

Arizona State University

Academic Catalog Archive Second Addendum 2025-2026

This document, published in February 2026, 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 and the first addendum. It also contains additional policies that were not provided within the Academic Catalog Archive 2025-2026 or the first addendum 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 Second Addendum 2025-2026, refer to the table of contents and the bookmarks provided.

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



Table of Contents

Academic organizations	3
University academic policies	4
Undergraduate policies and procedures	4
Credit by examination	4
Academic programs (descriptions and requirements)	6
Graduate certificates and degree programs.....	6
Artificial Intelligence, Analytics and FinTech Innovation, Microcertificate (TBAFTIGRCT). Establishment. Spring 2026.	6
Artificial Intelligence Engineering (Aerospace Engineering), MS (ESAIEAEMS). Establishment. Spring 2026. 7	
Foundations of Cross-cultural Leadership and Innovation, Microcertificate (TBFCCLGRCT). Establishment. Spring 2026.	9
Psychological Fundamentals of Well-being, Microcertificate (ASPFWBGRCT). Establishment. Spring 2026. 11	
Strategic Project Management, Microcertificate (LSSPMGRCT). Campus change. Spring 2026.	12
Minor programs	13
Interdisciplinary Arts and Performance, minor (ASIAPMIN). Reinstatement. Spring 2026.	13
Undergraduate certificate programs	15
Diversity and Equity Studies, certificate (ASDESCERT). Disestablishment. Spring 2026.	15
Foundations of Computer Science and Artificial Intelligence, certificate (ESCSEACERT). Establishment. Spring 2026.	15
Undergraduate degree programs	17
Computer Science and Artificial Intelligence, AS (ESCSEAIAS). Establishment. Spring 2026.....	17
Curriculum checksheets	18
Dual objective programs.....	22
Undergraduate-level combinations	22

Academic organizations

The following academic organizations experienced a name change for the 2025-26 academic year. These changes occurred after the publication of the 2025-26 Academic Catalog Archive and the first catalog archive addendum.

Business, W. P. Carey School of

Current department name: NASPO Department of Supply Chain Management

Previous department name: Department of Supply Chain Management

Global Futures, Rob Walton College of

Current college name: Rob Walton College of Global Futures

Previous college name: College of Global Futures

Current department name: Rob Walton School of Conservation Futures

Previous department name: School of Conservation Futures

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 and the first catalog archive addendum.

Undergraduate policies and procedures

Credit by examination

International Baccalaureate (IB)

Current policy:

Examination	Score	Credit Hours	Equivalency
Film – high level	7, 6, 5 or 4	3	FMS 110

Previous policy:

Examination	Score	Credit Hours	Equivalency
Film – high level	7, 6, 5 or 4	3	FMS 110 or 201

Current policy:

Examination	Score	Credit Hours	Equivalency
History Asia and Oceania – high level	7, 6 or 5	3	HST 240
	4	3	HST DEC

Previous policy:

Examination	Score	Credit Hours	Equivalency
History Asia and Oceania – high level	7, 6 or 5	6	HST 107, 240
	4	3	HST 107

Current policy:

Examination	Score	Credit Hours	Equivalency
Mathematics: Applications and Interpretations – standard level	7, 6, 5 or 4	0	No credit

Previous policy:

Examination	Score	Credit Hours	Equivalency
Mathematics: Applications and Interpretations – standard level	7, 6 or 5	3	MAT DEC
	4	0	No credit

Current policy:

Examination	Score	Credit Hours	Equivalency
Mathematics: Analysis and Approaches – standard level	7, 6 or 5	3	MAT 114

Previous policy:

Examination	Score	Credit Hours	Equivalency
Mathematics: Analysis and Approaches – standard level	7, 6 or 5	3	MAT DEC

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 and first catalog archive addendum.

Graduate certificates and degree programs

Artificial Intelligence, Analytics and FinTech Innovation, Microcertificate (TBAFTIGRCT). Establishment. Spring 2026.

Degree awarded: Artificial Intelligence, Analytics and FinTech Innovation (Certificate)

Campus: Online

Program description:

This microcertificate program in artificial intelligence, analytics and FinTech innovation equips students with the essential skills to harness the power of artificial intelligence, master data-driven decision-making, and drive innovation in the financial technology landscape. Students learn from world-class faculty and gain hands-on experience with the latest AI tools and strategies. Whether students are looking to lead a startup, manage a global enterprise or transform the public sector, the microcertificate program prepares them to navigate and shape the future of business. Students become transformative leaders with the expertise to seize opportunities and drive success in the dynamic global economy. Students embrace the future with Thunderbird --- where their journey to global leadership begins.

About Thunderbird

Thunderbird School of Global Management has produced world-class leaders for more than 75 years. The ideal Thunderbird student is one who is curious, globally minded and eager to develop and advance their careers in leadership and management within the global and digital landscape of the Fourth Industrial Revolution. 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.

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:

9 credit hours

Required Core (9 credit hours)

TGM 520 Navigating Global Fintech Innovations (3)

TGM 533 Analytics and Machine Learning for Global Business (3)

TGM 569 AI, Chip Strategy and the Future of Work (3)

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 Thunderbird School of Global Management.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree 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

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

Career opportunities:

Graduate of this program can enhance their career in any particular job field and function as companies and organizations continue to be affected by the advancement of AI and AI-related technologies.

Career examples include:

- business intelligence analyst
- data analyst
- data management specialist
- data scientist
- prompt engineer

Contact information:

Global Management, Thunderbird School of
Thunderbird School of Global Management
<https://thunderbird.asu.edu/>
TGHB 209
Admissions.tbird@asu.edu
602-496-7100

Artificial Intelligence Engineering (Aerospace Engineering), MS (ESAIEAEMS). Establishment. Spring 2026.

Degree awarded: MS Artificial Intelligence Engineering (Aerospace Engineering)

Campus: Tempe

Program description:

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

The use of AI approaches, including machine learning, natural language processing, computer vision, robotics and pattern recognition, is becoming widespread in aerospace engineering. Aerospace engineers increasingly rely on AI algorithms and machine learning models to design and optimize aircraft, to improve predictive maintenance and visual inspections, to optimize flight paths, and more. Similar approaches are being applied for spacecraft design and operations, raising demand for aerospace engineers with competencies in both AI tools and in core aerospace disciplines.

Students learn how to develop and customize relevant AI approaches to aerospace 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 aerospace engineering-specific courses to ensure breadth and depth in AI and in aerospace 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:

30 credit hours and a portfolio, or
30 credit hours and a thesis, or
30 credit hours including the required applied project course (MAE 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)
MAE 551 Applied Machine Learning for Mechanical Engineers (3)
MAE coursework (6)

Electives (3, 6 or 9)

Culminating Experience (0, 3 or 6)
MAE 593 Applied Project (3)
MAE 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. Other available electives are listed in the attached file, and 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

<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 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. letters of recommendation (optional)
4. personal statement
5. professional resume
6. 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 4 on the Internet-based TOEFL (iBT) or a score of 80 (taken in a testing center) if taken before January 21, 2026; an overall band score of 6.5 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:

Aerospace 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:

- aircraft
- autonomous flying vehicles (drones)
- avionics
- rocket propulsion
- spacecraft

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

Foundations of Cross-cultural Leadership and Innovation, Microcertificate (TBFCCLGRCT). Establishment. Spring 2026.

Degree awarded: Foundations of Cross-cultural Leadership and Innovation (Certificate)

Campus: Online

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

Program description:

The foundations of cross-cultural leadership and innovation microcertificate program prepares professionals to thrive in diverse and rapidly changing environments. Participants explore key topics including cross-cultural communication and negotiation, adaptive leadership, digital transformation and innovative strategy.

Designed for emerging and current leaders from any industry, this program supports professionals seeking to expand their leadership capacity and global perspective. Participants gain strategies for building trust across cultural and organizational boundaries, managing collaboration in hybrid and digital contexts, and cultivating innovation that drives meaningful results.

By the end of the program, participants are prepared to approach leadership with confidence, agility and creativity; equipped to inspire others, adapt to uncertainty and make a lasting impact in today's interconnected world.

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 of the current world. Upon completion of this degree program, graduates join a thriving global alumni network nearly 50,000 strong, managing some of the world's largest institutions, companies, nonprofits and NGOs.

Degree requirements:

9 credit hours

Required Core (6 credit hours)

TAM 530 Data Analytics and Digital Transformation in a Global World (3)

TAM 582 Communicating and Negotiating in a Dynamic Global World (3)

Electives (3 credit hours)

TAM 505 Navigating Global and Regional Business Environments (3)

TAM 511 Global Accounting: Managing with Numbers (3)

TAM 521 Financial Value Creation for Leaders (3)

TAM 542 Global Leadership and Personal Development (3)

TAM 557 Global Marketing in a Digital Age (3)

TGM 586 Global Entrepreneurship and Sustainable Business (3)

Additional Curriculum Information

Students select one of the listed courses as an elective. Courses should be selected in consultation with the 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 Thunderbird School of Global Management.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree 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 Admissions 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:

Graduates of this microcertificate program have gained the skills to enhance their career in any particular job field or function where cross-cultural leadership and innovation skills are especially valuable.

Career examples include:

- business analyst
- communications specialist
- compliance manager
- general manager
- operations manager
- project coordinator
- project manager
- talent development specialist

Contact information:

Global Management, Thunderbird School of

Thunderbird School of Global Management

<https://thunderbird.asu.edu/>

TGHB 209

Admissions.tbird@asu.edu

602-496-7100

Psychological Fundamentals of Well-being, Microcertificate (ASPFWBGRCT). Establishment. Spring 2026.

Degree awarded: Psychological Fundamentals of Well-being (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 microcertificate program in psychological fundamentals of well-being introduces the fundamentals of psychology, emphasizing self-understanding and the basic conditions supporting well-being and flourishing. Coursework emphasizes psychological concepts across various contexts, preparing students to think critically about how psychology can inform well-being.

Program requirements:

9 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)

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 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. 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.

Career opportunities:

This program provides foundational knowledge in psychology that 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 the following fields:

- community services
- education
- human resources
- organizational development

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
602-543-3000

Strategic Project Management, Microcertificate (LSSPMGRCT). Campus change. Spring 2026.

Current campuses: Polytechnic, Tempe, Online

Previous campuses: Polytechnic, Tempe

Minor programs

Interdisciplinary Arts and Performance, minor (ASIAPMIN). Reinstatement. Spring 2026.

Campus: West Valley

Program description:

The minor program in interdisciplinary arts and performance offers students a unique opportunity to explore and integrate multiple artistic disciplines while complementing their primary field of study. Rooted in the nationally recognized Bachelor of Arts program, this minor program emphasizes creative experimentation, collaborative learning, and aesthetic innovation across a range of media.

