSY 306 Environmental Psychology		
PSY 350 Social Psychology (SOBE)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOC 270 Sociology of Race and Ethnicity (CIVI)		
SOC 331 Environmental Sociology (SUST)		
SOC 332 The Modern City		

Requirement	Minimum Grade	Credit Hours
SOC 334 Technology and Society (SOBE)		
SOC 352 Social Change (CIVI)		
SOS 309 History and Philosophy of Sustainability		
SOS 447 Gender, Culture, and Development (GCSI)		
SOS 467 Art and Ecology		
WST 375 Women and Social Change		
WST 380 Race, Gender, and Class (SOBE)		
WST 457 Women, Cultures, and Societies		
OR		
Policy and Governance in Sustainable Systems		
ABS 381 Natural Resources Policy		
AGB 414 Food and Agribusiness Policy Issues		
ASB 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
BIO 412 Conservation in Practice		
ECN 441 Public Economics (CIVI)		
GCU 361 Urban Geography		
GPH 314 Global Change (SUST)		
HST 345 Environmental History (SUST)		
JUS 332 Politics of Energy Policy and Justice		

Requirement	Minimum Grade	Credit Hours
PAF 300 Public Management and Administration		
PAF 340 Contemporary Policy Challenges		
PHI 407 Environmental Philosophy and Policy (SUST)		
POS 160 Global Politics (GCSI)		
POS 300 Contemporary Global Controversies (GCSI)		
POS 346 Problems of Democracy (HUAD)		
POS 346 Problems of Democracy (HUAD)		
POS 351 Democratization (GCSI)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 368 Ethics and Human Rights (GCSI)		
POS 410 Governing American Cities		
PUP 301 Introduction to Urban Planning		
PUP 430 Transportation Planning and the Environment		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOS 371 Inequality and Sustainability		
STS 325 Science, Technology, and Public Policy		
TCL 340 Chicana/o and Latina/o Politics and Policy		
OR		
International Development and Sustainability		

Requirement	Minimum Grade	Credit Hours
AFR 340 The Making of Modern Africa		
AGB 302 International Management and Agribusiness (GCSI)		
ALT 412 Village Energy Systems		
ASB 100 Introduction to Global Health (GCSI)		
ASB 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
FIS 337 Innovation and Global Development (GCSI)		
GCU 364 Energy in the Global Arena		
GPH 314 Global Change (SUST)		
JUS 325 Globalization and Socio-Economic Justice		
JUS 352 The Global Politics of Human Rights (CIVI)		
OMT 440 International Business		
POS 160 Global Politics (GCSI)		
POS 300 Contemporary Global Controversies (GCSI)		
POS 368 Ethics and Human Rights (GCSI)		
POS 486 International Political Economy (GCSI)		
SBS 480 Global Justice (GCSI)		
SGS 301 Principles of Global Studies (GCSI)		
SGS 303 Global Trends (GCSI)		

Requirement	Minimum Grade	Credit Hours
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SGS 340 Violence, Conflict and Human Rights (GCSI)		
SOC 333 Population		
SOS 447 Gender, Culture, and Development (GCSI)		
STS 330 Information Technology and Artificial Intelligence		
STS 332 Global Issues in Science and Technology		
TDM 458 International Tourism (GCSI)		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
WST 378 Global Feminist Theory (GCSI)		
OR Sustainable Urban Dynamics		
ABS 260 Fundamentals of Sustainable Horticulture		
ABS 364 Urban Forestry		
ALA 100 Introduction to Environmental Design (HUAD)		
ALA 102 Landscapes and Sustainability (SUST)		
ASB 442 Global Cities		
CHE 469 Air Quality Engineering		

Requirement	Minimum Grade	Credit Hours
GCU 359 Cities of the World I		
GCU 361 Urban Geography		
GCU 425 Geography of the Mexican American Borderland		
GCU 442 Geographical Analysis of Transportation		
PAF 220 Introduction to Urban America		
PAF 240 Urban Policy		
PAF 305 Urban Governance		
PAF 351 Urban and Metropolitan Studies		
PAF 352 Urban Theory		
POS 410 Governing American Cities		
POS 464 Border Cities: Action Research on Globalization		
PUP 200 Cities in Cinema (HUAD)		
PUP 301 Introduction to Urban Planning		
PUP 363 History of Planning		
PUP 410 Public Participation in Planning		
PUP 430 Transportation Planning and the Environment		
SOC 331 Environmental Sociology (SUST)		
SOS 315 Energy Policy		

Requirement	Minimum Grade	Credit Hours
SOS 327 Sustainable Food and Farms		
SOS 330 Sustaining the Commons (CIVI)		
SOS 414 Urban and Environmental Health		
STS 325 Science, Technology, and Public Policy		
Upper Division Society and Sustainability	C	3
ASB 311 Principles of Social Anthropology (GCSI)		
ASB 326 Human Impacts on Ancient Environments (SUST)		
ASB 344 Technology and Society (SOBE)		
ASB 370 Ethics of Eating (SUST)		
BIO 311 Biology and Society		
BIO 434 People and Nature: Ecosystem Services		
ENG 367 Environmental Issues in Literature and Film		
FIS 334 Science, Technology and Inequality (GCSI)		
GCU 350 The Geography of World Crises (GCSI)		
GCU 357 Social Geography		
GCU 441 Economic Geography		
GCU 442 Geographical Analysis of Transportation		
JUS 320 Community and Social Justice		
JUS 321 Wealth Distribution and Poverty (SOBE)		

Requirement	Minimum Grade	Credit Hours
JUS 405 Inequality, Economy and Justice (HUAD)		
JUS 430 Social Protest, Conflict, and Change (CIVI)		
JUS 444 Environment and Justice		
PSY 306 Environmental Psychology		
PSY 350 Social Psychology (SOBE)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOC 331 Environmental Sociology (SUST)		
SOC 332 The Modern City		
SOC 334 Technology and Society (SOBE)		
SOC 352 Social Change (CIVI)		
SOS 309 History and Philosophy of Sustainability		
SOS 447 Gender, Culture, and Development (GCSI)		
SOS 467 Art and Ecology		
WST 375 Women and Social Change		
WST 380 Race, Gender, and Class (SOBE)		
WST 457 Women, Cultures, and Societies		
OR Upper Division Policy and Governance in Sustainable Systems		
ABS 381 Natural Resources Policy		

Requirement	Minimum Grade	Credit Hours
AGB 414 Food and Agribusiness Policy Issues		
ASB 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
BIO 412 Conservation in Practice		
ECN 441 Public Economics (CIVI)		
GCU 361 Urban Geography		
GPH 314 Global Change (SUST)		
HST 345 Environmental History (SUST)		
JUS 332 Politics of Energy Policy and Justice		
PAF 300 Public Management and Administration		
PAF 340 Contemporary Policy Challenges		
PHI 407 Environmental Philosophy and Policy (SUST)		
POS 300 Contemporary Global Controversies (GCSI)		
POS 346 Problems of Democracy (HUAD)		
POS 346 Problems of Democracy (HUAD)		
POS 351 Democratization (GCSI)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 368 Ethics and Human Rights (GCSI)		
POS 410 Governing American Cities		
PUP 301 Introduction to Urban Planning		

Requirement	Minimum Grade	Credit Hours
PUP 430 Transportation Planning and the Environment		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOS 371 Inequality and Sustainability		
STS 325 Science, Technology, and Public Policy		
TCL 340 Chicana/o and Latina/o Politics and Policy		
OR Upper Division International Development and Sustainability		
AFR 340 The Making of Modern Africa		
AGB 302 International Management and Agribusiness (GCSI)		
ALT 412 Village Energy Systems		
ASB 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
FIS 337 Innovation and Global Development (GCSI)		
GCU 364 Energy in the Global Arena		
GPH 314 Global Change (SUST)		
JUS 325 Globalization and Socio-Economic Justice		
JUS 352 The Global Politics of Human Rights (CIVI)		
OMT 440 International Business		
POS 300 Contemporary Global Controversies (GCSI)		

