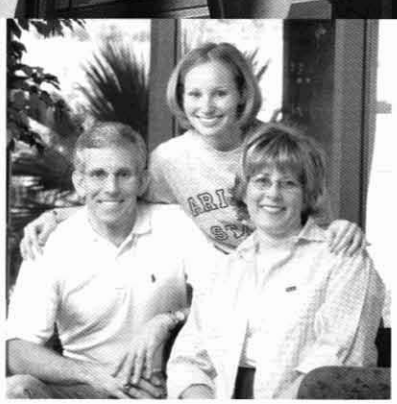
Arizona State University

General Catalog
2003–2004





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Arizona State University

2003–2004 General Catalog

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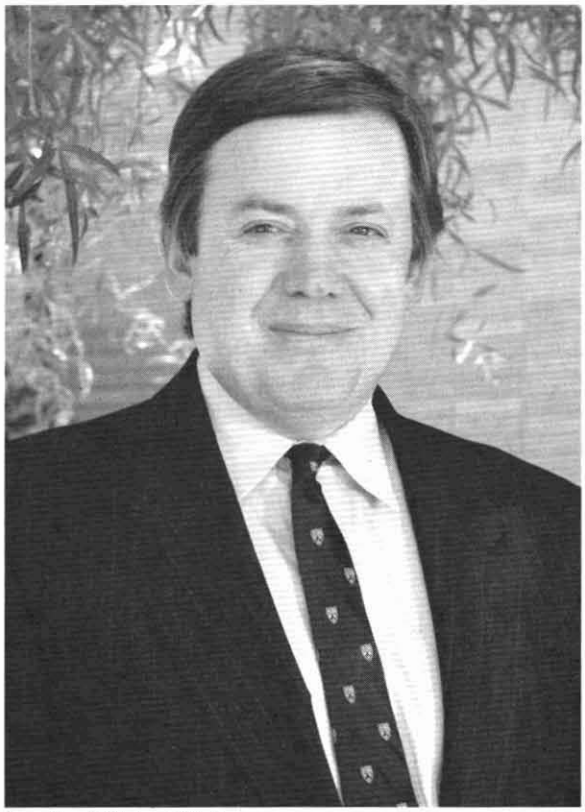
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President Michael M. Crow

Tim Trumble photo

Dear ASU Students and Prospective Students:

Welcome to Arizona State University! I am very glad to introduce the 2003–2004 *General Catalog*. Being new to ASU myself, I can tell you that the more I learn about this great university, the more proud I am to be its 16th president. ASU offers a wide range and depth of academic study, research opportunities, and resources as well as an enthusiastic and engaged faculty to provide you with a high quality education that will be both challenging and rewarding.

The catalog is organized so that you can effectively find the information most applicable to you and your course of studies. All of the information included is intended to help guide you through your university experience. However, nothing will replace the guidance an academic advisor can provide. I strongly encourage you to work closely with an advisor to plan your academic program.

I am tremendously excited to welcome you to ASU and to wish you a productive and fulfilling collegiate experience here.

Sincerely,

Michael Crow

Michael M. Crow
President

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Course Prefix Index

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ACC Accountancy....164
ADE Architectural Design and Technology Studios....133
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AET Aeronautical Engineering Technology....646
AFH African American Studies Humanities....323
AFR African American Studies....324
AFS African American Studies Social Science....325
AGB Agribusiness....597
AIS American Indian Studies....458
AJS Administration of Justice[1]
AMS American Studies[1]
AMT Aeronautical Management Technology....630
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CSH Chicana and Chicano Studies Humanities....343
CSS Chicana and Chicano Studies Social Science....343
DAH Dance History....280
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DSC Design....142
ECD Early Childhood Education....194
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[1] See the *ASU West Catalog*.

[2] See the *Graduate Catalog*.

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INT Interior Design 144
IPO International Programs Overseas 58
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ITA Italian 386
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JAC Joint Admission Continuous Enrollment 588
JMC Journalism and Mass Communication 466
JPN Japanese 387
JUS Justice Studies 469
KIN Kinesiology 374
KOR Korean 387
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[1] See the *ASU West Catalog*.
[2] See the *Graduate Catalog*.