Students engage with visual, sound, performance, video, game and interactive arts through both practical and theoretical approaches, developing a versatile artistic perspective. They build skills in collaboration, innovation and critical thinking through a curriculum that encourages boundary-pushing exploration and fosters a dynamic understanding of the arts as it evolves in contemporary contexts.

The minor program enriches creative thinking, enhances cross-disciplinary collaboration, and supports students in crafting their own distinct artistic paths --- whether for professional, academic or personal growth.

Curriculum:

Requirement	Minimum Grade	Credit Hours
The minor in interdisciplinary arts and performance consists of 15 credit hours of coursework, of which nine 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. Credit hours may not be shared between major and minor requirements. All courses used to satisfy requirements for the minor must be completed with a grade of "C" (2.00 on a 4.00 scale) or better.		
IAP 110 Foundations of Visual Art, Performance and Interdisciplinarity (HUAD) or IAP 111 Foundations of Sound, Digital Arts, and Games (HUAD)	C	3
IAP 201 Introduction to Interdisciplinary Arts (HUAD) or IAP 202 Perspectives on Interdisciplinary Arts and Performance (HUAD)	C	3
IAP 304 Traditions of the Avant-Garde and Experimental Art (HUAD) or IAP 305 20th and 21st Century Art, Performance, and Media (HUAD)	C	3
IAP 325 Sound Performance: Exploring Alternative Performance Groups or IAP 354 Visual Representation or IAP 361 Digital Editing and Media Literacy or IAP 375 Contemporary Performance: Theories and Practice (HUAD)	C	3
Upper Division IAP Elective	C	3

Requirement	Minimum Grade	Credit Hours
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IAP 394 "Mind and Bodies in Motion", IAP 394 "Oral History & Storytelling in Humanities & Arts", IAP 341, IAP 484, IAP 492, IAP 493, and IAP 499 may not be used for this requirement.

Notes

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

Enrollment requirements:

GPA Requirement: None

Incompatible Majors: BA in Interdisciplinary Arts and Performance

Other Enrollment Requirements: None

Current ASU undergraduate students may pursue a minor and have it recognized on their ASU transcript at graduation. Minor requirements appear on the degree audit once the minor is added. Certain major and minor combinations may be deemed inappropriate by the college or department of either the major program or the minor. Courses taken for the minor may not count toward both the major and minor.

Career opportunities:

The minor program in interdisciplinary arts and performance aims to meet the growing demand for adaptable, creative professionals by equipping students with the skills and knowledge to excel in an evolving artistic and professional landscape. Graduates with a background in interdisciplinary arts are well-prepared for diverse career paths.

Contact information:

Interdisciplinary Arts and Sciences, New College of
School of Humanities, Arts and Cultural Studies
<https://newcollege.asu.edu/programs/undergraduate/minors-certs/list>
FAB N101
harcsadvising@asu.edu
602-543-3000

Undergraduate certificate programs

Diversity and Equity Studies, certificate (ASDESCERT). Disestablishment. Spring 2026.

Foundations of Computer Science and Artificial Intelligence, certificate (ESCSEACERT). Establishment. Spring 2026.

Campus: Tempe

Program description:

The foundations of computer science and artificial intelligence certificate program equips students with foundational knowledge and interdisciplinary skills to pursue careers in technology-driven fields. Developed in partnership with the U.S. Naval Community College, this program is tailored to support the educational and professional advancement of enlisted personnel in the Navy, Marine Corps and Coast Guard.

Students explore core principles of computer science, including programming, data structures and algorithms, while gaining specialized exposure to AI topics. The curriculum emphasizes practical problem-solving, ethical considerations in AI, and the application of computational thinking to real-world challenges.

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:

Requirement	Minimum Grade	Credit Hours
The certificate in computer science and artificial intelligence requires 24 credit hours. Students must complete all courses with a grade of "C" (2.00 on a scale of 4.00) or higher.		
MAT 210 Brief Calculus (MATH)	C	3
MAT 243 Discrete Mathematical Structures	C	3
ACO 100 All About Data: Design, Query, and Visualization (QTRS)	C	3
CSE 110 Principles of Programming (QTRS)	C	3
CSE 180 Computer Literacy (QTRS)	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
STP 226 Elements of Statistics (QTRS)	C	3
CSE 285 Artificial Intelligence and Data Capstone	C	3

Notes

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

Enrollment requirements:

Students must be accepted to the U.S. Naval Community College to be admitted to this program.

Career opportunities:

Graduates are prepared to support and innovate within defense and maritime technology environments, as well as contribute to broader industries that rely on AI and computer science expertise. They can pursue careers across the private sector, government, military and nonprofit organizations. Graduates also are equipped to succeed in further undergraduate study.

Contact information:

Engineering, Ira A Fulton Schools of
Computer Science and Engineering Program
<https://usncc.asu.edu/>
USE 138
CISAmilitaryVet@asu.edu
480-965-4464

Undergraduate degree programs

Computer Science and Artificial Intelligence, AS (ESCSEAIAS). Establishment. Spring 2026.

Campus: Online

Program description:

The Associate of Science program in computer science and artificial intelligence equips students with foundational knowledge and interdisciplinary skills to pursue careers in technology-driven fields. Developed in partnership with the U.S. Naval Community College, this program is tailored to support the educational and professional advancement of enlisted personnel in the Navy, Marine Corps and Coast Guard.

Students explore core principles of computer science, including programming, data structures and algorithms, while gaining specialized exposure to AI topics. The curriculum emphasizes practical problem-solving, ethical considerations in AI, and the application of computational thinking to real-world challenges.

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/>.

At a glance:

Second language requirement: No

STEM-OPT extension eligible: No

First required math course: MAT 210 - Brief Calculus

Program math intensity: Substantial

Admission requirements:

All students are required to meet general university admission requirements.

First-year | Transfer | International | Readmission

<https://admission.asu.edu/apply/first-year/admission>

<https://admission.asu.edu/apply/transfer/admission>

<https://admission.asu.edu/international/undergrad-student>

<https://admission.asu.edu/apply/first-year/readmission>

Additional requirements:

Students must be accepted to the U.S. Naval Community College to be admitted to this program.

Change of major requirements:

Students must be accepted to the U.S. Naval Community College to be admitted to this program.

Students should visit the Change of Major form (<https://changemajor.apps.asu.edu>) for information about how to change a major to this program.

Attend online:

ASU Online

ASU offers this program in an online format with multiple enrollment sessions throughout the year. Applicants may view the program's ASU Online page for program descriptions and to request more information.

ASU Local

It is now possible to earn an ASU degree with ASU Local, an integrated college experience in which students take advantage of in-person success coaching and programming experiences on site while completing one of 130+ undergraduate online degree programs, all of which come with online faculty interaction and tutoring support.

Transfer options:

ASU is committed to helping students thrive by offering tools that allow personalization of the transfer path to ASU. Students may use MyPath2ASU®

(<https://transferguide.apps.asu.edu/app/transfermap?major=ESCSEAIAS~null&college=CES>) to outline a list of recommended courses to take prior to transfer.

ASU has transfer partnerships (<https://admission.asu.edu/apply/transfer/MyPath2ASU>) in Arizona and across the country to create a simplified transfer experience for students. These pathway programs include exclusive benefits, tools and resources, and they help students save time and money in their college journey.

Career opportunities:

Graduates are prepared to support and innovate within defense and maritime technology environments, as well as contribute to broader industries that rely on AI and computer science expertise. They can pursue careers across the private sector, government, military and nonprofit organizations. Graduates from this program are also equipped to succeed in further undergraduate study.

Contact information:

Engineering, Ira A Fulton Schools of
Computer Science and Engineering Program
<https://usncc.asu.edu/>
USE 138
CISAmilitaryVet@asu.edu
480-965-4464

Curriculum checksheets

The following curriculum checksheet is for a newly established undergraduate program. This checksheet was not available at the time of publication of the 2025-26 Academic Catalog Archive and first catalog archive addendum.

Curriculum - Computer Science and Artificial Intelligence, AS

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Associate of Science, AS

College/School: [Ira A. Fulton Schools of Engineering](#)

Plan Code: ESCSEAIAS

Minimum credit hours: 60

Upper division minimum credit hours: 0

Requirement	Minimum Grade	Credit Hours
Computer Science and Artificial Intelligence Requirements		
MAT 210 Brief Calculus (MATH)	C	3
MAT 243 Discrete Mathematical Structures	C	3
ACO 100 All About Data: Design, Query, and Visualization (QTRS)	C	3
CSE 110 Principles of Programming (QTRS)	C	3
CSE 180 Computer Literacy (QTRS)	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
STP 226 Elements of Statistics (QTRS)	C	3
CSE 285 Artificial Intelligence and Data Capstone	C	3
General Education Requirements		
BIO 130 Introduction to Environmental Science (SCIT)		4
CGF 110 Resilient American Futures: An Academic Road Trip (SUST)		3
COM 100 Introduction to Human Communication (SOBE)		3

GLG 110 Dangerous World (SCIT)	3
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GLG 111 Dangerous World Laboratory (SCIT)	1
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USNCC Naval Studies Certificate Courses

USNCC NAV 101	C	3
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OR PHI 105 Intro to Ethics (HUAD)		
--	--	--

USNCC NAV 102		
OR	C	3

HST 999 (HUAD)		
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USNCC NAV 103		
OR	C	3

POS 999 (CIVI)		
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USNCC NAV 104	C	3
OR POS 110 American Government and Politics (AMIT)		

USNCC NAV 105	C	3
OR POS 160 Global Politics (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
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First-Year Composition

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 (HUAD)

USNCC NAV 103: Naval Force Design and Concepts satisfies POS elective (CIVI)

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.

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 and first catalog archive addendum.

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 Applied Computing (Cybersecurity) and Risk Communication (ASACOCBS and ASRCMCERT)

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 rising importance of the field of risk communication stems from the need to name, understand and manage physical and social risks as society is faced with increasingly challenging decisions concerning stressed social and environmental infrastructures.

Proficiency in risk communication requires understanding the complex interfaces of physical, biological, psychological and social systems. In response, the certificate program in risk communication combines the strengths of three schools within the New College of Interdisciplinary Arts and Sciences: the School of Social and Behavioral Sciences; the School of Mathematical and Natural Sciences; and the School of Humanities, Arts and Cultural Studies.

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: 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

Graduates are prepared for a variety of careers in risk management, crisis communications and environmental public affairs. Specifically, graduates are suited to work as risk management specialists and environmental advocates, and they are prepared to translate complex scientific ideas and analyses into information that can be evaluated meaningfully by all members of society.

Graduates work in local government agencies and public relations organizations, and in law enforcement, advertising, marketing and insurance.