Requirement	Minimum Grade	Credit Hours
POS 368 Ethics and Human Rights (GCSI)		
POS 486 International Political Economy (GCSI)		
SBS 480 Global Justice (GCSI)		
SGS 301 Principles of Global Studies (GCSI)		
SGS 303 Global Trends (GCSI)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SGS 340 Violence, Conflict and Human Rights (GCSI)		
SOC 333 Population		
SOS 447 Gender, Culture, and Development (GCSI)		
STS 330 Information Technology and Artificial Intelligence		
STS 332 Global Issues in Science and Technology		
TDM 458 International Tourism (GCSI)		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
WST 378 Global Feminist Theory (GCSI)		
OR Upper Division Sustainable Urban Dynamics		
ABS 364 Urban Forestry		

Requirement	Minimum Grade	Credit Hours
ASB 442 Global Cities		
CHE 469 Air Quality Engineering		
GCU 359 Cities of the World I		
GCU 361 Urban Geography		
GCU 425 Geography of the Mexican American Borderland		
GCU 442 Geographical Analysis of Transportation		
PAF 305 Urban Governance		
PAF 351 Urban and Metropolitan Studies		
PAF 352 Urban Theory		
POS 410 Governing American Cities		
POS 464 Border Cities: Action Research on Globalization		
PUP 301 Introduction to Urban Planning		
PUP 363 History of Planning		
PUP 410 Public Participation in Planning		
PUP 430 Transportation Planning and the Environment		
SOC 331 Environmental Sociology (SUST)		
SOS 315 Energy Policy		
SOS 327 Sustainable Food and Farms		

Requirement	Minimum Grade	Credit Hours
SOS 330 Sustaining the Commons (CIVI)		
SOS 414 Urban and Environmental Health		
STS 325 Science, Technology, and Public Policy		

Track Elective options may require prerequisite courses. Students must meet all prerequisite requirements to enroll in a course.

SOS Upper Division Elective

Upper Division **SOS Elective**	C	3

Sustainability Capstone

SOS 498 Pro-Seminar OR **SOS 493 Honors Thesis**	B-	3

GPA Requirements

Check: Minimum 2.5 Major GPA

Check: Minimum 2.5 ASU Cumulative GPA

Sustainability Second Language Requirement (BA)

Language Requirement: satisfied through completion of a language course at the intermediate level (202 or equivalent) or higher.	C	16

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement or proficiency exam, regardless of prior credit earned. CLEP and AP credit are also viable options for fulfilling the second language requirement.

Related Discipline

All students must complete 12 hours of approved Related Discipline courses. A Related Discipline is a concentration outside of Sustainability that augments the student's Sustainability education. Must see advisor for approval. Courses for the Related Discipline may not overlap with other major requirements. Students may, however, use courses from a minor or certificate to satisfy the Related Discipline requirement. Students must notify their academic advisor of their selected related discipline so it can be entered into their degree audit.

Upper Division Related Discipline	C	9
Related Discipline	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

CGF 101 First-Year Student: Introduction to ASU and Your Academic Community OR **CGF 201 Transfer Student: Introduction to ASU and Your Academic Community**	C	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Environmental Humanities, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAENHCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The environmental humanities certificate consists of 15 hours. At least 12 credit hours must be completed at the upper-division level, with a minimum of six upper-division credit hours offered by The College of Liberal Arts and Sciences. A grade of "C" (2.00 on a 4.00 scale) or higher is required in all courses taken for the certificate.		

Required Course

ENG 367 Environmental Issues in Literature and Film **or** **ENG 371 Rhetoric of the Environmental Movement** **or** **ENG 378 Environmental Creative Nonfiction (HUAD)**	C	3

Internship or Independent Study

ENG 484 Topic: Environmental Humanities Certificate **or** **ENG 499 Individualized Instruction** **or** **EVE 452 Environmental Investigation and Remediation Design** Students majoring in environmental engineering are encouraged to take EVE 452 to fulfill this requirement.	C	3

Electives

Requirement	Minimum Grade	Credit Hours
Upper Division Electives		
ASB 326 Human Impacts on Ancient Environments (SUST)		
ASB 370 / SOS 370 Ethics of Eating (SUST)		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
ENG 334 The American Southwest in Literature and Film (HUAD)		
ENG 363 Transborder Mexican and Chicano/a Literature of Southwest North America (HUAD)		
ENG 367 Environmental Issues in Literature and Film		
ENG 371 Rhetoric of the Environmental Movement		
ENG 378 Environmental Creative Nonfiction (HUAD)		
ENG 468 Environmental Literary Criticism (HUAD)	C	6
HST 342 U.S. West 20th Century		
HST 345 Environmental History (SUST)		
JUS 332 Politics of Energy Policy and Justice		
JUS 444 Environment and Justice		
PSY 306 Environmental Psychology		
REL 349 / JST 349 / SOS 349 Nature, Sustainability and Religion (SUST)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOC 331 Environmental Sociology (SUST)		
SOS 320 Society and Sustainability (SOBE)		
Electives	C	3
ASB 326 Human Impacts on Ancient Environments (SUST)		

Requirement	Minimum Grade	Credit Hours
ASB 370 / SOS 370 Ethics of Eating (SUST)		
BIO 324 / PHI 310 Environmental Ethics (SUST)		
CEE 181 Technological, Social, and Sustainable Systems (SUST)		
ENG 334 The American Southwest in Literature and Film (HUAD)		
ENG 363 Transborder Mexican and Chicano/a Literature of Southwest North America (HUAD)		
ENG 367 Environmental Issues in Literature and Film		
ENG 371 Rhetoric of the Environmental Movement		
ENG 378 Environmental Creative Nonfiction (HUAD)		
ENG 468 Environmental Literary Criticism (HUAD)		
HST 342 U.S. West 20th Century		
HST 345 Environmental History (SUST)		
JUS 332 Politics of Energy Policy and Justice		
JUS 444 Environment and Justice		
PSY 306 Environmental Psychology		
REL 349 / JST 349 / SOS 349 Nature, Sustainability and Religion (SUST)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOC 331 Environmental Sociology (SUST)		
SOS 110 Building a Sustainable World (SUST)		
SOS 320 Society and Sustainability (SOBE)		
Other courses may be used by approval of an academic advisor in the Department of English.		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BA/CERT Sustainability and Sustainable Food Systems (SUSUSTBA and SUFSUCERT)

Program description:
Students in ASU's School of Sustainability are reinventing the future of a world at risk. Students gain career preparation through experiential learning, study abroad programs, research with faculty, community engagement and leadership development. Their knowledge and innovations will shape the social and environmental quality of life for future generations.

The School of Sustainability offers a Bachelor of Arts and a Bachelor of Science program in sustainability. Students focus on developing practical solutions to some of the most pressing environmental, economic and social challenges of sustainability, honing their skills in resilience and systems thinking. They learn to manage trade-offs, engage with diverse stakeholders, utilize future-visioning tools, and assess the ethics and values associated with different solution pathways.

The BA program is geared toward students with interests in the social dimensions of sustainability, in local to global contexts, with an emphasis on governance, policy, urban systems and international development.

Food systems are particularly important for human societies to sustain; however, these systems are particularly vulnerable to multiple threats. Many students from a wide variety of disciplines are interested in food systems, especially as food and sustainability become increasingly relevant issues to employers in fields across the public and private sectors.

This certificate program in sustainable food systems enables students to take advantage of the diversity of courses offered that address challenges to food system sustainability. Students are encouraged to cover a breadth of topics and perspectives related to food system issues. They also have the opportunity to focus on particular skills and approaches suitable for their career paths, in areas as varied as agriculture, marketing, retail, policy and ethics. This program offers an innovative and exciting approach to the challenges of food system sustainability.

Because of the transdisciplinary nature of the certificate program, many courses may be found across ASU's campuses, allowing students to choose the focus area and location of study that best fit their needs.

The knowledge, competencies and skills students have upon completion of this certificate include the ability to identify food system drivers, activities, actors and outcomes at different spatial scales, and the capacity to assess the primary social, economic and environmental drivers and outcomes associated with food system sustainability challenges.

Students also acquire the ability to apply the following analytical skills or approaches to the development of food system sustainability solutions: cultural and social analysis, alternative agricultural design and practice, analysis of biophysical processes and environmental services, urban planning and policy, marketing and entrepreneurial development, sustainability assessment, and consumer preference and behavior.

BA At a Glance:
College/school: College of Global Futures
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: Yes
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: College of Global Futures
Location: Tempe

Career opportunities:
The growing emphasis on sustainability extends beyond corporate and governmental sectors, offering diverse career opportunities in nonprofits, nongovernmental organizations, community development, justice equity and inclusion efforts. Opportunities encompass sustainability coordination, management, leadership and more. Students can explore alumni employment data for career insights on the College of Global Futures employment data page.