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MHL Music History/Literature 290
MIC Microbiology 403
MIS Military Science 406
MKT Marketing 176
MSE Materials Science and Engineering 226
MTC Music Theory and Composition 291
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MUS Music 295
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NOR Norwegian 388
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NUR Nursing 451
OPM Operations Management 175
PAF Public Affairs 472
PGM Professional Golf Management 599
PGS Psychology (Social and Behavioral) 429
PHI Philosophy 410
PHS Physical Sciences 415
PHY Physics 415
PLA Landscape Architecture 152
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POL Political Science[1]
POR Portuguese 388
POS Political Science 425
PSY Psychology (Science and Mathematics) 431, 609
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PUP Urban and Environmental Planning 153
QBA Quantitative Business Analysis 169
RDG Reading Education 196
REA Real Estate 178
REC Recreation Management and Tourism 474
REL Religious Studies 433
ROM Romanian 389
RUS Russian 389
SBS Social and Behavioral Sciences[1]
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SCM Supply Chain Management 179
SED Secondary Education 196
SEM Science and Engineering of Materials[2]
SET Security Engineering Technology[2]
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SLV Slavic 390
SOC Sociology 436
SPA Spanish 390
SPE Special Education 196
SPF Social and Philosophical Foundations 198
STE Society, Values, and Technology 214
STP Statistics and Probability 400
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WAC Writing Across the Curriculum 352
WSH Women's Studies Humanities 442
WST Women's Studies 442

[1] See the *ASU West Catalog*.
[2] See the *Graduate Catalog*.

Academic Organization

Organized under ASU Main, ASU East, ASU West, and ASU Extended Campus are colleges, schools, departments, and other administrative units whose faculty offer courses.

ASU Main

Barrett Honors College

College of Architecture and Environmental Design

School of Architecture
School of Design
School of Planning and Landscape Architecture

College of Education

Division of Curriculum and Instruction
Division of Educational Leadership and Policy Studies
Division of Psychology in Education

College of Engineering and Applied Sciences

Del E. Webb School of Construction

School of Engineering

Department of Chemical and Materials Engineering
Department of Civil and Environmental Engineering
Department of Computer Science and Engineering
Department of Electrical Engineering
Department of Industrial Engineering
Department of Mechanical and Aerospace Engineering
Harrington Department of Bioengineering

College of Extended Education

College of Law

College of Liberal Arts and Sciences

African American Studies Program
Department of Aerospace Studies
Department of Anthropology
Department of Chemistry and Biochemistry
Department of Chicana and Chicano Studies
Department of English
Department of Family and Human Development
Department of Geography
Department of Geological Sciences
Department of History
Department of Kinesiology
Department of Languages and Literatures
Department of Mathematics and Statistics
Department of Military Science
Department of Philosophy
Department of Physics and Astronomy
Department of Political Science
Department of Psychology
Department of Religious Studies
Department of Sociology
Department of Speech and Hearing Science
Interdisciplinary Humanities Program
School of Life Sciences (Biology, Microbiology, Plant Biology)
Women's Studies Program

College of Nursing

College of Public Programs

American Indian Studies Program
Asian Pacific American Studies Program
Department of Recreation Management and Tourism
Hugh Downs School of Human Communication
School of Justice Studies
School of Public Affairs
School of Social Work
Walter Cronkite School of Journalism and Mass Communication

Division of Undergraduate Academic Services

Academic Success at the University
Bachelor of Interdisciplinary Studies
Writing Across the Curriculum

Graduate College

Gerontology
Science and Engineering of Materials
Transportation Systems

Herberger College of Fine Arts

Department of Dance
Department of Theatre
School of Art
School of Music

W. P. Carey School of Business

Department of Economics
Department of Finance
Department of Management
Department of Marketing
Department of Supply Chain Management
School of Accountancy and Information Management
School of Health Administration and Policy

ASU East

College of Technology and Applied Sciences

Department of Aeronautical Management Technology
Department of Electronics and Computer Engineering Technology
Department of Information and Management Technology
Department of Mechanical and Manufacturing Engineering Technology

East College

Department of Exercise and Wellness
Department of Nutrition
Faculty of Applied Psychology
Faculty of Business Administration
Faculty of Education
Faculty of Human Health Studies
Faculty of Multimedia Writing and Technical Communication