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	• 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.
	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		
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	• Develop your research skills. • Develop your professional skills. • Interested in pre-professional pathways? Explore our pre-health and pre-law websites.
 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		

Term 4 48 - 63 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ACO 240: Introduction to Programming Languages	3	C	• Explore an internship, an IGLE international experience, or ASU study abroad.
 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		

Term 5 63 - 78 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
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★ 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:	6	
Elective		
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
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★	Upper Division Applied Computing Capstone/Experiential Learning Requirement 1	3	C	- 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.
	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		

Term 8	108 - 120 Credit Hours Necessary course	Hours	Minimum Grade	Notes
signified by	★			

★	Upper Division Applied Computing Capstone/Experiential Learning Requirement 2	3	C	- 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.
	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		

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 351: Governance, Risk and Compliance	ACO 482: Design Thinking for National Security	ACO 484: Internship
ACO 394: Special Topics	ACO 484: Internship	ACO 494: Applied Projects
ACO 401: Managing Cyber Risks in Enterprise Business Processes or CIS 401: Managing Cyber Risks in Enterprise Business Processes	ACO 494: Applied Projects	ACO 499: Individualized Instruction
ACO 402: Privacy, Ethics and Compliance Issues or CIS 402: Privacy, Ethics and Compliance Issues	ACO 494: Industry Capstone Projects	
ACO 461: Security Operations	ACO 499: Individualized Instruction	
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 - Risk Communication, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: [New College of Interdisciplinary Arts and Sciences](#)

Plan Code: ASRCMCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
The certificate in risk communication consists of 15 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.		
COM 415 Risk Communication (SOBE)	C	3
ENV 201 Fundamentals of Environmental Science (SUST) or BIO 130 Introduction to Environmental Science (SCIT)	C	3 - 4
Upper Division Risk Communication Electives	C	9
CHM 302 Environmental Chemistry		
COM 319 Persuasion and Social Influence (CIVI)		
COM 414 Crisis Communication		
COM 450 Organizational Communication (SOBE)		
COM 454 Rhetorical and Critical Approaches to Public Relations		
COM 463 Intercultural Communication for Global Leadership and Collaboration (GCSI)		
ENG 371 Rhetoric of the Environmental Movement		

Requirement	Minimum Grade	Credit Hours
ENV 485 Environmental Impact Assessment (CIVI)		
IAS 340 / PHI 320 Bioethics (HUAD)		
IAS 407 / PHI 407 Environmental Philosophy and Policy (SUST)		
IAS 409 / PHI 409 Eco-Community Ethics		
LSC 362 The Human Environment		
PTX 301 Basics of Pharmacology and Toxicology		
PTX 430 Environmental and Human Toxicology		

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 Architectural Studies and Geographic Information Science (ARSTDBSD and LAGISCERT)

Program description:

The preprofessional Bachelor of Science in Design program in architectural studies offered by The Design School helps students understand architecture as both a cultural expression and technical achievement, and it offers an interdisciplinary approach to architecture.

Students are prepared for alternative practices with architecture firms and in related fields such as landscape architecture, engineering, art, construction, urban planning, urban design and historic preservation, or for graduate studies in the professional Master of Architecture program, in business fields or in law.

This program offers two possible paths: cross-disciplinary focus and professional focus. For the first three years, all students take two project-topic courses yearly, together with other classes, to develop their skills. In the third year, students intending to pursue professional licensure as a registered architect must declare to their advisor their interest in pursuing the professional focus.

Geographic information scientists do more than create maps; they uncover patterns, relationships and insights that help us better understand the world and how people interact within it. By combining elements of computer science, statistics and geography, GIS professionals are equipped to answer complex questions about what is happening, where it's occurring, why it matters, and how to respond.

The certificate program in geographic information science combines geospatial tools, spatial reasoning and practical analysis to solve real-world problems. Students work in multiple GIS platforms as they build a strong foundation in spatial analysis, geovisualization, remote sensing, cartography and spatial modeling. The curriculum balances technical training with conceptual insight, helping students understand not just how to work with geographic data, but how to analyze, interpret it and communicate their findings to others.

This program prepares students to apply GIS tools and spatial reasoning to pressing challenges such as climate change, population dynamics, public health, and sustainable urban development. Through applied coursework and class projects, students learn how to collect, manage, analyze, and interpret spatial data, turning raw information into actionable insights.

BSD At a Glance:

College/school: Herberger Institute for Design and the Arts

Location: Tempe or Online

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: The College of Liberal Arts and Sciences

Location: Tempe or Online

Career opportunities:

Graduates of the bachelor's degree program are prepared for graduate school as well as a range of design-related careers.

Those who wish to become licensed can complete their professional studies by attending an accredited professional master's degree program. The Design School offers a two-year professional MArch degree for graduates of the undergraduate program.

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

Designed to complement any undergraduate major, the certificate program supports graduates pursuing work fields such as:

- business
- computer science
- environmental science
- health care
- nonprofit organizations
- real estate
- retail
- transportation
- urban planning
- utilities
- visual arts

Curriculum - Architectural Studies, 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: ARSTDBSD

Minimum credit hours: 120

Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
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Check: Minimum 3.00 ASU Cumulative GPA



Architecture Projects and Studios

ARC 101 Architecture Project I	C	3
ARC 102 Architecture Project II	C	3
ARC 201 Architecture Project III	C	3
ARC 202 Architecture Project IV	C	3
ARC 301 Architecture Project V	C	3
ARC 302 Architecture Project VI	C	3
ARC 401 Architecture Studio I	C	6
ARC 402 Architecture Studio II	C	6

Architecture History and Theory

ARC 111 Architecture of Architecture I	C	3
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Requirement	Minimum Grade	Credit Hours
ARC 112 Architecture of Architecture II	C	3
ARC 331 World and Western Architecture I	C	3
ARC 332 World and Western Architecture II	C	3
Architecture Technology and Representation		
ARC 421 Architecture Technology I	C	3
ARC 422 Architecture Technology II	C	3
ATE 242 Introduction to Architectural Technology	C	3
Upper Division Architectural Representation Elective		
ARC 494 Topic: Revit I	C	3
ARC 494 Topic: Revit II		
DSC 494 Topic: Grasshopper		
DSC 494 Topic: Rhino		
Architecture Electives		
ARC 394 Topic: Architecture Bootcamp	C	3
OR Upper Division Architecture Elective		
ARC 351 Architecture of Collaboration	C	3
ARC 352 Architecture of Leadership		
ARC 394 Special Topics		
ARC 431 Contemporary Architecture and Urbanism 1970 to the Present (HUAD)		
ARC 434 Great Cities (HUAD)		
ARC 436 Charles and Ray Eames		

2025-26 Academic Catalog Archive Second Addendum

36

Requirement	Minimum Grade	Credit Hours
ARC 484 Internship Upper Division ARC Elective APH 494 Topic: Frank Lloyd Wright APH 494 Topic: Peter Zumthor APH 494 Topic: The Image of Rome DSC 494 Topic: Grasshopper DSC 494 Topic: Rhino Architecture Bootcamp is designed for transfer and change of major students who did not take 100- and 200-level ARC project courses.		
Upper Division Architecture Elective	C	3
ARC 351 Architecture of Collaboration ARC 352 Architecture of Leadership ARC 394 Special Topics ARC 431 Contemporary Architecture and Urbanism 1970 to the Present (HUAD) ARC 434 Great Cities (HUAD) ARC 436 Charles and Ray Eames ARC 484 Internship Upper Division ARC Elective APH 494 Topic: Frank Lloyd Wright APH 494 Topic: Peter Zumthor APH 494 Topic: The Image of Rome DSC 494 Topic: Grasshopper DSC 494 Topic: Rhino 		

Requirement	Minimum Grade	Credit Hours
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OR **ARC 484 Internship**

Upper Division **ARC Elective**

C

6

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

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 - 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
<u>IEE Elective</u>		
<u>PUP Elective</u>		

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 Environmental Education (LAASTPLSBS and TEEVEDCERT)

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 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.

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: Mary Lou Fulton College for Teaching and Learning Innovation

Location: Tempe, West Valley 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 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 - 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
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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)

C 3

Additional math prerequisites may be needed.

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

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 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
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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
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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
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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.

BA/CERT General Studies and Applied Business Data Analytics (LSGNSBGS and BABDACERT)

Program description:

The Bachelor of Arts program in general studies offers students a purpose-built, transfer-friendly degree designed to serve the more than 39 million adults in the United States who have college credit but no degree. This program expands access to degree completion by maximizing previously earned credits and offering a flexible curriculum. The program fosters critical thinking, communication, adaptability and problem-solving skills, and the ability to work across disciplines to prepare students for graduate study or to meet employer expectations in a variety of careers.

Students can align their degree program with their experience or career aspirations while building toward graduate education in areas such as public administration, health innovation or applied leadership.

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: Downtown Phoenix, Polytechnic, Online or 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 or Online

Career opportunities:

Graduates with a degree in general studies have a broad educational foundation and the flexibility to explore multiple career paths. The program's versatility allows graduates to prepare for opportunities in business, social services, organizational management, government and beyond.

Graduates may pursue careers including:

- administrative services manager
- business operations or project coordinator
- curator (with additional training or relevant experience)
- general and operations manager
- health education or program specialist
- human resources specialist
- military or veterans services coordinator
- purchasing manager
- social and community service manager
- sustainability specialist

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 - General Studies, BA

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Bachelor of Arts, BA

College/School: [College of Integrative Sciences and Arts](#)

Plan Code: LSGNSBGS

Minimum credit hours: 120

Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
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Required Major Course

IDS 321 Topic: The University in the World		
OR UNI 400 Society and the Individual	C	3

Major Clusters

Students completing the Bachelor of Arts in General Studies will complete three courses in each cluster for a total of 36 credit hours. A minimum of 18 of the 36 credits must be upper-division credits.