Individuals with a BA in sustainability distinctly contribute to these fields. Their education equips them with a comprehensive approach to addressing sustainability challenges, making them valuable to employers and graduate programs. These graduates possess a deep understanding of complex systems drawn from diverse disciplines, and they excel in forward-thinking strategies and stakeholder engagement.

Their strong communication skills, honed through coursework and authentic experiences, enable them to effectively convey sustainability concepts. Additionally, their expertise in teamwork and relationship-building empowers seamless collaboration in diverse settings. Armed with these skills, graduates are well prepared to make a lasting impact on the environment, society and global sustainability efforts.

A certificate in sustainable food systems provides a distinct and valuable skill set that transcends traditional career boundaries. Whether graduates are pursuing paths in business, technology, science, education or government, the knowledge of sustainable food systems enriches their ability to drive positive change.

This certificate brings a fresh perspective to various sectors, including agriculture, consumer goods, public health and education. Graduates are equipped to address pressing issues such as environmental sustainability, farm-to-table practices, nutrition and urban agriculture. Graduates stand out in a competitive job market, offering versatile skills that can be applied across diverse career landscapes.

By integrating sustainable food systems principles into their education and future endeavors, graduates become catalysts for transformative change, shaping a healthier, more sustainable future for all. This certificate not only broadens their career horizons but also empowers them to make a lasting impact in their chosen fields.

Curriculum - Sustainability, BA

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Arts, BA
College/School: College of Global Futures
Plan Code: SUSUSTBA
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Sustainability Quantitative Courses		
SOS 102 Quantitative Reasoning for Sustainability	C	3
STP 226 Elements of Statistics (QTRS)	C	3
Sustainability Introductory Courses		
SOS 110 Building a Sustainable World (SUST)	C	3
SOS 111 Sustainable Cities (SUST)	C	3
Sustainability Core Competency and Skill Courses		
SOS 220 Systems Thinking	C	3
SOS 232 Professional Skills in Sustainability Practice	C	3
SOS 310 Equity, Justice and Sustainability (HUAD)	C	3
SOS 311 Future Thinking and Strategies	C	3

Requirement	Minimum Grade	Credit Hours
Sustainability Track Courses Students must select a single Sustainability Track. This track selection impacts the course options for the Sustainability Track Course requirement and the Sustainability Track Electives requirement. Students should select their track and notify their academic advisor by the end of sophomore year or as early as possible.		
BA sustainability students must select one of the following tracks: Society and Sustainability, Policy and Governance in Sustainable Systems, International Development and Sustainability, or Sustainable Urban Dynamics.		
Students complete the required course of their chosen track. Society and Sustainability Track - Required Course: SOS 320; Policy and Governance in Sustainable Systems Track - Required Course: SOS 321; International Development and Sustainability Track - Required Course: SOS 322; Sustainable Urban Dynamics Track - Required Course: SOS 323		
SOS 320 Society and Sustainability (SOBE) OR **SOS 321 Policy and Governance in Sustainable Systems** OR **SOS 322 International Development and Sustainability** OR **SOS 323 Sustainable Urban Dynamics**	C	3
Students complete three additional track courses, beyond their required track course, from the following:		
SOS 320 Society and Sustainability (SOBE) OR **SOS 321 Policy and Governance in Sustainable Systems**	C	9

Requirement	Minimum Grade	Credit Hours
OR **SOS 322 International Development and Sustainability**		
OR **SOS 323 Sustainable Urban Dynamics**		
OR **SOS 324 Sustainable Energy Technology and Systems**		
OR **SOS 325 The Economics of Sustainability**		
OR **SOS 326 Sustainable Ecosystems**		
OR **SOS 327 Sustainable Food and Farms**		
OR **SOS 328 Sustainability and Enterprise**		

Sustainability Track Electives

Take two elective courses from your selected track. At least one course (3 credit hours) must be upper division.

Society and Sustainability	C	3
ASB 202 Immigration and Ethnic Relations in the U.S. (CIVI)		
ASB 211 Women in Other Cultures		
ASB 311 Principles of Social Anthropology (GCSI)		
ASB 326 Human Impacts on Ancient Environments (SUST)		
ASB 344 Technology and Society (SOBE)		
ASB 370 Ethics of Eating (SUST)		
BIO 311 Biology and Society		
BIO 434 People and Nature: Ecosystem Services		

Requirement	Minimum Grade	Credit Hours
ENG 367 Environmental Issues in Literature and Film		
FIS 111 Welcome to the Future (CIVI)		
FIS 334 Science, Technology and Inequality (GCSI)		
GCU 350 The Geography of World Crises (GCSI)		
GCU 357 Social Geography		
GCU 441 Economic Geography		
GCU 442 Geographical Analysis of Transportation		
GPH 210 Society and Environment		
JUS 320 Community and Social Justice		
JUS 321 Wealth Distribution and Poverty (SOBE)		
JUS 405 Inequality, Economy and Justice (HUAD)		
JUS 430 Social Protest, Conflict, and Change (CIVI)		
JUS 444 Environment and Justice		
PSY 306 Environmental Psychology		
PSY 350 Social Psychology (SOBE)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOC 270 Sociology of Race and Ethnicity (CIVI)		
SOC 331 Environmental Sociology (SUST)		
SOC 332 The Modern City		

Requirement	Minimum Grade	Credit Hours
SOC 334 Technology and Society (SOBE)		
SOC 352 Social Change (CIVI)		
SOS 309 History and Philosophy of Sustainability		
SOS 447 Gender, Culture, and Development (GCSI)		
SOS 467 Art and Ecology		
WST 375 Women and Social Change		
WST 380 Race, Gender, and Class (SOBE)		
WST 457 Women, Cultures, and Societies		
OR		
Policy and Governance in Sustainable Systems		
ABS 381 Natural Resources Policy		
AGB 414 Food and Agribusiness Policy Issues		
ASB 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
BIO 412 Conservation in Practice		
ECN 441 Public Economics (CIVI)		
GCU 361 Urban Geography		
GPH 314 Global Change (SUST)		
HST 345 Environmental History (SUST)		
JUS 332 Politics of Energy Policy and Justice		

Requirement	Minimum Grade	Credit Hours
PAF 300 Public Management and Administration		
PAF 340 Contemporary Policy Challenges		
PHI 407 Environmental Philosophy and Policy (SUST)		
POS 160 Global Politics (GCSI)		
POS 300 Contemporary Global Controversies (GCSI)		
POS 346 Problems of Democracy (HUAD)		
POS 346 Problems of Democracy (HUAD)		
POS 351 Democratization (GCSI)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 368 Ethics and Human Rights (GCSI)		
POS 410 Governing American Cities		
PUP 301 Introduction to Urban Planning		
PUP 430 Transportation Planning and the Environment		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOS 371 Inequality and Sustainability		
STS 325 Science, Technology, and Public Policy		
TCL 340 Chicana/o and Latina/o Politics and Policy		
OR		
International Development and Sustainability		

Requirement	Minimum Grade	Credit Hours
AFR 340 The Making of Modern Africa		
AGB 302 International Management and Agribusiness (GCSI)		
ALT 412 Village Energy Systems		
ASB 100 Introduction to Global Health (GCSI)		
ASB 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
FIS 337 Innovation and Global Development (GCSI)		
GCU 364 Energy in the Global Arena		
GPH 314 Global Change (SUST)		
JUS 325 Globalization and Socio-Economic Justice		
JUS 352 The Global Politics of Human Rights (CIVI)		
OMT 440 International Business		
POS 160 Global Politics (GCSI)		
POS 300 Contemporary Global Controversies (GCSI)		
POS 368 Ethics and Human Rights (GCSI)		
POS 486 International Political Economy (GCSI)		
SBS 480 Global Justice (GCSI)		
SGS 301 Principles of Global Studies (GCSI)		
SGS 303 Global Trends (GCSI)		

Requirement	Minimum Grade	Credit Hours
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SGS 340 Violence, Conflict and Human Rights (GCSI)		
SOC 333 Population		
SOS 447 Gender, Culture, and Development (GCSI)		
STS 330 Information Technology and Artificial Intelligence		
STS 332 Global Issues in Science and Technology		
TDM 458 International Tourism (GCSI)		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
WST 378 Global Feminist Theory (GCSI)		
OR		
Sustainable Urban Dynamics		
ABS 260 Fundamentals of Sustainable Horticulture		
ABS 364 Urban Forestry		
ALA 100 Introduction to Environmental Design (HUAD)		
ALA 102 Landscapes and Sustainability (SUST)		
ASB 442 Global Cities		
CHE 469 Air Quality Engineering		