Morrison School of Agribusiness and Resource Management

ASU West

Academic Affairs

Barrett Honors College
Learning Enhancement Center
Research Consulting Center

College of Arts and Sciences

Department of American Studies
Department of Integrative Studies
Department of Interdisciplinary Arts and Performance
Department of Life Sciences
Department of Social and Behavioral Sciences
Ethnic Studies Program
Interdisciplinary Studies Graduate Program
Religious Studies Program
Women's Studies Program

College of Education

Department of Elementary Education
Department of Graduate Studies and Professional Development
Department of Secondary Education
Department of Special Education

College of Human Services

Department of Administration of Justice
Department of Communication Studies
Department of Recreation and Tourism Management
Department of Social Work
Gerontology Program
Nursing (ASU Main Program)

Division of Collaborative Programs

Applied Science Program
University-College Center
West Campus Advising Center

School of Management

Department of Accounting and Information Systems Management
Department of Economics, Finance, Marketing and Quantitative Business Analysis
Department of Management

ASU Extended Campus

College of Extended Education

Academic and Professional Programs
American English and Culture Program
Distance Learning and Technology
Extended Campus Programs
Independent Learning

ASU Baccalaureate Degrees

Baccalaureate degrees, majors, and concentrations offered by ASU Main, ASU East, and ASU West and through ASU Extended Campus are shown in the "ASU Baccalaureate Degrees" table below, organized by the name of the major. The table points to the primary page where more information can be found. The table shows only officially approved concentrations; other informal areas of study may also be available. For graduate degrees, see the "ASU Graduate Degrees" table, page 494.

ASU offers these baccalaureate degrees, abbreviated in the table below and elsewhere in the catalog:

Bachelor of Applied Science (B.A.S.)
Bachelor of Arts (B.A.)
Bachelor of Arts in Education (B.A.E.)
Bachelor of Fine Arts (B.F.A.)
Bachelor of Interdisciplinary Studies (B.I.S.)
Bachelor of Music (B.M.)
Bachelor of Science (B.S.)
Bachelor of Science in Design (B.S.D.)
Bachelor of Science in Engineering (B.S.E.)
Bachelor of Science in Landscape Architecture (B.S.L.A.)
Bachelor of Science in Nursing (B.S.N.)
Bachelor of Science in Planning (B.S.P.)
Bachelor of Social Work (B.S.W.)

ASU Baccalaureate Degrees

Major	Degree	Concentration	Campus	Page
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			West	657
Administration of Justice	B.S.	—	West	657
Aeronautical Management Technology[1]	B.S.	Air transportation management, professional flight	East	627
Aerospace Engineering[1]	B.S.E.	—	Main	248
African American Studies	B.A.	Humanities/arts, politics and society, social and behavioral sciences	Main	322
Agribusiness	B.S.	Agribusiness finance, e-commerce, food and agribusiness marketing, food science, general agribusiness, golf and facilities management, international agribusiness, management of agribusiness, preveterinary medicine, professional golf management, resource management	East	593
American Indian Studies	B.S.	—	Main	457
American Studies	B.A.	—	West	657
Anthropology	B.A.	—	Main	325
Applied Biological Sciences	B.S.	Applied biological sciences, applied biological sciences/secondary education, ecological restoration, urban horticulture, wildlife habitat management	East	602
Applied Psychology	B.S.	—	East	608
Applied Science	B.A.S.	Aviation maintenance management technology	East	629
		Aviation management technology	East	629
		Computer systems administration	East	634
		Consumer products technology	East	596
		Digital media management	East	640
		Digital publishing	East	640
		Emergency management	East	640
		Fire service management	East	640
		Food retailing	East	596
		Food service management	East	620
		Instrumentation	East	672

[1] This major requires more than 120 semester hours to complete.

[2] Applications for this program are not being accepted at this time.

[3] This program is administered by ASU Main.