Global and Natural Science Perspectives	C	6
Upper Division ABS Elective		
Upper Division BIO Elective		
Upper Division CHM Elective		
COM 316 Gender and Communication (SOBE)		
COM 363 Latinxs and the Media (SOBE)		
ENG 201 World Literature (HUAD)		
ENG 202 World Literature (HUAD)		

Requirement	Minimum Grade	Credit Hours
ENG 216 Persuasive Writing on Public Issues (CIVI)		
ENG 217 Writing Reflective Essays (HUAD)		
ENG 317 Cross-Cultural Writing (HUAD)		
HCR 230 Culture and Health (GCSI) or HSC 210 Cultural Aspects of Health (GCSI)		
HCR 310 Fundamentals of Human Trafficking (SOBE)		
HST 101 Global History Since 1500 (HUAD)		
HST 104 Modern Europe: French Revolution to European Union (GCSI)		
HST 230 Introduction to Jewish Civilization (GCSI)		
HST 306 Studies in United States History		
HST 327 Women in U.S. History, 1600 to 1880 (HUAD)		
HST 328 Women in U.S. History, 1880-1980 (HUAD)		
HST 364 Sex and Society in Europe (HUAD)		
HST 368 Culture and Imagination in European History		
HST 372 Modern Middle East (GCSI)		
HST 430 The Ottoman Empire in the Classical Period		
Upper Division MAT Elective		
MCO 430 International Mass Communication (GCSI)		
REL 100 Religions of the World (HUAD)		
REL 201 Religion and the Modern World (HUAD)		
REL 365 Islamic Civilization (HUAD)		
REL 369 Women in Islam		
REL 390 Women, Gender and Religion (GCSI)		

Requirement	Minimum Grade	Credit Hours
SPA 405 Latino Cultural Perspectives for the Professions (HUAD)		
Upper Division STP Elective		
SWU 456 Immigrants and Refugees (CIVI)		
SWU 457 Southwest Borderland Immigration Issues (CIVI)		
TDM 205 Introduction to Travel and Tourism (GCSI)		
WST 100 Women, Gender, and Society (SOBE) or WST 300 Women and Gender in Contemporary Society (SOBE)		
WST 380 Race, Gender, and Class (SOBE)		
WST 390 Women, Gender and Religion (GCSI)		
Upper Division Global and Natural Science Perspectives	C	3
Upper Division ABS Elective		
Upper Division BIO Elective		
Upper Division CHM Elective		
COM 316 Gender and Communication (SOBE)		
COM 363 Latinxs and the Media (SOBE)		
ENG 317 Cross-Cultural Writing (HUAD)		
HCR 310 Fundamentals of Human Trafficking (SOBE)		
HST 306 Studies in United States History		
HST 327 Women in U.S. History, 1600 to 1880 (HUAD)		
HST 328 Women in U.S. History, 1880-1980 (HUAD)		
HST 364 Sex and Society in Europe (HUAD)		
HST 368 Culture and Imagination in European History		

Requirement	Minimum Grade	Credit Hours
HST 372 Modern Middle East (GCSI)		
HST 430 The Ottoman Empire in the Classical Period		
Upper Division MAT Elective		
MCO 430 International Mass Communication (GCSI)		
REL 365 Islamic Civilization (HUAD)		
REL 369 Women in Islam		
REL 390 Women, Gender and Religion (GCSI)		
SPA 405 Latino Cultural Perspectives for the Professions (HUAD)		
Upper Division STP Elective		
SWU 456 Immigrants and Refugees (CIVI)		
SWU 457 Southwest Borderland Immigration Issues (CIVI)		
WST 380 Race, Gender, and Class (SOBE)		
WST 390 Women, Gender and Religion (GCSI)		
Organizations, Technology, and Ethics	C	3
CAP 342 Community Outreach, Prevention and Intervention		
CHM 107 Chemistry and Society (SCIT)		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 467 Digital Rhetoric (HUAD)		
CRJ 350 Law and Social Control (CIVI)		
CRJ 403 Victims and the Criminal Justice System		
CRJ 404 Juvenile Delinquency		
CRJ 405 Neighborhoods and Crime (CIVI)		

Requirement	Minimum Grade	Credit Hours
CRJ 406 Sex Crimes		
CRJ 408 Drugs and Crime		
CRJ 422 Violence in America		
CRJ 461 Intimate-Partner Violence		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 470 Discretionary Justice (SOBE)		
HCI 150 Introduction to Health Innovation		
HCI 250 Health Entrepreneurship and Value Creation		
HCR 210 Ethics for the Health Care Professional (HUAD)		
HCR 230 Culture and Health (GCSI) or HSC 210 Cultural Aspects of Health (GCSI)		
HCR 231 Fundamentals of Community Health		
HCR 310 Fundamentals of Human Trafficking (SOBE)		
HCR 331 Communication within Communities		
HST 333 African American History to 1865 (AMIT)		
MCO 120 Media and Society (HUAD)		
MCO 240 Media Issues in American Pop Culture		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
MCO 426 Digital Media Literacy II		
MCO 456 Political Communication (CIVI)		
MCO 460 Race, Gender, and Media (SOBE)		

Requirement	Minimum Grade	Credit Hours
MVS 301 Experience of America's Modern Wars		
MVS 302 Military and Veterans in Media and Arts (HUAD)		
NLM 160 Voluntary Action and Community Leadership (CIVI)		
NLM 220 Introduction to Nonprofit Organizations		
NLM 300 Fund Raising and Resource Development		
NLM 310 Strategic Volunteer Engagement (CIVI)		
OGI 220 Behavioral Dynamics in Organizations (SOBE)		
OGI 260 Resource Allocation in Organizations (SUST)		
OGI 300 Theory and Practice of Leadership		
OGI 343 Social Processes in Organizations (SOBE)		
OGI 345 Organizational Ethics (HUAD)		
OGI 350 Diversity and Organizations (GCSI)		
OGI 355 Leading Organizational Innovation and Change		
OGI 357 Assessment in Organizations		
OGI 360 Assessment of Leadership Effectiveness		
PAF 220 Introduction to Urban America		
PAF 240 Urban Policy		
PAF 305 Urban Governance		
PAF 311 Leadership and Change (SOBE)		
PAF 351 Urban and Metropolitan Studies		
PAF 352 Urban Theory		
PAF 410 Building Leadership Skills (SOBE)		
PAF 420 Managing Across Boundaries		

Requirement	Minimum Grade	Credit Hours
PAF 460 Public Service Ethics		
PHI 101 Introduction to Philosophy (HUAD)		
PHI 105 Intro to Ethics (HUAD)		
PHI 306 Applied Ethics (CIVI)		
PRM 145 Special Events Management		
PRM 487 Advanced Special Events Management		
SPA 317 Spanish for Professional Success		
SPA 318 Advanced Spanish for Health Care Professionals		
SPA 401 Spanish Oral Communication for the Professions		
SPA 402 Mastering Professional Spanish Writing		
SPA 404 Spanish in U. S. Professional Communities		
SPA 405 Latino Cultural Perspectives for the Professions (HUAD)		
SPA 406 Introduction to Spanish/English Medical Interpretation		
STS 101 Introduction to Science, Technology and Society (SOBE)		
STS 102 Engineering for All (HUAD)		
STS 110 Global Technology and Development		
STS 194 Special Topics		
STS 200 Yesterday's Tomorrows: A History of the Future (HUAD)		
STS 203 Animals, Technology and Society (HUAD)		
STS 235 Technology and Urban Systems		
STS 260 Politics of Science and Technology		

Requirement	Minimum Grade	Credit Hours
STS 294 Special Topics		
STS 301 Research in Science and Technology Studies		
STS 302 Philosophy of Science and Technology		
STS 304 Science, Technology and Society (SOBE)		
STS 305 Science and Social Theory		
STS 306 Social Effects of Science and Technology		
STS 317 Science, Technology, and Global Engagement		
STS 318 Science, Technology, and Government		
STS 325 Science, Technology, and Public Policy		
STS 328 Science, Technology, and Culture		
STS 329 Technology in Developing Countries		
STS 331 Ethical Issues in Science and Technology		
STS 332 Global Issues in Science and Technology		
STS 364 Science, Technology, and National Security		
STS 394 Topic: Contro in Med, Tech, & Env		
STS 394 Topic: Frankenstein to the Matrix		
STS 394 Topic: Global Env Issues		
STS 394 Special Topics		
STS 401 Statistics in Science and Technology Studies (QTRS)		
STS 425 Law, Values, Science and Technology		
STS 492 Honors Directed Study		
STS 493 Honors Thesis		
STS 494 Topic: Brave New World: Sci Fiction, Fact & Future		

Requirement	Minimum Grade	Credit Hours
STS 494 Topic: International Health and Technology		
STS 494 Topic: Narrative, Technology, and Society		
STS 494 Topic: Science of Detecting Suicide Bombers		
STS 494 Topic: Social Mobility, Justice, and Technology		
STS 494 Special Topics		
STS 498 Pro-Seminar		
STS 499 Individualized Instruction		
SWU 171 Introduction to Social Work (SOBE)		
SWU 181 Economics: A Social Issues Perspective		
SWU 182 Social Services Perspective of Government (AMIT)		
SWU 183 Introductory Ethics: A Social Issues Perspectives (HUAD)		
SWU 432 Social Policy and Services		
SWU 456 Immigrants and Refugees (CIVI)		
SWU 457 Southwest Borderland Immigration Issues (CIVI)		
SWU 461 LGBTQ+ Communities: Practice and Policy (CIVI)		
TDM 205 Introduction to Travel and Tourism (GCSI)		
TWC 201 Writing for Digital Media		
TWC 214 Storytelling with Data		
TWC 294 Topic: From Gutenberg to Google: A History of Information		
TWC 294 Special Topics		
TWC 305 Research in Technical Communication		
TWC 312 Introduction to Visual Culture		

Requirement	Minimum Grade	Credit Hours
TWC 351 Copyright and Intellectual Property		
TWC 362 Writing in Health Professions		
TWC 371 The Science of Science Communication		
TWC 401 Fundamentals of Technical Communication		
TWC 414 Advanced Data Visualization		
TWC 430 Digital Accessibility		
TWC 436 Project Management in Technical Communication		
TWC 446 Technical and Scientific Reports		
TWC 447 User Experience in Medicine and Health		
TWC 451 Copyright and Intellectual Property in the Electronic Age		
TWC 452 Information in the Digital Age		
TWC 453 Information and Communications Technology in American History		
TWC 455 Digital Ethics in Internet Policy and Governance		
TWC 484 Internship		
TWC 492 Honors Directed Study		
TWC 494 Topic: Intellectual Property		
TWC 494 Special Topics		
TWC 494 Topic: Strategic Medical and Health Communication		
TWC 494 Topic: UX Writing		

Upper Division Organizations, Technology, and Ethics

C

6

CAP 342 Community Outreach, Prevention and Intervention

2025-26 Academic Catalog Archive Second Addendum

COM 312 Communication, Conflict, and Negotiation (CIVI)

63

Requirement	Minimum Grade	Credit Hours
COM 467 Digital Rhetoric (HUAD)		
CRJ 350 Law and Social Control (CIVI)		
CRJ 403 Victims and the Criminal Justice System		
CRJ 404 Juvenile Delinquency		
CRJ 405 Neighborhoods and Crime (CIVI)		
CRJ 406 Sex Crimes		
CRJ 408 Drugs and Crime		
CRJ 422 Violence in America		
CRJ 461 Intimate-Partner Violence		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 470 Discretionary Justice (SOBE)		
HCR 310 Fundamentals of Human Trafficking (SOBE)		
HCR 331 Communication within Communities		
HST 333 African American History to 1865 (AMIT)		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
MCO 426 Digital Media Literacy II		
MCO 456 Political Communication (CIVI)		
MCO 460 Race, Gender, and Media (SOBE)		
MVS 301 Experience of America's Modern Wars		
MVS 302 Military and Veterans in Media and Arts (HUAD)		
NLM 300 Fund Raising and Resource Development		