Requirement	Minimum Grade	Credit Hours
GCU 359 Cities of the World I		
GCU 361 Urban Geography		
GCU 425 Geography of the Mexican American Borderland		
GCU 442 Geographical Analysis of Transportation		
PAF 220 Introduction to Urban America		
PAF 240 Urban Policy		
PAF 305 Urban Governance		
PAF 351 Urban and Metropolitan Studies		
PAF 352 Urban Theory		
POS 410 Governing American Cities		
POS 464 Border Cities: Action Research on Globalization		
PUP 200 Cities in Cinema (HUAD)		
PUP 301 Introduction to Urban Planning		
PUP 363 History of Planning		
PUP 410 Public Participation in Planning		
PUP 430 Transportation Planning and the Environment		
SOC 331 Environmental Sociology (SUST)		
SOS 315 Energy Policy		

Requirement	Minimum Grade	Credit Hours
SOS 327 Sustainable Food and Farms		
SOS 330 Sustaining the Commons (CIVI)		
SOS 414 Urban and Environmental Health		
STS 325 Science, Technology, and Public Policy		
Upper Division Society and Sustainability	C	3
ASB 311 Principles of Social Anthropology (GCSI)		
ASB 326 Human Impacts on Ancient Environments (SUST)		
ASB 344 Technology and Society (SOBE)		
ASB 370 Ethics of Eating (SUST)		
BIO 311 Biology and Society		
BIO 434 People and Nature: Ecosystem Services		
ENG 367 Environmental Issues in Literature and Film		
FIS 334 Science, Technology and Inequality (GCSI)		
GCU 350 The Geography of World Crises (GCSI)		
GCU 357 Social Geography		
GCU 441 Economic Geography		
GCU 442 Geographical Analysis of Transportation		
JUS 320 Community and Social Justice		
JUS 321 Wealth Distribution and Poverty (SOBE)		

Requirement	Minimum Grade	Credit Hours
JUS 405 Inequality, Economy and Justice (HUAD)		
JUS 430 Social Protest, Conflict, and Change (CIVI)		
JUS 444 Environment and Justice		
PSY 306 Environmental Psychology		
PSY 350 Social Psychology (SOBE)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOC 331 Environmental Sociology (SUST)		
SOC 332 The Modern City		
SOC 334 Technology and Society (SOBE)		
SOC 352 Social Change (CIVI)		
SOS 309 History and Philosophy of Sustainability		
SOS 447 Gender, Culture, and Development (GCSI)		
SOS 467 Art and Ecology		
WST 375 Women and Social Change		
WST 380 Race, Gender, and Class (SOBE)		
WST 457 Women, Cultures, and Societies		
OR Upper Division Policy and Governance in Sustainable Systems		
ABS 381 Natural Resources Policy		

Requirement	Minimum Grade	Credit Hours
AGB 414 Food and Agribusiness Policy Issues		
ASB 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
BIO 412 Conservation in Practice		
ECN 441 Public Economics (CIVI)		
GCU 361 Urban Geography		
GPH 314 Global Change (SUST)		
HST 345 Environmental History (SUST)		
JUS 332 Politics of Energy Policy and Justice		
PAF 300 Public Management and Administration		
PAF 340 Contemporary Policy Challenges		
PHI 407 Environmental Philosophy and Policy (SUST)		
POS 300 Contemporary Global Controversies (GCSI)		
POS 346 Problems of Democracy (HUAD)		
POS 346 Problems of Democracy (HUAD)		
POS 351 Democratization (GCSI)		
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 368 Ethics and Human Rights (GCSI)		
POS 410 Governing American Cities		
PUP 301 Introduction to Urban Planning		

Requirement	Minimum Grade	Credit Hours
PUP 430 Transportation Planning and the Environment		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOS 371 Inequality and Sustainability		
STS 325 Science, Technology, and Public Policy		
TCL 340 Chicana/o and Latina/o Politics and Policy		

OR Upper Division International Development and Sustainability

AFR 340 The Making of Modern Africa		
AGB 302 International Management and Agribusiness (GCSI)		
ALT 412 Village Energy Systems		
ASB 378 Globalization: Migration, Mass Media, McDonald's (GCSI)		
FIS 337 Innovation and Global Development (GCSI)		
GCU 364 Energy in the Global Arena		
GPH 314 Global Change (SUST)		
JUS 325 Globalization and Socio-Economic Justice		
JUS 352 The Global Politics of Human Rights (CIVI)		
OMT 440 International Business		
POS 300 Contemporary Global Controversies (GCSI)		

Requirement	Minimum Grade	Credit Hours
POS 368 Ethics and Human Rights (GCSI)		
POS 486 International Political Economy (GCSI)		
SBS 480 Global Justice (GCSI)		
SGS 301 Principles of Global Studies (GCSI)		
SGS 303 Global Trends (GCSI)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SGS 340 Violence, Conflict and Human Rights (GCSI)		
SOC 333 Population		
SOS 447 Gender, Culture, and Development (GCSI)		
STS 330 Information Technology and Artificial Intelligence		
STS 332 Global Issues in Science and Technology		
TDM 458 International Tourism (GCSI)		
TEM 431 Innovation Management		
TEM 450 Design for the Developing World		
TEM 455 Global Impact Entrepreneurship		
WST 378 Global Feminist Theory (GCSI)		
OR Upper Division Sustainable Urban Dynamics		
ABS 364 Urban Forestry		

Requirement	Minimum Grade	Credit Hours
ASB 442 Global Cities		
CHE 469 Air Quality Engineering		
GCU 359 Cities of the World I		
GCU 361 Urban Geography		
GCU 425 Geography of the Mexican American Borderland		
GCU 442 Geographical Analysis of Transportation		
PAF 305 Urban Governance		
PAF 351 Urban and Metropolitan Studies		
PAF 352 Urban Theory		
POS 410 Governing American Cities		
POS 464 Border Cities: Action Research on Globalization		
PUP 301 Introduction to Urban Planning		
PUP 363 History of Planning		
PUP 410 Public Participation in Planning		
PUP 430 Transportation Planning and the Environment		
SOC 331 Environmental Sociology (SUST)		
SOS 315 Energy Policy		
SOS 327 Sustainable Food and Farms		

Requirement	Minimum Grade	Credit Hours
SOS 330 Sustaining the Commons (CIVI)		
SOS 414 Urban and Environmental Health		
STS 325 Science, Technology, and Public Policy		

Track Elective options may require prerequisite courses. Students must meet all prerequisite requirements to enroll in a course.

SOS Upper Division Elective

Upper Division **SOS Elective**	C	3

Sustainability Capstone

SOS 498 Pro-Seminar OR **SOS 493 Honors Thesis**	B-	3

GPA Requirements

Check: Minimum 2.5 Major GPA

Check: Minimum 2.5 ASU Cumulative GPA

Sustainability Second Language Requirement (BA)

Language Requirement: satisfied through completion of a language course at the intermediate level (202 or equivalent) or higher.	C	16

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement or proficiency exam, regardless of prior credit earned. CLEP and AP credit are also viable options for fulfilling the second language requirement.

Related Discipline

All students must complete 12 hours of approved Related Discipline courses. A Related Discipline is a concentration outside of Sustainability that augments the student's Sustainability education. Must see advisor for approval. Courses for the Related Discipline may not overlap with other major requirements. Students may, however, use courses from a minor or certificate to satisfy the Related Discipline requirement. Students must notify their academic advisor of their selected related discipline so it can be entered into their degree audit.