ASU Baccalaureate Degrees (continued)

Major	Degree	Concentration	Campus	Page
Applied Science (continued)	B.A.S.	Manufacturing technology and management	East	634
		Microcomputer systems	East	646
		Multimedia writing and technical communication	East	635
		Municipal operations management	East	618
		Operations management	East	640
		Resource team specialist	East	640
		Semiconductor technology	East	597
		Software technology applications	East	635
		Technical graphics	East	635
		(All concentrations listed for ASU East)	Extended	640
		All minors available at ASU West, individualized concentration	West	672
			Extended	657
Architectural Studies	B.S.D.	—	Main	129
Art	B.A.	Art history, digital art, museum studies, studio art	Main	263
	B.F.A.	Art education, ceramics, drawing, fibers, intermedia, metals, painting, photography, printmaking, sculpture	Main	265
Asian Languages (Chinese/ Japanese)	B.A.	—	Main	376
Biochemistry	B.S.	—	Main	338
Bioengineering[1]	B.S.E.	—	Main	215
Biology	B.S.	Biology and society	Main	331
Business Administration	B.S.	—	East	166 609
Chemical Engineering[1]	B.S.E.	—	Main	220
Chemistry	B.A., B.S.	—	Main	336
Chicana and Chicano Studies	B.A.	Humanities/cultural sciences, social sciences/policy	Main	342
Civil Engineering[1]	B.S.E.	Construction engineering, environmental engineering	Main	228
Clinical Laboratory Sciences	B.S.	—	Main	401
Communication	B.A., B.S.	—	Main	460
			Extended	673
Communication Studies	B.A., B.S.	—	West	657
Computational Mathematical Sciences	B.S.	—	Main	395
Computer Engineering Technology[1]	B.S.	Computer hardware technology, embedded systems technology, software technology	East	633
Computer Information Systems	B.S.	—	Main	164
Computer Science[1]	B.S.	Software engineering	Main	234
Computer Systems Engineering[1]	B.S.E.	—	Main	236
Conservation Biology	B.S.	—	Main	331
Construction[1]	B.S.	General building construction, heavy construction, residential construction, specialty construction	Main	206
Dance	B.F.A.	Choreography, dance education, dance studies, performance	Main	278
Design Science[2]	B.S.D.	—	Main	136
Early Childhood Education	B.A.E.	—	Main	186
Economics	B.A.	—	Main	344
	B.S.	—	Main	166 344
Electrical Engineering[1]	B.S.E.	—	Main	240

[1] This major requires more than 120 semester hours to complete.

[2] Applications for this program are not being accepted at this time.

[3] This program is administered by ASU Main.

ASU Baccalaureate Degrees (continued)

Major	Degree	Concentration	Campus	Page
Electronics Engineering Technology[1]	B.S.	Electronic systems, microelectronics, telecommunications	East	632
Elementary Education	B.A.E.	—	East	610
		Bilingual education/English as a second language, early childhood education	West	657
		Multilingual/multicultural education	Main	193
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Engineering Interdisciplinary Studies[2]	B.S.	—	Main	202
Engineering Special Studies[1]	B.S.E.	Premedical engineering	Main	255
English	B.A.	—	West	657
		Linguistics, literature	Main	346
			Extended	674
Exercise and Wellness	B.S.	Exercise and wellness, health promotion	East	613
Family and Human Development	B.S.	Family studies/child development	Main	352
Finance	B.S.	—	Main	169
French	B.A.	—	Main	377
Geography	B.A., B.S.	Meteorology-climatology, urban studies	Main	354
Geological Sciences	B.S.	—	Main	360
German	B.A.	—	Main	377
Global Business	B.S.	Financial management, human resources management, information systems management, international studies, marketing	West	657
Graphic Design	B.S.D.	—	Main	136
History	B.A.	—	Main	363
			West	657
			Extended	672
Housing and Urban Development	B.S.D.	—	Main	146
			Extended	671
Human Health Studies	B.A., B.S.	—	East	616
Humanities	B.A.	—	Main	370
Industrial Design	B.S.D.	—	Main	136
Industrial Engineering[1]	B.S.E.	—	Main	244
Industrial Technology	B.S.	Environmental technology management, graphic information technology, industrial technology management	East	638
Integrated Studies	B.A., B.S.	—	Main	314
Integrative Studies	B.A.	All minors available at ASU West, individualized concentration	West	657
Interdisciplinary Arts and Performance	B.A.	Media, music, performance studies, theater/performance, visual art	West	657
Interdisciplinary Studies	B.I.S.	See the "B.I.S. Concentrations" table, page 118.	Main	116
			East	601
			Extended	671
Interior Design[1]	B.S.D.	—	Main	136
Italian	B.A.	—	Main	377
Journalism and Mass Communication	B.A.	Journalism, media analysis and criticism, media management, media production, strategic media and public relations	Main	465
Justice Studies	B.S.	—	Main	468
Kinesiology	B.S.	Exercise science, movement science, teacher preparation	Main	372

[1] This major requires more than 120 semester hours to complete.