Requirement	Minimum Grade	Credit Hours
NLM 310 Strategic Volunteer Engagement (CIVI)		
OGL 300 Theory and Practice of Leadership		
OGL 343 Social Processes in Organizations (SOBE)		
OGL 345 Organizational Ethics (HUAD)		
OGL 350 Diversity and Organizations (GCSI)		
OGL 355 Leading Organizational Innovation and Change		
OGL 357 Assessment in Organizations		
OGL 360 Assessment of Leadership Effectiveness		
PAF 305 Urban Governance		
PAF 311 Leadership and Change (SOBE)		
PAF 351 Urban and Metropolitan Studies		
PAF 352 Urban Theory		
PAF 410 Building Leadership Skills (SOBE)		
PAF 420 Managing Across Boundaries		
PAF 460 Public Service Ethics		
PHI 306 Applied Ethics (CIVI)		
PRM 487 Advanced Special Events Management		
SPA 317 Spanish for Professional Success		
SPA 318 Advanced Spanish for Health Care Professionals		
SPA 401 Spanish Oral Communication for the Professions		
SPA 402 Mastering Professional Spanish Writing		
SPA 404 Spanish in U. S. Professional Communities		
SPA 405 Latino Cultural Perspectives for the Professions		

Requirement	Minimum Grade	Credit Hours
(HUAD)		
SPA 406 Introduction to Spanish/English Medical Interpretation		
STS 301 Research in Science and Technology Studies		
STS 302 Philosophy of Science and Technology		
STS 304 Science, Technology and Society (SOBE)		
STS 305 Science and Social Theory		
STS 306 Social Effects of Science and Technology		
STS 317 Science, Technology, and Global Engagement		
STS 318 Science, Technology, and Government		
STS 325 Science, Technology, and Public Policy		
STS 328 Science, Technology, and Culture		
STS 329 Technology in Developing Countries		
STS 331 Ethical Issues in Science and Technology		
STS 332 Global Issues in Science and Technology		
STS 364 Science, Technology, and National Security		
STS 394 Topic: Contro in Med, Tech, & Env		
STS 394 Topic: Frankenstein to the Matrix		
STS 394 Topic: Global Env Issues		
STS 394 Special Topics		
STS 401 Statistics in Science and Technology Studies (QTRS)		
STS 425 Law, Values, Science and Technology		
STS 492 Honors Directed Study		
STS 493 Honors Thesis		

Requirement	Minimum Grade	Credit Hours
STS 494 Topic: Brave New World: Sci Fiction, Fact & Future		
STS 494 Topic: International Health and Technology		
STS 494 Topic: Narrative, Technology, and Society		
STS 494 Topic: Science of Detecting Suicide Bombers		
STS 494 Topic: Social Mobility, Justice, and Technology		
STS 494 Special Topics		
STS 498 Pro-Seminar		
STS 499 Individualized Instruction		
SWU 432 Social Policy and Services		
SWU 456 Immigrants and Refugees (CIVI)		
SWU 457 Southwest Borderland Immigration Issues (CIVI)		
SWU 461 LGBTQ+ Communities: Practice and Policy (CIVI)		
TWC 305 Research in Technical Communication		
TWC 312 Introduction to Visual Culture		
TWC 351 Copyright and Intellectual Property		
TWC 362 Writing in Health Professions		
TWC 371 The Science of Science Communication		
TWC 401 Fundamentals of Technical Communication		
TWC 414 Advanced Data Visualization		
TWC 430 Digital Accessibility		
TWC 436 Project Management in Technical Communication		
TWC 446 Technical and Scientific Reports		
TWC 447 User Experience in Medicine and Health		

Requirement	Minimum Grade	Credit Hours
TWC 451 Copyright and Intellectual Property in the Electronic Age		
TWC 452 Information in the Digital Age		
TWC 453 Information and Communications Technology in American History		
TWC 455 Digital Ethics in Internet Policy and Governance		
TWC 484 Internship		
TWC 492 Honors Directed Study		
TWC 494 Topic: Intellectual Property		
TWC 494 Special Topics		
TWC 494 Topic: Strategic Medical and Health Communication		
TWC 494 Topic: UX Writing		
National and Civil Service and Professional Studies	C	6
AES 101 Department of the Air Force Professionalism		
AES 201 Team and Leadership Fundamentals I		
AES 203 Team and Leadership Fundamentals II		
AES 301 Leading People and Effective Communication I		
AES 303 Leading People and Effective Communication II		
AES 401 National Security, Leadership Responsibilities and Commissioning Preparation I		
COM 259 Communication in Business and the Professions (CIVI)		
COM 263 Communication Across Cultures and Global Engagement (GCSI)		
COM 312 Communication, Conflict, and Negotiation (CIVI)		

Requirement	Minimum Grade	Credit Hours
COM 316 Gender and Communication (SOBE)		
COM 371 Language, Culture and Communication (GCSI)		
CRJ 100 Introduction to Criminal Justice (SOBE)		
CRJ 201 Criminal Justice Crime Control Policies and Practices (SOBE)		
CRJ 350 Law and Social Control (CIVI)		
CRJ 403 Victims and the Criminal Justice System		
CRJ 404 Juvenile Delinquency		
CRJ 405 Neighborhoods and Crime (CIVI)		
CRJ 406 Sex Crimes		
CRJ 408 Drugs and Crime		
CRJ 422 Violence in America		
CRJ 461 Intimate-Partner Violence		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 470 Discretionary Justice (SOBE)		
ENG 216 Persuasive Writing on Public Issues (CIVI)		
ENG 217 Writing Reflective Essays (HUAD)		
ENG 301 Writing for the Professions		
ENG 317 Cross-Cultural Writing (HUAD)		
HCR 231 Fundamentals of Community Health		
HCR 310 Fundamentals of Human Trafficking (SOBE)		
HCR 331 Communication within Communities		

Requirement	Minimum Grade	Credit Hours
MCO 456 Political Communication (CIVI)		
MIS 101 Introduction to the United States Army		
MIS 102 Foundation of Agile and Adaptive Leadership		
MIS 201 Army Leadership and Decision Making		
MIS 202 Army Doctrine and Team Development		
MIS 301 Training Management and the Warfighting Functions		
MIS 302 Applied Leadership in Small-Unit Operations		
MVS 100 Introduction to Military Studies (AMIT)		
MVS 200 The Military Culture and American Society		
MVS 201 Interdisciplinary Approaches to Conflict and War		
MVS 202 Exploring Veteran Culture		
MVS 276 Fundamentals of Military Psychology and Counseling		
MVS 294 Special Topics		
MVS 300 Fighting for American Ideals		
MVS 301 Experience of America's Modern Wars		
MVS 302 Military and Veterans in Media and Arts (HUAD)		
MVS 316 Combat Trauma		
MVS 376 Writing a Personal History		
MVS 394 Topic: Brutality and Beauty: The Poetry of Conflict		
MVS 394 Special Topics		
MVS 394 Topic: Veterans, Science Fiction, and the Future		
MVS 394 Topic: War & Popular Culture		
MVS 395 Combat in Film		

Requirement	Minimum Grade	Credit Hours
MVS 400 Military Theory and Practice		
MVS 402 Technology and Warfare (GCSI)		
MVS 403 American Military Leadership		
MVS 404 War and Memory		
MVS 484 Internship		
MVS 485 Military and Veterans Studies Portfolio and Performance Assessment		
MVS 489 Undergraduate Research		
MVS 493 Honors Thesis		
MVS 494 Special Topics		
MVS 498 Pro-Seminar		
MVS 499 Individualized Instruction		
NAV 101 Introduction to Naval Science		
NAV 102 Sea Power and Maritime Affairs		
NAV 402 Leadership and Ethics		
NLM 160 Voluntary Action and Community Leadership (CIVI)		
NLM 220 Introduction to Nonprofit Organizations		
NLM 300 Fund Raising and Resource Development		
NLM 310 Strategic Volunteer Engagement (CIVI)		
OGL 220 Behavioral Dynamics in Organizations (SOBE)		
OGL 260 Resource Allocation in Organizations (SUST)		
OGL 300 Theory and Practice of Leadership		
OGL 343 Social Processes in Organizations (SOBE)		

Requirement	Minimum Grade	Credit Hours
OGL 345 Organizational Ethics (HUAD)		
OGL 350 Diversity and Organizations (GCSI)		
OGL 355 Leading Organizational Innovation and Change		
OGL 357 Assessment in Organizations		
OGL 360 Assessment of Leadership Effectiveness		
PAF 240 Urban Policy		
PAF 305 Urban Governance		
PAF 311 Leadership and Change (SOBE)		
PAF 410 Building Leadership Skills (SOBE)		
PAF 420 Managing Across Boundaries		
PAF 460 Public Service Ethics		
SWU 181 Economics: A Social Issues Perspective		
SWU 182 Social Services Perspective of Government (AMIT)		
SWU 432 Social Policy and Services		
SWU 456 Immigrants and Refugees (CIVI)		
SWU 457 Southwest Borderland Immigration Issues (CIVI)		
USL 210 Service Learning: Intro to Diverse Community Issues		
USL 402 Service Learning: Education & Youth		
Upper Division National and Civil Service and Professional Studies	C	3
AES 301 Leading People and Effective Communication I		
AES 303 Leading People and Effective Communication II		
AES 401 National Security, Leadership Responsibilities and Commissioning Preparation I		

Requirement	Minimum Grade	Credit Hours
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		
COM 371 Language, Culture and Communication (GCSI)		
CRJ 350 Law and Social Control (CIVI)		
CRJ 403 Victims and the Criminal Justice System		
CRJ 404 Juvenile Delinquency		
CRJ 405 Neighborhoods and Crime (CIVI)		
CRJ 406 Sex Crimes		
CRJ 408 Drugs and Crime		
CRJ 422 Violence in America		
CRJ 461 Intimate-Partner Violence		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
CRJ 470 Discretionary Justice (SOBE)		
ENG 301 Writing for the Professions		
ENG 317 Cross-Cultural Writing (HUAD)		
HCR 310 Fundamentals of Human Trafficking (SOBE)		
HCR 331 Communication within Communities		
MCO 456 Political Communication (CIVI)		
MIS 301 Training Management and the Warfighting Functions		
MIS 302 Applied Leadership in Small-Unit Operations		
MVS 300 Fighting for American Ideals		
MVS 301 Experience of America's Modern Wars		

Requirement	Minimum Grade	Credit Hours
MVS 302 Military and Veterans in Media and Arts (HUAD)		
MVS 316 Combat Trauma		
MVS 376 Writing a Personal History		
MVS 394 Topic: Brutality and Beauty: The Poetry of Conflict		
MVS 394 Special Topics		
MVS 394 Topic: Veterans, Science Fiction, and the Future		
MVS 394 Topic: War & Popular Culture		
MVS 395 Combat in Film		
MVS 400 Military Theory and Practice		
MVS 402 Technology and Warfare (GCSI)		
MVS 403 American Military Leadership		
MVS 404 War and Memory		
MVS 484 Internship		
MVS 485 Military and Veterans Studies Portfolio and Performance Assessment		
MVS 489 Undergraduate Research		
MVS 493 Honors Thesis		
MVS 494 Special Topics		
MVS 498 Pro-Seminar		
MVS 499 Individualized Instruction		
NAV 402 Leadership and Ethics		
NLM 300 Fund Raising and Resource Development		
NLM 310 Strategic Volunteer Engagement (CIVI)		