Upper Division Related Discipline	C	9
Related Discipline	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

CGF 101 First-Year Student: Introduction to ASU and Your Academic Community OR **CGF 201 Transfer Student: Introduction to ASU and Your Academic Community**	C	1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition		
OR **ENG 105 Advanced First-Year Composition**	C	6
OR **ENG 107 First-Year Composition AND ENG 108 First-Year Composition**		

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Sustainable Food Systems, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Global Futures

Plan Code: SUFSUCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
Required Course		
SFS 215 Fundamentals of Sustainable Food Systems (SUST) **or** **SFS 216 The Sustainable Plate (SUST)**	C	3
Sustainable Food Systems Tier Electives		
Students must choose four tier electives. A minimum of two courses must be selected from Tier 1 Core electives, and no more than two courses from the same subject prefix across both Tiers 1 and 2 should be selected.		
ENG 367 and PUP 498 must be taken with the specific titles/topics indicated.		
Upper Division Tier 1 - Core Electives (choose at least two)	C	6
ABS 319 Food, Health and Human Biology		
ABS 369 Hydroponic Food Crop Production		
AGB 302 International Management and Agribusiness (GCSI)		
AGB 414 Food and Agribusiness Policy Issues		
AGB 456 Food Product Innovation and Development		

Requirement	Minimum Grade	Credit Hours
ASB 300 Food and Culture (SOBE)		
BIO 429 Human Impacts on Ecosystem Functioning		
ITA 350 Food and Culture: The Mediterranean Lifestyle in Italy		
NTR 353 The Western Diet		
PLB 302 Plants and Civilization		
PUP 498 Topic: Urban Food Systems		
SOS 327 Sustainable Food and Farms		
Upper Division Tier 2 - Electives	C	6
ABS 319 Food, Health and Human Biology		
ABS 368 Plant Propagation		
ABS 369 Hydroponic Food Crop Production		
ABS 464 Desert Horticulture		
AGB 302 International Management and Agribusiness (GCSI)		
AGB 321 Agribusiness Sales and Marketing		
AGB 414 Food and Agribusiness Policy Issues		
AGB 420 Food Advertising and Promotion		
AGB 452 Global Food and Agricultural Trade		
AGB 456 Food Product Innovation and Development		
ASB 300 Food and Culture (SOBE)		
ASB 305 Poverty and Global Health (CIVI)		
ASB 463 / TCL 443 Political Ecology of the Border		
BIO 311 Biology and Society		
BIO 324 Environmental Ethics (SUST)		

Requirement	Minimum Grade	Credit Hours
BIO 418 Soil Ecology		
BIO 434 People and Nature: Ecosystem Services		
ENG 367 Environmental Issues in Literature and Film		
GPH 314 Global Change (SUST)		
ITA 350 Food and Culture: The Mediterranean Lifestyle in Italy		
NTR 348 Cultural Aspects of Food (GCSI)		
NTR 353 The Western Diet		
NTR 448 Community Nutrition		
PLB 302 Plants and Civilization		
PUP 498 Topic: Urban Food Systems		
SOS 322 International Development and Sustainability		
SOS 327 Sustainable Food and Farms		
SOS 370 / **ASB 370 Ethics of Eating (SUST)**		
SOS 374 / **GLG 327 Earth's Critical Zone**		

Tier Electives are not limited to courses from this list only. Other courses on food systems may be offered (special topics, etc.). Students may request to have those approved as an elective for this certificate by submitting a College of Global Futures Standards Petition.

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Sustainability and Wildlife Management (SUSUSTBS and LSWLMCERT)

Program description:
Students in ASU's School of Sustainability are reinventing the future of a world at risk. Students gain career preparation through experiential learning, study abroad, research with faculty, community engagement and leadership development. Sustainability graduates are transforming social and environmental quality of life for current and future generations.

The School of Sustainability offers both a Bachelor of Arts and a Bachelor of Science program in sustainability. Students focus on developing practical solutions to some of the most pressing environmental, economic and social challenges of sustainability, honing their skills in resilience and systems thinking. They learn to manage trade-offs, engage with diverse stakeholders, utilize future visioning tools, and assess the ethics and values associated with different solution pathways.

The BS program is geared toward students interested in the more quantitative aspects of sustainability, such as those related to energy and materials, economics, and ecology and environmental science.

The undergraduate wildlife management certificate program is for students interested in biology, conservation, sustainability and management of wildlife resources. Students gain application-based and hands-on experience in the field and engage with wildlife professionals.

BS At a Glance:
College/school: College of Global Futures
Location: Tempe, Online, ASU Local
Second language requirement: Yes
STEM-OPT extension eligible: Yes
First required math course: SOS 211 - Calculus and Probability
Math intensity: Moderate

CERT At a Glance:
College/school: College of Integrative Sciences and Arts
Location: Polytechnic

Career opportunities:
The growing emphasis on sustainability extends beyond corporate and governmental sectors, offering diverse career opportunities in nonprofits, nongovernmental organizations, community development, justice equity and inclusion efforts. Opportunities encompass sustainability coordination, management, leadership and more. Students can explore alumni employment data for career insights on the College of Global Futures employment data page.

Individuals with a BS in sustainability particularly contribute to these fields. Their education equips them with a comprehensive approach to addressing sustainability challenges, making them valuable to employers and graduate programs. These graduates possess a deep understanding of complex systems drawn from diverse disciplines and excel in forward-thinking strategies and stakeholder engagement.

Their strong communication skills, honed through coursework and practical experiences, enable them to effectively convey sustainability concepts. Additionally, their expertise in teamwork and relationship building empowers seamless collaboration in diverse settings. Armed with these skills, graduates are well prepared to make a lasting impact on the environment, society and global sustainability efforts.

Students can advance their career options with an undergraduate certificate. This certificate can give a hiring edge to students who want to pursue employment in the growing number of environmental careers offered by state and federal agencies such as the Arizona Game and Fish Department, U.S. Forest Service, U.S. Geological Survey and U.S. Bureau of Land Management. Students also have strong career prospects with nongovernmental organizations in areas of fish and wildlife management and range management or as biological technicians.

Advanced degrees or certifications may be required for academic or clinical positions.

Curriculum - Sustainability, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: College of Global Futures
Plan Code: SUSUSTBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Sustainability Quantitative Courses		
SOS 102 Quantitative Reasoning for Sustainability	C	3
SOS 211 Calculus and Probability for the Life and Social Sciences (MATH)	C	3
SOS 212 Systems, Dynamics and Sustainability (QTRS)	C	3
Sustainability Introductory Courses		
SOS 110 Building a Sustainable World (SUST)	C	3
SOS 111 Sustainable Cities (SUST)	C	3
Sustainability Core Competency and Skill Courses		
SOS 220 Systems Thinking	C	3
SOS 232 Professional Skills in Sustainability Practice	C	3
SOS 310 Equity, Justice and Sustainability (HUAD)	C	3

Requirement	Minimum Grade	Credit Hours
SOS 311 Future Thinking and Strategies	C	3

Sustainability Track Courses

Students must select a single Sustainability Track. This track selection impacts the course options for the Sustainability Track Course requirement and the Sustainability Track Electives requirement. Students should select their track and notify their academic advisor by the end of sophomore year or as early as possible.		
BS sustainability students must select one of the following tracks: Sustainable Energy, Materials, and Technology; Economics of Sustainability; or Sustainable Ecosystems.		
Students complete the required course of their chosen track. Sustainable Energy, Materials and Technology Track - Required Course: SOS 324; Economics of Sustainability Track - Required Course: SOS 325; Ecosystems Sustainability Track - Required Course: SOS 326		
SOS 324 Sustainable Energy Technology and Systems OR **SOS 325 The Economics of Sustainability** OR **SOS 326 Sustainable Ecosystems**	C	3
Students complete three additional track courses, beyond their required track course, from the following:		
SOS 320 Society and Sustainability (SOBE) OR **SOS 321 Policy and Governance in Sustainable Systems** OR **SOS 322 International Development and Sustainability** OR **SOS 323 Sustainable Urban Dynamics**	C	9

Requirement	Minimum Grade	Credit Hours
OR **SOS 324 Sustainable Energy Technology and Systems**		
OR **SOS 325 The Economics of Sustainability**		
OR **SOS 326 Sustainable Ecosystems**		
OR **SOS 327 Sustainable Food and Farms**		
OR **SOS 328 Sustainability and Enterprise**		

Sustainability Track Electives

Take two elective courses from your selected track. At least one course (3 credit hours) must be upper division.