[2] Applications for this program are not being accepted at this time.

[3] This program is administered by ASU Main.

ASU Baccalaureate Degrees (continued)

Major	Degree	Concentration	Campus	Page
Landscape Architecture	B.S.L.A.	—	Main	146
Life Sciences	B.S.	—	West	657
Management	B.S.	—	Main	172
Manufacturing Engineering Technology[1]	B.S.	Manufacturing engineering technology, mechanical engineering technology	East	644
Marketing	B.S.	—	Main	175
Materials Science and Engineering[1]	B.S.E.	—	Main	223
Mathematics	B.A.	—	Main	393
	B.S.	Statistics	Main	394
Mechanical Engineering[1]	B.S.E.	—	Main	250
Mechanical Engineering Technology[1]	B.S.	Aeronautical engineering technology, automation engineering technology, mechanical engineering technology	East	645
Microbiology	B.S.	—	Main	401
Molecular Biosciences/ Biotechnology	B.S.	—	Main	407
Multimedia Writing and Technical Communication	B.S.	—	East	617
Music	B.A.	—	Main	284
Music Education[1]	B.M.	Choral-general, instrumental, string	Main	284
Music Therapy[1]	B.M.	—	Main	285
Nursing	B.S.N.	—	Main	446
			West[3]	657
Nutrition	B.S.	Dietetics, food and nutrition management, human nutrition	East	619
Performance	B.M.	Guitar, jazz, keyboard, music theatre, orchestral instrument, piano accompanying, voice	Main	286
Philosophy	B.A.	—	Main	408
Physics	B.S.	—	Main	411
Plant Biology	B.S.	Environmental science and ecology, plant biochemistry and molecular biology, urban horticulture	Main	417
Political Science	B.A.	—	Main	421
			West	657
			Extended	672
	B.S.	—	West	657
		Public policy advocacy and lobbying, public policy analysis	Main	422
			Extended	672
Psychology	B.A., B.S.	—	Main	428
			West	657
			Extended	673
Real Estate	B.S.	—	Main	177
Recreation	B.S.	Recreation management, tourism management	Main	472
Recreation and Tourism Management	B.S.	—	West	657
Religious Studies	B.A.	—	Main	432
			Extended	673
Russian	B.A.	—	Main	377

[1] This major requires more than 120 semester hours to complete.

[2] Applications for this program are not being accepted at this time.

[3] This program is administered by ASU Main.

ASU Baccalaureate Degrees (continued)

Major	Degree	Concentration	Campus	Page
Secondary Education	B.A.E.	Academic specializations: biological sciences, business, chemistry, Chicana and Chicano studies, economics, English, family and human development,[2] French, geography, German, history, Japanese, mathematics, physical education, physics, political science, social studies, Spanish	Main	189
		Academic specializations: English, history, mathematics, social studies	West	657
Selected Studies in Education[2]	B.A.E.	—	Main	190
Social and Behavioral Sciences	B.A., B.S.	—	West	657
Social Work	B.S.W.	—	Main	476
			West	657
			Extended	671
Sociology	B.A.	—	Main	435
			West	657
			Extended	673
	B.S.	—	West	657
Spanish	B.A.	—	Main	378
			West	657
Special Education	B.A.E.	—	Main	190
			West	657
Speech and Hearing Science	B.S.	—	Main	438
Supply Chain Management	B.S.	—	Main	177
Theatre	B.A.	Acting, scenography	Main	296
Theory and Composition	B.M.	Composition, theory	Main	289
Urban Planning	B.S.P.	—	Main	146
Women's Studies	B.A.	—	Main	441
			West	657
	B.S.	—	West	657

[1] This major requires more than 120 semester hours to complete.

[2] Applications for this program are not being accepted at this time.

[3] This program is administered by ASU Main.

University Calendar

April 2003

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
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May 2003

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June 2003

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July 2003

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August 2003

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September 2003

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2003 Summer Sessions

Check the 2003 *Summer Sessions Bulletin* for details and to confirm these dates.