Requirement	Minimum Grade	Credit Hours
OGL 300 Theory and Practice of Leadership OGL 343 Social Processes in Organizations (SOBE) OGL 345 Organizational Ethics (HUAD) OGL 350 Diversity and Organizations (GCSI) OGL 355 Leading Organizational Innovation and Change OGL 357 Assessment in Organizations OGL 360 Assessment of Leadership Effectiveness PAF 305 Urban Governance PAF 311 Leadership and Change (SOBE) PAF 410 Building Leadership Skills (SOBE) PAF 420 Managing Across Boundaries PAF 460 Public Service Ethics SWU 432 Social Policy and Services SWU 456 Immigrants and Refugees (CIVI) SWU 457 Southwest Borderland Immigration Issues (CIVI) USL 402 Service Learning: Education & Youth		
Humanities, Identities, and Society	C	3
CAP 220 Self in a Multicultural Society (SOBE) CDE 232 Human Development (SOBE) COM 100 Introduction to Human Communication (SOBE) COM 207 Critical Thinking and Writing in Communication COM 222 Argumentation (CIVI) COM 225 Public Speaking and Presentations (CIVI)		

Requirement	Minimum Grade	Credit Hours
COM 230 Teamwork and Collaboration (SOBE)		
COM 250 Communication and the Workplace (SOBE)		
COM 259 Communication in Business and the Professions (CIVI)		
COM 263 Communication Across Cultures and Global Engagement (GCSI)		
COM 312 Communication, Conflict, and Negotiation (CIVI)		
COM 316 Gender and Communication (SOBE)		
COM 323 Communication Approaches to Popular Culture (SOBE)		
COM 362 Urban Communication: Reinventing the Latinx City		
COM 363 Latinxs and the Media (SOBE)		
COM 371 Language, Culture and Communication (GCSI)		
COM 464 Communicative Sexualities (SOBE)		
CRJ 350 Law and Social Control (CIVI)		
CRJ 403 Victims and the Criminal Justice System		
CRJ 404 Juvenile Delinquency		
CRJ 405 Neighborhoods and Crime (CIVI)		
CRJ 406 Sex Crimes		
CRJ 408 Drugs and Crime		
CRJ 422 Violence in America		
CRJ 461 Intimate-Partner Violence		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		

Requirement	Minimum Grade	Credit Hours
ENG 216 Persuasive Writing on Public Issues (CIVI)		
ENG 217 Writing Reflective Essays (HUAD)		
ENG 218 Writing About Literature		
ENG 287 Beginning Creative Writing Workshop in Poetry (HUAD)		
ENG 288 Beginning Creative Writing Workshop in Fiction (HUAD)		
ENG 301 Writing for the Professions		
ENG 364 Women and Literature (HUAD)		
ENG 387 Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice		
ENG 388 Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice		
HCR 230 Culture and Health (GCSI) or HSC 210 Cultural Aspects of Health (GCSI)		
HCR 310 Fundamentals of Human Trafficking (SOBE)		
HCR 331 Communication within Communities		
HST 110 United States Since 1865 (HUAD)		
HST 230 Introduction to Jewish Civilization (GCSI)		
HST 306 Topic: The Civil Rights Movement		
HST 327 Women in U.S. History, 1600 to 1880 (HUAD)		
HST 328 Women in U.S. History, 1880-1980 (HUAD)		
HST 333 African American History to 1865 (AMIT)		
HST 368 Culture and Imagination in European History		
HST 372 Modern Middle East (GCSI)		

Requirement	Minimum Grade	Credit Hours
HST 430 The Ottoman Empire in the Classical Period		
IDS 310 Topic: Immigration: From Debate to Reform		
IDS 310 Integration: Cultural Contexts		
IDS 310 Topic: Integrative Performance		
IDS 311 Topic: European Jewish Life Today		
IDS 311 Topic: Food, Commodities, and Cultures		
IDS 311 Integration: Global Contexts		
IDS 311 Topic: Integrative Sustainability: Past, Future, Practice		
IDS 311 Topic: Reifying Conservation		
IDS 312 Topic: Death and Dying: An Interdisciplinary Approach		
IDS 312 Topic: Debt: Philosophy, Society, History		
IDS 312 Integrative Perspectives on Change		
IDS 312 Topic: Law and American Institutions		
IDS 312 Topic: Predators, Pets, and Pests		
IDS 312 Topic: Supernatural as Natural: Religion in our Evolution		
IDS 313 Topic: Chocolate in Global History		
IDS 313 Topic: Coffee in Global History		
IDS 313 Topic: Global Governance: International Organizations		
IDS 313 Topic: History/Cultural Impacts of Gaming in Global Cxt		
IDS 313 Topic: Identity and Conflict in Europe		
IDS 313 Integrative Perspectives on a Changing World		
IDS 313 Topic: Science, Technology, and Innovation		

Requirement	Minimum Grade	Credit Hours
IDS 313 Topic: Sex and Sexuality Across Time and Place		
IDS 313 Topic: Sugar in Global History		
IDS 313 Topic: Technology and Global Conflict		
IDS 313 Topic: The Cultural and Chemical History of Beer		
IDS 314 Topic: Analyzing War-ganizations		
IDS 314 Integrative Perspectives on Cultural Dynamics		
IDS 314 Topic: The Cultures of the West		
IDS 315 Topic: How to Become an Influencer		
IDS 315 Integration: Social Contexts		
IDS 315 Topic: Sports Fans		
IDS 315 Topic: The Global Workplace		
IDS 315 Topic: The Integrative Nature of Behavioral Dynamics		
IDS 315 Topic: The Political Economy of Work and Organizations		
IDS 316 Topic: Graphic Medicine: Comics, Illness, and Healthcare		
IDS 316 Topic: Integral Spirituality		
IDS 316 Topic: Integration in the Creative Process		
IDS 316 Integration: Humanities Contexts		
IDS 316 Topic: Mixed Media Art Journaling		
IDS 316 Topic: Park Futures		
IDS 316 Topic: The Nature of Consciousness		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		

Requirement	Minimum Grade	Credit Hours
MCO 426 Digital Media Literacy II		
MVS 301 Experience of America's Modern Wars		
MVS 302 Military and Veterans in Media and Arts (HUAD)		
PHI 101 Introduction to Philosophy (HUAD)		
PHI 105 Intro to Ethics (HUAD)		
PHI 306 Applied Ethics (CIVI)		
PSY 101 Introduction to Psychology (SOBE)		
PSY 350 Social Psychology (SOBE)		
REL 100 Religions of the World (HUAD)		
REL 101 Religion, Culture and Public Life (HUAD)		
REL 201 Religion and the Modern World (HUAD)		
REL 240 Introduction to Southeast Asia		
REL 365 Islamic Civilization (HUAD)		
REL 369 Women in Islam		
REL 390 Women, Gender and Religion (GCSI)		
SWU 456 Immigrants and Refugees (CIVI)		
SWU 461 LGBTQ+ Communities: Practice and Policy (CIVI)		
WST 100 Women, Gender, and Society (SOBE) or WST 300 Women and Gender in Contemporary Society (SOBE)		
WST 380 Race, Gender, and Class (SOBE)		
WST 390 Women, Gender and Religion (GCSI)		
Upper Division Humanities, Identities, and Society	C	6
COM 312 Communication, Conflict, and Negotiation (CIVI)		

Requirement	Minimum Grade	Credit Hours
COM 316 Gender and Communication (SOBE)		
COM 323 Communication Approaches to Popular Culture (SOBE)		
COM 362 Urban Communication: Reinventing the Latinx City		
COM 363 Latinxs and the Media (SOBE)		
COM 371 Language, Culture and Communication (GCSI)		
COM 464 Communicative Sexualities (SOBE)		
CRJ 350 Law and Social Control (CIVI)		
CRJ 403 Victims and the Criminal Justice System		
CRJ 404 Juvenile Delinquency		
CRJ 405 Neighborhoods and Crime (CIVI)		
CRJ 406 Sex Crimes		
CRJ 408 Drugs and Crime		
CRJ 422 Violence in America		
CRJ 461 Intimate-Partner Violence		
CRJ 462 Gangs		
CRJ 463 White Collar Crime		
ENG 301 Writing for the Professions		
ENG 364 Women and Literature (HUAD)		
ENG 387 Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice		
ENG 388 Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice		
HCR 310 Fundamentals of Human Trafficking (SOBE)		

Requirement	Minimum Grade	Credit Hours
HCR 331 Communication within Communities		
HST 306 Topic: The Civil Rights Movement		
HST 327 Women in U.S. History, 1600 to 1880 (HUAD)		
HST 328 Women in U.S. History, 1880-1980 (HUAD)		
HST 333 African American History to 1865 (AMIT)		
HST 368 Culture and Imagination in European History		
HST 372 Modern Middle East (GCSI)		
HST 430 The Ottoman Empire in the Classical Period		
IDS 310 Topic: Immigration: From Debate to Reform		
IDS 310 Integration: Cultural Contexts		
IDS 310 Topic: Integrative Performance		
IDS 311 Topic: European Jewish Life Today		
IDS 311 Topic: Food, Commodities, and Cultures		
IDS 311 Integration: Global Contexts		
IDS 311 Topic: Integrative Sustainability: Past, Future, Practice		
IDS 311 Topic: Reifying Conservation		
IDS 312 Topic: Death and Dying: An Interdisciplinary Approach		
IDS 312 Topic: Debt: Philosophy, Society, History		
IDS 312 Integrative Perspectives on Change		
IDS 312 Topic: Law and American Institutions		
IDS 312 Topic: Predators, Pets, and Pests		
IDS 312 Topic: Supernatural as Natural: Religion in our Evolution		

Requirement	Minimum Grade	Credit Hours
IDS 313 Topic: Chocolate in Global History		
IDS 313 Topic: Coffee in Global History		
IDS 313 Topic: Global Governance: International Organizations		
IDS 313 Topic: History/Cultural Impacts of Gaming in Global Cxt		
IDS 313 Topic: Identity and Conflict in Europe		
IDS 313 Integrative Perspectives on a Changing World		
IDS 313 Topic: Science, Technology, and Innovation		
IDS 313 Topic: Sex and Sexuality Across Time and Place		
IDS 313 Topic: Sugar in Global History		
IDS 313 Topic: Technology and Global Conflict		
IDS 313 Topic: The Cultural and Chemical History of Beer		
IDS 314 Topic: Analyzing War-ganizations		
IDS 314 Integrative Perspectives on Cultural Dynamics		
IDS 314 Topic: The Cultures of the West		
IDS 315 Topic: How to Become an Influencer		
IDS 315 Integration: Social Contexts		
IDS 315 Topic: Sports Fans		
IDS 315 Topic: The Global Workplace		
IDS 315 Topic: The Integrative Nature of Behavioral Dynamics		
IDS 315 Topic: The Political Economy of Work and Organizations		
IDS 316 Topic: Graphic Medicine: Comics, Illness, and Healthcare		

Requirement	Minimum Grade	Credit Hours
IDS 316 Topic: Integral Spirituality		
IDS 316 Topic: Integration in the Creative Process		
IDS 316 Integration: Humanities Contexts		
IDS 316 Topic: Mixed Media Art Journaling		
IDS 316 Topic: Park Futures		
IDS 316 Topic: The Nature of Consciousness		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
MCO 426 Digital Media Literacy II		
MVS 301 Experience of America's Modern Wars		
MVS 302 Military and Veterans in Media and Arts (HUAD)		
PHI 306 Applied Ethics (CIVI)		
PSY 350 Social Psychology (SOBE)		
REL 365 Islamic Civilization (HUAD)		
REL 369 Women in Islam		
REL 390 Women, Gender and Religion (GCSI)		
SWU 456 Immigrants and Refugees (CIVI)		
SWU 461 LGBTQ+ Communities: Practice and Policy (CIVI)		
WST 380 Race, Gender, and Class (SOBE)		
WST 390 Women, Gender and Religion (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 - 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.

registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.