Upper Division Sustainable Energy, Materials, and Technology	C	3
ALT 435 Applied Photovoltaics		
ARC 331 World and Western Architecture I		
CEE 400 Earth Systems Engineering and Management (SUST)		
ERM 302 Water and Wastewater Treatment Technology		
ERM 401 Hazardous Waste Management		
ERM 426 Environmental Issues		
ERM 428 International Environmental Management		
GCU 364 Energy in the Global Arena		
GPH 405 Energy and Environment		
GPH 412 Physical Meteorology		

Requirement	Minimum Grade	Credit Hours
HST 302 Topic: Energy Transitions and Sustainability		
SOS 315 Energy Policy		
SOS 435 U.S. Energy: Pathways to Sustainability		
SOS 494 Topic: Renewable Energy		
OR Upper Division Economics of Sustainability		
ASB 316 Money and Culture		
ECN 306 Survey of International Economics (GCSI)		
ECN 312 Intermediate Microeconomic Theory (SOBE)		
ECN 313 Intermediate Macroeconomic Theory (SOBE)		
ECN 345 Survey of Energy and Environmental Economic Issues (SUST)		
ECN 360 Economic Development (GCSI)		
ECN 413 Advanced Honors Macroeconomics		
ECN 414 Economics of Uncertainty and Information		
ECN 425 Introduction to Econometrics		
ECN 436 International Trade Theory		
ECN 445 Environmental Economics		
GCU 441 Economic Geography		
JUS 325 Globalization and Socio-Economic Justice		

Requirement	Minimum Grade	Credit Hours
POS 486 International Political Economy (GCSI)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOS 371 Inequality and Sustainability		
OR **Upper Division Sustainable Ecosystems**		
ABS 364 Urban Forestry		
ABS 370 Ecology		
ABS 430 Watershed Management		
ABS 481 Riparian and Wetland Restoration		
BIO 303 Plant Diversity and Evolution		
BIO 304 / **PLB 302 Plants and Civilization**		
BIO 308 Plant Physiology		
BIO 311 Biology and Society		
BIO 313 The Flora of Arizona		
BIO 320 Fundamentals of Ecology		
BIO 322 Conservation of Biodiversity (SUST)		
BIO 323 Ecosystem Restoration and Management		
BIO 324 Environmental Ethics (SUST)		
BIO 325 Oceanography		

Requirement	Minimum Grade	Credit Hours
BIO 331 Animal Behavior		
BIO 370 Vertebrate Zoology		
BIO 386 General Entomology		
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 411 Quantitative Methods in Conservation and Ecology		
BIO 412 Conservation in Practice		
BIO 421 Landscape Ecology		
BIO 423 Population and Community Ecology		
BIO 434 People and Nature: Ecosystem Services		
BIO 471 Ornithology		
BIO 472 Mammalogy		
BIO 474 Herpetology		
CHM 302 Environmental Chemistry		
GPH 314 Global Change (SUST)		
GPH 381 Geography of Natural Resources (SUST)		
HST 345 Environmental History (SUST)		
PLB 300 Plant Diversity and Evolution		
PLB 310 The Flora of Arizona		

Requirement	Minimum Grade	Credit Hours
SCN 301 Ecology and Natural History of the Sonoran Desert (SCIT)		
SOS 372 Earth Science in Arizona and the Southwest		
SOS 374 Earth's Critical Zone		
SOS 375 Humans and the Environment: What's the Connection?		
SOS 414 Urban and Environmental Health		
SOS 429 Human Impacts on Ecosystem Functioning		
SOS 433 Sustainable Water Use		
SOS 476 Earth's Past Climates: The Key to our Sustainable Future		
Sustainable Energy, Materials, and Technology	C	3
ALA 100 Introduction to Environmental Design (HUAD)		
ALA 102 Landscapes and Sustainability (SUST)		
ALT 435 Applied Photovoltaics		
ARC 331 World and Western Architecture I		
CEE 400 Earth Systems Engineering and Management (SUST)		
CHM 107 Chemistry and Society (SCIT)		
CON 101 Construction and Culture: a Built Environment (HUAD)		
ERM 201 Environmental Management		

Requirement	Minimum Grade	Credit Hours
ERM 203 Environmental Regulations		
ERM 302 Water and Wastewater Treatment Technology		
ERM 401 Hazardous Waste Management		
ERM 426 Environmental Issues		
ERM 428 International Environmental Management		
GCU 364 Energy in the Global Arena		
GPH 405 Energy and Environment		
GPH 412 Physical Meteorology		
HST 302 Topic: Energy Transitions and Sustainability		
IND 242 Materials and Design		
SES 141 Energy In Everyday Life (SCIT)		
SOS 171 The Thread of Energy (SUST)		
SOS 181 Technological, Social, and Sustainable Systems (SUST)		
SOS 315 Energy Policy		
SOS 435 U.S. Energy: Pathways to Sustainability		
SOS 494 Topic: Renewable Energy		
OR		
Economics of Sustainability		
ASB 316 Money and Culture		

Requirement	Minimum Grade	Credit Hours
ECN 211 Macroeconomic Principles (SOBE)		
ECN 212 Microeconomic Principles (SOBE)		
ECN 306 Survey of International Economics (GCSI)		
ECN 312 Intermediate Microeconomic Theory (SOBE)		
ECN 313 Intermediate Macroeconomic Theory (SOBE)		
ECN 345 Survey of Energy and Environmental Economic Issues (SUST)		
ECN 360 Economic Development (GCSI)		
ECN 413 Advanced Honors Macroeconomics		
ECN 414 Economics of Uncertainty and Information		
ECN 425 Introduction to Econometrics		
ECN 436 International Trade Theory		
ECN 445 Environmental Economics		
GCU 441 Economic Geography		
JUS 325 Globalization and Socio-Economic Justice		
POS 486 International Political Economy (GCSI)		
SGS 330 Globalization and the Environment: Problems and Solutions (SUST)		
SOS 371 Inequality and Sustainability		
OR		
Sustainable Ecosystems		

Requirement	Minimum Grade	Credit Hours
ABS 364 Urban Forestry		
ABS 370 Ecology		
ABS 430 Watershed Management		
ABS 481 Riparian and Wetland Restoration		
BIO 181 General Biology I (SCIT)		
BIO 182 General Biology II (SCIT)		
BIO 303 Plant Diversity and Evolution		
BIO 304 / PLB 302 Plants and Civilization		
BIO 308 Plant Physiology		
BIO 311 Biology and Society		
BIO 313 The Flora of Arizona		
BIO 320 Fundamentals of Ecology		
BIO 322 Conservation of Biodiversity (SUST)		
BIO 323 Ecosystem Restoration and Management		
BIO 324 Environmental Ethics (SUST)		
BIO 325 Oceanography		
BIO 331 Animal Behavior		
BIO 370 Vertebrate Zoology		
BIO 386 General Entomology		

Requirement	Minimum Grade	Credit Hours
BIO 410 Techniques in Conservation Biology and Ecology		
BIO 411 Quantitative Methods in Conservation and Ecology		
BIO 412 Conservation in Practice		
BIO 421 Landscape Ecology		
BIO 423 Population and Community Ecology		
BIO 434 People and Nature: Ecosystem Services		
BIO 471 Ornithology		
BIO 472 Mammalogy		
BIO 474 Herpetology		
CHM 302 Environmental Chemistry		
GLG 110 Dangerous World (SCIT)		
GPH 314 Global Change (SUST)		
GPH 381 Geography of Natural Resources (SUST)		
HST 345 Environmental History (SUST)		
MIC 205 Microbiology (SCIT)		
MIC 220 Biology of Microorganisms		
PLB 300 Plant Diversity and Evolution		
PLB 310 The Flora of Arizona		

Requirement	Minimum Grade	Credit Hours
SCN 301 Ecology and Natural History of the Sonoran Desert (SCIT)		
SOS 372 Earth Science in Arizona and the Southwest		
SOS 374 Earth's Critical Zone		
SOS 375 Humans and the Environment: What's the Connection?		
SOS 414 Urban and Environmental Health		
SOS 429 Human Impacts on Ecosystem Functioning		
SOS 433 Sustainable Water Use		
SOS 476 Earth's Past Climates: The Key to our Sustainable Future		

Track Elective options may require prerequisite courses. Students must meet all prerequisite requirements to enroll in a course.

SOS Upper Division Elective

Upper Division **SOS Elective**	C	3

Sustainability Capstone

SOS 498 Pro-Seminar OR **SOS 493 Honors Thesis**	B-	3

GPA Requirements

Requirement	Minimum Grade	Credit Hours
Check: Minimum 2.5 Major GPA		
Check: Minimum 2.5 ASU Cumulative GPA		

Second Language Requirement (BS)

ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement or proficiency exam, regardless of prior credit earned. CLEP and AP credit are also viable options for fulfilling the second language requirement.		
Language Requirement: satisfied through completion of a language course at the beginner level (102 or equivalent) or higher.	C	8

Related Discipline

All students must complete 12 hours of approved Related Discipline courses. A Related Discipline is a concentration outside of Sustainability that augments the student's Sustainability education. Must see advisor for approval. Courses for the Related Discipline may not overlap with other major requirements. Students may, however, use courses from a minor or certificate to satisfy the Related Discipline requirement. Students must notify their academic advisor of their selected related discipline so it can be entered into their degree audit.		
Upper Division Related Discipline	C	9
Related Discipline	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

CGF 101 First-Year Student: Introduction to ASU and Your Academic Community **OR** **CGF 201 Transfer Student: Introduction to ASU and Your Academic Community**	C	1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Wildlife Management, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: College of Integrative Sciences and Arts

Plan Code: LSWLMCERT

Minimum credit hours: 22

Upper division minimum credit hours: 18

Requirement	Minimum Grade	Credit Hours
This certificate requires 22 credit hours. A grade of "C" (2.00 on a 4.00 scale) or better is required in each course.		

Required Courses

ABS 274 Introduction to Wildlife Management	C	4
ABS 376 Wildlife Ecology	C	3
ABS 377 International Wildlife Conservation	C	3
ABS 470 Life History of Mammals	C	3

Electives

Upper Division Electives	C	9

- **ABS 380 Restoration and Wildlife Plants**
- **ABS 384 Natural Resources Measurements**
- **ABS 472 Applied Herpetology**
- **ABS 473 Applied Ornithology**

Requirement	Minimum Grade	Credit Hours
ABS 475 Habitat Management for Small Wildlife		
ABS 476 Large Mammal Habitat Ecology		
ABS 485 GIS in Natural Resources		
ABS 486 Introduction to Remote Sensing		
ABS 489 Undergraduate Research		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Tourism and Recreation Management and Recreational Therapy (PPTRMBS and PPRECTCERT)

Program description:
Through the Bachelor of Science program in tourism and recreation management, students acquire the planning and management skills required for careers in the growing tourism, recreation, sport and event industries throughout the world.

Selecting one of four emphasis areas --- tourism, recreation, events or sport --- enables students to home in on what most interests them. The curriculum offers broad understandings of each sector as well as the skills specific to a chosen field. Students are prepared to contribute to economic and social development and make a positive impact on quality of life, domestically and abroad.

Students enrolled in the recreational therapy certificate program gain knowledge and requisite competencies to lead recreation-based therapeutic programs as a strategy to improve individual and community health. Through curriculum foundational to the field, students learn the systematic process of conducting assessments, developing service plans, implementing therapeutic interventions, and evaluating and documenting outcomes of care. Students examine the holistic benefits of recreational therapy through exposure to creative and expressive arts, adapted exercise and sport, aquatic therapy, therapeutic riding, horticulture therapy, community integration, leisure education and structured play.

The certificate program is an ideal choice for individuals who value the importance of a healthy leisure lifestyle for all, want to advocate for accessible recreation opportunities, and are dedicated to the use of recreation-based interventions to improve well-being.

The certificate is a valuable supplement to degrees in related fields. It helps students develop a unique set of competencies and also serves as a pathway to credentialing as a qualified provider of recreational therapy.

Students seeking professional certification in recreational therapy have the option to select specific recreational therapy content courses to contribute a portion of the requirements necessary for eligibility with the National Council for Therapeutic Recreation Certification. Further information is available on its website. https://www.nctrc.org/about-certification/ctrs-the-qualified-provider

BS At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: Watts College of Public Service & Community Solutions
Location: Downtown Phoenix or Online

Career opportunities:
Industries in the leisure sector offer a wide variety of career options. Graduates are equipped to plan, design, develop and manage services to address the needs of a particular clientele. Graduates can seek work in the public, nonprofit, or private and commercial sectors based on their interests. Employment opportunities are available in diverse organizations, including resorts, hotels, and convention and visitor bureaus, as well as in business and corporate travel, transportation, tour operations, event and meeting planning and management, and attractions management. City and state parks, recreation departments, national parks and protected areas also offer potential career paths. Other career options include youth, recreation and sports-oriented nonprofits; sports and recreation program planning and management; sports events and many others.

Recreational therapists practice in settings such as inpatient and outpatient physical rehabilitation, inpatient and outpatient mental health, and skilled nursing facilities, as well as in assisted living and adult day programs, parks and recreation and adapted sports programs, acute care hospitals, pediatric hospitals and programs, and school systems.

Curriculum - Tourism and Recreation Management, BS

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science, BS
College/School: Watts College of Public Service & Community Solut
Plan Code: PPTRMBS
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Unit Core		
CRD 210 Community Services and Professions	C	3
CRD 301 Sustainable Communities (SUST)	C	3
CRD 302 Inclusive Community Development (SOBE)	C	3
CRD 402 Assessment and Evaluation of Community Services (QTRS)	C	3
Professional Core		
CRD 403 Leadership and Professional Development	C	3
CRD 484 Internship OR CRD 435 Service Learning for Community Development AND Upper Division Major Electives	C	6

> PRM 307 Arizona Cardinals Rotational Program
>
> PRM 360 Environmental and Cultural Interpretation

Requirement	Minimum Grade	Credit Hours
PRM 427 Where's the Money: Special Event Revenue Generation		
PRM 483 Sports Tourism		
PRM 485 Sports Events		
PRM 487 Advanced Special Events Management		
PRM 494 Special Topics		
RTH 364 Foundations in Recreational Therapy (SOBE)		
RTH 440 Advocacy in Therapeutic Recreation (GCSI)		
RTH 450 Therapeutic Recreation and Community Health		
RTH 453 Inclusive Community Sport		
RTH 455 Recreational Therapy and Play with Children, Youth and Families		
RTH 460 Assessment and Documentation in Recreational Therapy		
TDM 345 Meeting and Convention Planning		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 475 Entrepreneurial Recreation and Tourism		
TDM 480 Sustainable Tourism		
TDM 481 Sustainable Food Management in Tourism		

Requirement	Minimum Grade	Credit Hours
TDM 483 Sports Tourism		

Major Core

CRD 350 Tourism, Recreation and Sports Marketing	C	3
CRD 401 Managing Tourism and Leisure Enterprises	C	3
PRM 120 Leisure and the Quality of Life (SOBE)	C	3
PRM 203 Program Planning	C	3
PRM 310 Volunteer Management (CIVI)	C	3
PRM 380 Wilderness and Parks in America (SUST)	C	3

Major Electives

TDM 205 Introduction to Travel and Tourism (GCSI)	C	3
Major Electives	C	12
PRM 145 Special Events Management		
PRM 201 Introduction to Parks, Recreation and Sport Management		
PRM 294 Special Topics		
PRM 307 Arizona Cardinals Rotational Program		
PRM 360 Environmental and Cultural Interpretation		
PRM 427 Where's the Money: Special Event Revenue		

Requirement	Minimum Grade	Credit Hours
Generation		
PRM 483 Sports Tourism		
PRM 485 Sports Events		
PRM 487 Advanced Special Events Management		
PRM 494 Special Topics		
RTH 364 Foundations in Recreational Therapy (SOBE)		
RTH 440 Advocacy in Therapeutic Recreation (GCSI)		
RTH 450 Therapeutic Recreation and Community Health		
RTH 453 Inclusive Community Sport		
RTH 455 Recreational Therapy and Play with Children, Youth and Families		
RTH 460 Assessment and Documentation in Recreational Therapy		
TDM 225 Introduction to Hotel, Resort and Lodging Management		
TDM 345 Meeting and Convention Planning		
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 475 Entrepreneurial Recreation and Tourism		
TDM 480 Sustainable Tourism		

Requirement	Minimum Grade	Credit Hours
TDM 481 Sustainable Food Management in Tourism		
TDM 483 Sports Tourism		
Upper Division Major Electives	C	6
PRM 307 Arizona Cardinals Rotational Program		
PRM 360 Environmental and Cultural Interpretation		
PRM 427 Where's the Money: Special Event Revenue Generation		
PRM 483 Sports Tourism		
PRM 485 Sports Events		
PRM 487 Advanced Special Events Management		
PRM 494 Special Topics		
RTH 364 Foundations in Recreational Therapy (SOBE)		
RTH 440 Advocacy in Therapeutic Recreation (GCSI)		
RTH 450 Therapeutic Recreation and Community Health		
RTH 453 Inclusive Community Sport		
RTH 455 Recreational Therapy and Play with Children, Youth and Families		
RTH 460 Assessment and Documentation in Recreational Therapy		
TDM 345 Meeting and Convention Planning		

Requirement	Minimum Grade	Credit Hours
TDM 386 Convention Sales and Management		
TDM 448 Heritage and Cultural Tourism		
TDM 458 International Tourism (GCSI)		
TDM 475 Entrepreneurial Recreation and Tourism		
TDM 480 Sustainable Tourism		
TDM 481 Sustainable Food Management in Tourism		
TDM 483 Sports Tourism		

Solution-Based Learning

Successful completion of the college's Solution-Based Learning (SBL) requirement is expected of each student by degree completion. Successful completion of three credits of PRM 203, CRD 402, CRD 435, or CRD 484 will satisfy the SBL requirement.