BS/CERT Public Service and Public Policy (Law and Policy) and Cross-Sector Leadership (PPPAFLPBS and PPCSLDCERT)

Program description:

The School of Public Affairs offers a concentration in law and policy as part of the Bachelor of Science in public service and public policy.

Through this concentration, students gain foundational knowledge about the law and its relationship to society. They also acquire the skills necessary for positively impacting communities via the law, public organizations and the policy process.

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: 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: Moderate

CERT At a Glance:

College/school: Watts College of Public Service & Community Solutions

Location: Downtown Phoenix or Online

Career opportunities:

The program is primarily designed for individuals who work in the public sector or are interested in doing so. The skills and knowledge students acquire allow them to successfully function in many other types of organizations; however the primary focus is on public organizations.

This program prepares students for entry- and midlevel supervisory and managerial positions in city, county, state and federal agencies; for work in nonprofit organizations; and for work in the private sector at the interface of public affairs and private enterprise. For those who already have work experience, the degree provides further opportunity for promotion. In addition, the program prepares students for future graduate study in law, public policy and public administration, and for pursuits focused on public affairs and the common good.

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 - Public Service and Public Policy (Law and Policy), BS

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Bachelor of Science, BS

College/School: [Watts College of Public Service & Community Solut](#)

Plan Code: PPPAFLPBS

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 200 Public Service and Policy (CIVI)	C	3
PAF 201 Economics and Public Policy (SOBE)	C	3
PAF 300 Public Management and Administration	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 340 Contemporary Policy Challenges	C	3
PAF 400 Senior Capstone Project	C	3
PAF 460 Public Service Ethics	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

Area 1: Community Resources and Development

[CRD Elective](#)

[NLM Elective](#)

[PRM Elective](#)

[RTH Elective](#)

[TDM Elective](#)

Area 2: Social Work

[SWU Elective](#)

Area 3: Public Service and Community Solutions

[CPP Elective](#)

3

Students are required to complete coursework from Watts interdisciplinary areas. CRJ 201 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

Law and Policy Concentration

PHI 103 Principles of Sound Reasoning (QTRS)	C	3
CRJ 201 Criminal Justice Crime Control Policies and Practices (SOBE)	C	3
PAF 411 Law in Action	C	3

Law and Policy Electives

Upper Division PAF Elective		
JUS 222 Drugs and Justice (SOBE)		
JUS 235 Disability, Justice and Advocacy (CIVI)		
JUS 308 Courts and Society (SOBE)	C	6
CRJ 350 Law and Social Control (CIVI)		
CRJ 410 Criminal Procedure I: The Law of Investigations		
POS 315 The Supreme Court		

Upper Division PAF Elective Recommended: PAF 484	C	3
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Related Area

Social Sciences

OGL 200 Introduction to Organizational Leadership (CIVI)		
POS 112 Foundations of Democracy (CIVI)		
POS 150 Comparative Government (GCSI)	C	3
PSY 101 Introduction to Psychology (SOBE)		
SOC 101 Introductory Sociology (SOBE)		

Professional Skills	C	3
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COM 225 Public Speaking and Presentations (CIVI)		
ENG 216 Persuasive Writing on Public Issues (CIVI)		

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 - 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 Robotics and Autonomous Systems, and International Relations (ESRASBS and LAINSCERT)

Program description:

Robotics and autonomous systems are transforming the way people live and work, driving advances in transportation, manufacturing, health care, aerospace and beyond. Autonomous systems --- such as driverless vehicles, mobile robots, industrial robots and intelligent machines --- operate with minimal human intervention, requiring a deep integration of engineering disciplines to achieve reliable, safe and efficient performance.

Students in the Bachelor of Science program in robotics and autonomous systems receive a comprehensive engineering education in robotics, controls, automation and intelligent systems. The program emphasizes both theoretical foundations and practical applications, with particular focus on systems integration, sensing and perception, data fusion, and modeling and simulation. Students gain the ability to analyze, design, implement and optimize robotic and autonomous technologies across diverse domains, preparing them to contribute to innovations that define the future of engineered systems.

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.

Students in the international relations certificate program develop a sophisticated understanding of how the world is deeply interconnected and why events happening in one part of the globe may have huge impacts on other regions. Students learn about U.S. political institutions or global politics before progressing to advanced coursework on public policy, political leadership and political change. They examine core issues in international relations, including America's role in the world, violent conflict, diplomacy and trade, and how local identities interact with global trends to shape world affairs. Students develop analytical and communication skills, and pursue hands-on research, including internships.

BS At a Glance:

College/school: Ira A. Fulton Schools of Engineering

Location: Polytechnic

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:

Professionals with a degree in robotics and autonomous systems have substantial opportunities at all levels in manufacturing engineering and in research and development at companies, research institutes and national laboratories (e.g., Department of Defense, Department of Energy, NASA). Relevant careers and related titles include:

- engineer
- manufacturing engineer
- mechanical engineer
- mechatronics engineer
- researcher and scientist

Graduates who have combined the certificate in international relations with their major program of study become more attractive to employers.

Graduates can identify global trends and address issues facing humanity. They have developed a deeper understanding of international policy while leveraging their critical thinking and communication skills, as well as their cross-cultural competencies. Their sector-spanning analytic skills are useful for careers in government, international organizations, nongovernmental organizations, academia and journalism. Graduates pursue careers as foreign service officers, security analysts and policy analysts, and in other data-driven positions.

Curriculum - Robotics and Autonomous Systems, BS

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Bachelor of Science, BS

College/School: [Ira A. Fulton Schools of Engineering](#)

Plan Code: ESRASBS

Minimum credit hours: 120

Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Robotics and Autonomous Sys - Engineering Fundamentals		
CSE 101 Introduction to Computer Science and Programming for Non-Computer Science Majors (QTRS) or RAS 110 Principles of Programming for Engineers	C	3
RAS 101 Foundations of Robotic Engineering I	C	3
RAS 102 Foundations of Robotic Engineering II	C	3
RAS 205 Design and Analysis of Data Structures and Algorithms	C	3
RAS 215 Statics and Mechanics of Materials	C	3
EGR 216 Engineering Electrical Fundamentals	C	3
Robotics and Autonomous Sys - Core		
RAS 210 Computer-Aided Design and Manufacturing (CAD/CAM)	C	3
RAS 220 Dynamics	C	3
RAS 230 Introduction to Robotic Mechanism Design and Deployment	C	3

Requirement	Minimum Grade	Credit Hours
RAS 433 Transforms and Systems Modeling	C	3
RAS 455 Robotic Systems I	C	3
RAS 456 Robotic Systems II	C	3
Robotics and Autonomous Sys - Project Courses		
RAS 304 Embedded Systems Design Project I	C	3
RAS 314 Embedded Systems Design Project II	C	3
RAS 401 Professional Design Project I or EGR 401 Professional Design Project I	C	3
RAS 402 Professional Design Project II or EGR 402 Professional Design Project II	C	3
RAS 446 Robotic and Manufacturing System Control and Optimization	C	3
RAS 475 Applied Machine Learning and AI for Robotics and Manufacturing	C	3
Robotics and Autonomous Systems Major GPA		
Check: Minimum 2.0 Major GPA		
Math, Science & Interdisciplinary Requirements		
HST 318 History of Engineering (HUAD)	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)	C	3

MAT 275 Modern Differential Equations (MATH)	C	3
MAT 343 Applied Linear Algebra		3
PHY 121 University Physics I: Mechanics (SCIT) AND PHY 122 University Physics Laboratory I (SCIT)	C	4
PHY 321 Vector Mechanics and Vibration		3
EGR 280 Engineering Statistics (QTRS)		3

Technical Electives

Upper Division Technical Electives - RAS

MFG 387 Industrial Automation MFG 494 Special Topics RAS
484 Internship EGR 463 Vehicle Electrical Systems and Hybrid
Systems EGR 465 Ground Vehicle Dynamics EGR 494 Topic:
Power Electronic Converters and Systems RAS 494 Special
Topics

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-MSN The ASU Experience	1
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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

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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 - International Relations, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: [The College of Liberal Arts and Sciences](#)

Plan Code: LAINSCERT

Minimum credit hours: 15

Upper division minimum credit hours: 12

Requirement	Minimum Grade	Credit Hours
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The certificate is comprised of 15 credit hours from political science, global studies, and international relations courses. At least 12 credit hours must be in upper-division coursework and at least six of those credit hours must be from courses offered by The College of Liberal Arts and Sciences. A grade of "C" (2.00 on a 4.00 scale) or better is required for all courses used toward the certificate.



Foundations for International Relations

Foundations for International Relations Courses

INR 205 Perspectives on International Relations

POS 160 Global Politics (GCSI)

SGS 101 Thinking Globally (GCSI)

POS 360 World Politics (GCSI)

SGS 301 Principles of Global Studies (GCSI)

C

3

Intelligence, Diplomacy, and Security

Requirement	Minimum Grade	Credit Hours
Upper Division Intelligence, Diplomacy, and Security Courses		
POS 348 Do You Want to Build a Nation? (CIVI)	C	3
POS 364 National Security, Intelligence, and Terrorism (SOBE)		
POS 394 Topic: The Politics of Cyberspace		
POS 394 Topic: Democratic Resilience in the Digital Age		
POS 466 / SGS 466 Migration, Environment and Global Security		
POS 467 International Security (GCSI)		
POS 494 / SGS 494 Topic: Diplomacy/PolicyDesignStudio I		
SGS 494 Topic: International Criminal Tribunals & Global Security		
International Law, Economy, and Institutions		
Upper Division International Law, Economy, and Institutions Courses		
POS 350 Comparative Politics (GCSI)	C	6
POS 351 Democratization (GCSI)		
POS 361 American Foreign Policy (SOBE)		
POS 367 World Politics and Global Inequalities (GCSI)		
POS 465 International Organization and Law (GCSI)		
POS 486 International Political Economy (GCSI)		
SGS 303 Global Trends (GCSI)		
SGS 321 International Institutions and Global Governance		
SGS 340 Violence, Conflict and Human Rights (GCSI)		
SGS 350 Economic Development and Globalization		

Requirement	Minimum Grade	Credit Hours
SGS 379 The Resource Curse		

Culture, Politics, and Identity

Upper Division Culture, Politics, and Identity Courses

POS 300 Contemporary Global Controversies (GCSI)		
POS 368 Ethics and Human Rights (GCSI)		
POS 388 Religion, Ethics, and International Politics (CIVI)	C	3
SGS 360 Cultural Aspects of Globalization		
SGS 370 Geopolitics (GCSI)		

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 Secondary Education and Elementary Education (TESEDBAE and TEEEDCERT)

Program description:

The Bachelor of Arts in Education program in secondary education prepares students to educate learners in grades 6--12 in the content area of the student's choice.

Students develop strong content knowledge, instructional competency and professional skills needed to lead successful classrooms in middle and high schools. Students gain extensive experience integrating educational technology, and the program has a strong focus on teaching and learning practices that foster equitable access and outcomes for diverse secondary populations. Students select one content area as their subject emphasis, in which they take at least 24 credit hours. Content areas, which may vary depending on location, include biology, business, chemistry, earth and space sciences, economics, English, general science, geography, health, history, mathematics, physics, physical education, political science and American government, and some foreign languages.

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 apply in learning environments what they learn during coursework.

Graduates earn a bachelor's degree in secondary education and receive an institutional recommendation for teacher certification in Secondary Education, 6--12, as well as a structured English Immersion, P--12, endorsement through the Arizona Department of Education. To be eligible for secondary certification in Arizona, students must also earn a passing score on the professional knowledge exam offered through the National Evaluation Series or Arizona Educator Proficiency Assessments.

The certificate program in elementary education prepares students to work with children in grades K--8 in an educational setting. This certificate program can be added only to the following majors in Mary Lou Fulton Teachers College, granting students eligibility for dual teaching certificates at the completion of their undergraduate Bachelor of Arts in Education program:

- BAE in early childhood education
- BAE in secondary education
- BAE in special education

Students engage in innovative coursework grounded in theory-based strategies and evidence-based practices for teaching. Coursework is designed to support the development of instructional competencies, professional skills, content knowledge and pedagogical content knowledge in mathematics, science, English language arts and social studies.

This program has a strong focus on teaching and learning practices that foster equitable access and outcomes for culturally and linguistically diverse students and learners with special needs and exceptionalities.

When added to a bachelor's degree program listed above, graduates are eligible to earn an institutional recommendation from ASU for Arizona teacher certification in Elementary Education, K--8, as recognized by 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

These programs are also offered via ASU Sync (<https://provost.asu.edu/sync/students>). 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.

The BAE program in secondary education via ASU Sync is available for transfer students who reside in Arizona. Students should speak to an advisor about the content areas and modalities offered at ASU campuses in and outside Maricopa County.

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 (<https://www.benefits.va.gov/gibill>).

BAE At a Glance:

College/school: Mary Lou Fulton College for Teaching and Learning Innovation

Location: Tempe, West Valley or 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, West Valley or ASU Sync

Career opportunities:

Graduates are recommended for certification in an approved area for grades 6--12. The demand for well-prepared secondary teachers is strong, particularly in the areas of math and science. Job opportunities in a fast-growing state such as Arizona are numerous. Graduates with a degree in secondary education work in:

- charter schools
- private school settings
- public schools
- online schools

Graduates of Mary Lou Fulton Teachers College are highly sought-out teachers in public, charter and private education institutions. Many graduates with degrees in elementary education also work at community organizations that serve children and youth.

Curriculum - Secondary 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: TESEDBAE

Minimum credit hours: 120

Upper division minimum credit hours: 45

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 332 Disciplinary Literacy Methods	C	4
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
TEL 487 Student Teaching: Dual Certification OR TEL 488 Student Teaching	C	12

Requirement	Minimum Grade	Credit Hours
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Major Core

TEL 366 Professional Experience Internship	C	1
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SED 403 Secondary Principles, Curriculum and Methods	C	3
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Content Area Courses

Biology	C	21
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BIO 181 General Biology I (SCIT)

BIO 182 General Biology II (SCIT)

BIO 320 Fundamentals of Ecology

BIO 340 General Genetics

BIO 345 Evolution

ABS Elective

BIO Elective

MIC Elective

SCN Elective

OR

Business

ACC 231 Uses of Accounting Information I

ACC 241 Uses of Accounting Information II

ECN 211 Macroeconomic Principles (SOBE)

ECN 212 Microeconomic Principles (SOBE)

MGT 380 Management and Strategy

MKT 390 Essentials of Marketing

Requirement	Minimum Grade	Credit Hours
SCM 380 Supply Chain Management Foundations (SUST)		
<u>AGB Elective</u>		
<u>CIS Elective</u>		
<u>FIN Elective</u>		
<u>LES Elective</u>		
<u>MGT Elective</u>		
<u>MKT Elective</u>		
<u>REA Elective</u>		
OR		
Chemistry		
CHM 113 General Chemistry I (SCIT)		
CHM 116 General Chemistry II (SCIT)		
CHM 233 General Organic Chemistry I AND CHM 237 General Organic Chemistry Laboratory I		
CHM 234 General Organic Chemistry II AND CHM 238 General Organic Chemistry Laboratory II		
<u>CHM Elective</u>		
<u>BCH Elective</u>		
OR		
Economics		
ECN 211 Macroeconomic Principles (SOBE)		
ECN 212 Microeconomic Principles (SOBE)		
ECN 221 Business Statistics (QTRS)		
ECN 312 Intermediate Microeconomic Theory (SOBE)		

Requirement	Minimum Grade	Credit Hours
ECN 313 Intermediate Macroeconomic Theory (SOBE)		
<u>ECN Elective</u>		
OR English		
ENG 200 Critical Reading and Writing About Literature (HUAD)		
ENG 221 Survey of English Literature I (HUAD)		
ENG 222 Survey of English Literature II (HUAD)		
ENG 241 Literatures of the United States to 1860 (HUAD)		
ENG 242 Literatures of the United States, 1860 to Present (HUAD)		
ENG 471 Literature for Young Adults (HUAD)		
<u>ENG Elective</u>		
OR General Science		
AST 111 Introduction to Solar Systems Astronomy (SCIT)		
BIO 100 The Living World (SCIT)		
BIO 181 General Biology I (SCIT)		
BIO 182 General Biology II (SCIT)		
CHM 101 Introductory Chemistry (SCIT)		
CHM 113 General Chemistry I (SCIT)		
CHM 116 General Chemistry II (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)		

Requirement	Minimum Grade	Credit Hours
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)		
SCN 300 Foundations of Environmental Education		
<u>ABS Elective</u>		
<u>AST Elective</u>		
<u>BIO Elective</u>		
<u>CHM Elective</u>		
<u>GLG Elective</u>		
<u>PHY Elective</u>		

OR Geography

GCU 102 Introduction to Human Geography (GCSI)

GCU 114 World Social Studies

GCU 121 World Geography (GCSI)

GCU 241 The Global Economy in Transition

GIS 205 Geographic Information Science I (QTRS)

GPH 111 Introduction to Physical Geography (SCIT)

GPH 112 Introduction to Physical Geography Lab (SCIT)

GCU Elective

GPH Elective

GIS Elective

Requirement	Minimum Grade	Credit Hours
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OR History

- HST 100 Global History to 1500 (HUAD)
- HST 101 Global History Since 1500 (HUAD)
- HST 109 United States to 1865 (AMIT)
- HST 110 United States Since 1865 (HUAD)
- HST Elective

OR Mathematics

- MAT 243 Discrete Mathematical Structures
- MAT 270 Calculus with Analytic Geometry I (MATH)
- MAT 271 Calculus with Analytic Geometry II (MATH)
- MAT 272 Calculus with Analytic Geometry III (MATH)
- MAT 275 Modern Differential Equations (MATH)
- MAT 300 Mathematical Structures
- MAT 310 Introduction to Geometry
- MAT Elective
- MTE Elective
- STP Elective

OR Physics

- 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
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 252 Physics III (SCIT)		
PHY Elective		

OR Political Science

POS 110 American Government and Politics (AMIT)
POS 150 Comparative Government (GCSI)
POS 160 Global Politics (GCSI)
POS 210 Political Ideologies (CIVI)
POS 216 State and Local Government (CIVI)
POS 270 American Legal System
POS 300 Contemporary Global Controversies (GCSI)
POS 310 American National Government (AMIT)
POS 370 Law and Society (CIVI)
JUS Elective
SGS Elective
POS Elective

OR Spanish

SPA 201 Intermediate Spanish
SPA 202 Intermediate Spanish

Requirement	Minimum Grade	Credit Hours
SPA 313 Spanish Conversation and Composition		
SPA 314 Spanish Conversation and Composition		
SPA 315 Advanced Spanish I for Bilinguals (SOBE)		
SPA 316 Advanced Spanish II for Bilinguals (CIVI)		
SPA 412 Advanced Conversation and Composition		
SPA 413 Spanish Grammar in Context		
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)		
<u>SPA Elective</u>		

Students select one content area. Please consult with an academic advisor.

Content Area Methods Course

Upper Division Content Area Methods

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

MTE 485 Methods of Teaching Standards-Based Middle Grades and Early Secondary Mathematics

MTE 494 Topic: Advanced Methods of Tchng Mthmtics in Scndry Schls

Requirement	Minimum Grade	Credit Hours
PPE 450 Physical Education for the Elementary School		
SED 404 World and Native Language Methods and Assessment for K-12 Classrooms		
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 483 Science Teaching Methods for Secondary Schools II		
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		

Student select the methods course that matches their content area. Consult an academic advisor to ensure proper course selection.

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
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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 - Elementary Education, Certificate

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Certificate, Certificate

College/School: [Mary Lou Fulton College for Teaching & Learning In](#)

Plan Code: TEEEDCERT

Minimum credit hours: 20

Upper division minimum credit hours: 20

Requirement	Minimum Grade	Credit Hours
Required Courses		
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
RDG 413 Elementary Methods for Literacy Instruction and Assessment	C	4
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, Special Education, 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.