Interdisciplinary Requirement

Interdisciplinary Requirement	6
Area 1: Criminology and Criminal Justice	
CRJ Elective	
Area 2: Public Affairs	
PAF Elective	
Area 3: Social Work	

SWU Elective

Area 4: Public Service and Community Solutions

CPP Elective

Students can choose courses from any of the four Watts interdisciplinary areas. To meet the requirement, students must take two courses from at least two different groups.

Math Proficiency

Mathematics (MATH) Recommended: **MAT 114**	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CPP The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit

hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Recreational Therapy, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: Watts College of Public Service & Community Solut

Plan Code: PPRECTCERT

Minimum credit hours: 18

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The recreational therapy certificate requires completion of 18 credit hours: six credit hours of required courses and 12 credit hours of electives. Students seeking the national credential in therapeutic recreation should select electives from that list.		

Required Courses

RTH 364 Foundations in Recreational Therapy (SOBE)	C	3
RTH 413 Leadership and Professional Development in Recreational Therapy	C	3

Elective Courses

Choose four courses from Blocks A and B if interested in the ASU certificate, but not seeking the National Council for Therapeutic Recreation (NCTRC) credential. Choose four courses from only Block B if interested in taking support courses for NCTRC credential: https://www.nctrc.org/about-certification/ctrs-the-qualified-provider/

Elective Courses	C	6
Upper Division Elective Courses	C	6

Requirement	Minimum Grade	Credit Hours

Block A

Choose 4 courses from Block A and B if interested in only ASU certificate. Please note that Block A classes do not meet NCTRC credential requirements.

CDE 244 Children Facing Health Care Challenges

CDE 312 Adolescence (SOBE)

CDE 414 The School-Aged Child: Development in the Elementary Years

CDE 418 Aging and the Life Course (SOBE)

CDE 430 Infant and Toddler Development in the Family (SOBE)

CDE 450 Childhood Disorders and Family Functioning

DST 101 Introduction to Disability Studies (CIVI)

PRM 120 Leisure and the Quality of Life (SOBE)

RTH 453 Inclusive Community Sport

Block B

Students seeking the national credentialing through the National Council for Therapeutic Recreation (NCTRC) should select four courses from this list.

RTH 250 Therapeutic Recreation and Community Health (CIVI)

RTH 400 Intervention Techniques in Recreational Therapy

RTH 440 Advocacy in Therapeutic Recreation (GCSI)

RTH 455 Recreational Therapy and Play with Children, Youth and Families

RTH 460 Assessment and Documentation in Recreational Therapy

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BSP/CERT Urban Planning and Geographic Information Science (ARPUPBSP and LAGISCERT)

Program description:
Urban planners guide communities in making wise decisions about their use of land and resources. The urban planning program introduces students to issues faced by urban areas and the tools necessary to address them.

Students in the Bachelor of Science in Planning program gain expertise in the analysis and synthesis of the physical, social, political and economic issues that shape urban and regional development. Courses cover comprehensive planning, computer and analytical methods, public policy formulation and administration, socioeconomic and environmental analyses, urban design and many other fields that urban planning encompasses, such as:

- geographic information systems
- housing
- landscape architecture
- planning and zoning law
- transportation
- urban and development economics
- utilities

The geographic information science undergraduate certificate program pairs the practical skill of geographic information science with the conceptual knowledge of geographical problem-solving and spatial thinking.

BSP At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe, Online, ASU Local
Second language requirement: No
STEM-OPT extension eligible: No
First required math course: MAT 114 - College Mathematics
Math intensity: General

CERT At a Glance:
College/school: The College of Liberal Arts and Sciences
Location: Tempe or Online

Career opportunities:
Graduates of the urban planning program pursue career opportunities with private planning firms and governmental planning agencies, mainly at the city level, but also with county, state and federal entities. Some planners elect to pursue graduate degrees to develop specialty skills and enhance their opportunities for career advancement.

The urban planning degree, especially when combined with a focus on geographic information science, gives graduates an advantage in careers that combine urban planning with GIS and in other jobs that involve urban issues, including:

- comprehensive and long-range planning
- economic development planning
- housing issues
- planning law
- public participation in the planning process
- socioeconomic and environmental analyses
- sustainable planning
- transportation

Geographic information science is one of the fastest-growing segments of the economy, and employment possibilities can be found across the private sector and in many government agencies at the local, state and national levels.

Graduates who have paired this geographic information science certificate with their degree program have added knowledge, skills and abilities in these highly desirable areas:

- analysis
- computer programming
- problem-solving
- statistics

These skills are applicable to many fields and sectors, including:

- health care
- nonprofit organizations
- real estate
- retail
- utilities

Curriculum - Urban Planning, BSP

Catalog Year: 2025 - 2026 **General Studies Gold**
Degree: Bachelor of Science in Planning, BSP
College/School: The College of Liberal Arts and Sciences
Plan Code: ARPUPBSP
Minimum credit hours: 120
Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the Class Search.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 270 Statistics for Geography and Planning	C	3
PUP 190 Sustainable Cities (SUST)	C	3
PUP 301 Introduction to Urban Planning	C	3
PUP 424 Planning Methods	C	4
Upper Division **GIS Elective** **OR** Upper Division **PUP Elective**	C	3
Upper Division **PUP Elective** **OR** **PUP 484 Internship**	C	6

Requirement	Minimum Grade	Credit Hours
Upper Division **PUP Elective**	C	3
GIS Elective OR **PUP Elective**	C	3
Limit of six total hours of Internship (484), Thesis (493), Individualized Instruction (499), or Directed Study (492) can be applied to the major.		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Mathematics (MATH) Recommended: **MAT 114**	C	3
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/student-resources/science-society. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

Additional Requirements

BSP Urban Planning Major Related

ALA Elective		
ASB Elective		
GCU Elective		
GIS Elective		
GPH Elective	C	9
PUP Elective		
SGS Elective		
SOC Elective		
SOS Elective		

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-LA The ASU Experience **OR** **LIA 101 Student Success in The College of Liberal Arts and Sciences** Students enrolled in a campus immersion degree enroll in LIA 101. Students enrolled in an online degree enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition**	C	6

OR **ENG 107 First-Year Composition** AND **ENG 108 First-Year Composition**

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses. https://catalog.asu.edu/undergraduatereq

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All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

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Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

Campus immersion students are recommended to take GPH 191 to fulfill one credit hour of electives.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

Curriculum - Geographic Information Science, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: The College of Liberal Arts and Sciences

Plan Code: LAGISCERT

Minimum credit hours: 20

Upper division minimum credit hours: 13

Requirement	Minimum Grade	Credit Hours
The certificate requires 20 credit hours with a grade of "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 20 credit hours must be upper division.		
GIS 205 Geographic Information Science I (QTRS)	C	3
GIS 211 Geographic Information Science II (QTRS)	C	4
GIS 311 Geographic Information Science III (QTRS)	C	4
Upper Division **GIS Elective**	C	6
Upper Division GIS Related Coursework	C	3
CEE Elective		
CSE Elective		
GCU Elective		
GIS Elective		
GPH Elective		
EEE Elective		
EGR Elective		
FSE Elective		

Requirement	Minimum Grade	Credit Hours
IEE Elective		
PUP Elective		

Notes

Prerequisite courses may be needed in order to complete the requirements of this certificate.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.