Mon., Feb. 3–Tues., June 3	Registration and drop/add for first five-week session and eight-week session
Mon., Feb. 3–Tues., July 8	Registration and drop/add for second five-week session
Tues., Apr. 29	Final tuition payment deadline for all summer sessions (For students who register on or after the deadline, fees are due daily.)
Mon., May 26	Memorial Day holiday
Mon., June 2	Instruction begins for first five-week session and eight-week session
Mon., June 9	Unrestricted course and complete withdrawal deadline for first five-week session and eight-week session
Fri., June 20	Restricted course withdrawal deadline for first five-week session and eight-week session
Fri., June 27	Restricted complete withdrawal deadline for first five-week session
Tues., July 1	August graduation filing deadline (must be met to have name appear in commencement program)
Thurs., July 3	First five-week session ends
Fri., July 4	Classes are excused for Independence Day holiday
Mon., July 7	Instruction begins for second five-week session
Fri., July 11	Doctoral participation form due to reserve seat at commencement
Mon., July 14	Unrestricted course and complete withdrawal deadline for second five-week session
Fri., July 18	Restricted complete withdrawal deadline for eight-week session
Fri., July 25	Eight-week session ends
Fri., July 25	Restricted course withdrawal deadline for second five-week session
Fri., Aug. 1	Restricted complete withdrawal deadline for second five-week session
Fri., Aug. 8	Second five-week session ends
Fri., Aug. 8	Commencement

2003 Fall Semester

Check the fall 2003 *Schedule of Classes* for details and to confirm these dates.

Thurs., Mar. 27–Fri., Apr. 4	Preregistration
Mon., Apr. 21–Sun., Aug. 31	Drop/add
Wed., Apr. 23–Sun., Aug. 31	Registration
Tues., Aug. 5	Final tuition payment deadline for fall 2003 (For students who register on or after the deadline, fees are due daily.)

September 2003

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October 2003

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November 2003

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December 2003

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January 2004

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February 2004

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Tues., Aug. 19–Thurs., Aug. 21	Residence halls open (Check-in date varies by community/last name. Refer to the Residential Life schedule.)
Thurs., Aug. 21	New Faculty and Academic Professional Orientation and Reception
Thurs., Aug. 21–Sun., Aug. 24	ASU Sun Devil 101
Mon., Aug. 25	Instruction begins
Mon., Sept. 1	Classes are excused for Labor Day holiday
Fri., Sept. 26	Unrestricted withdrawal deadline
Tues., Oct. 1	Winter Session registration begins
Wed., Oct. 15	December graduation filing deadline (must be met to have name appear in commencement program)
Fri., Oct. 31	Restricted course withdrawal deadline
Tues., Nov. 11	Classes are excused for Veterans Day holiday
Thurs., Nov. 27–Fri., Nov. 28	Classes are excused for Thanksgiving recess
Wed., Dec. 3	Restricted complete withdrawal deadline
Tues., Dec. 9	Instruction ends
Wed., Dec. 10	Reading day
Thurs., Dec. 11–Sat., Dec. 13; Mon., Dec. 15–Wed., Dec. 17	Final examinations
Thurs., Dec. 18	Commencement (4 P.M.)
Fri., Dec. 19	Some residence halls close for semester break
Sat., Dec. 20	Midyear recess begins
Mon., Dec. 29	Winter Session instruction begins

2004 Spring Semester

Check the spring 2004 *Schedule of Classes* for details and to confirm these dates.

Mon., Oct. 27–Tues., Nov. 4, 2003	Preregistration
Mon., Nov. 17, 2003–Sun., Jan. 25, 2004	Drop/add
Wed., Nov. 19, 2003–Fri., Jan. 25, 2004	Registration
Tues., Dec. 16, 2003	Final tuition payment deadline for spring 2004 (For students who register on or after the deadline, fees are due daily.)
Thurs., Jan. 1, 2004	Winter Session classes are excused for New Year's Day holiday
Wed., Jan. 14	Residence halls open
Fri., Jan. 16	Orientation for new students
Fri., Jan. 16	Winter Session instruction ends
Mon., Jan. 19	Classes are excused for Martin Luther King Jr. Day holiday
Tues., Jan. 20	Instruction begins
Fri., Feb. 13	Unrestricted withdrawal deadline
Sun., Mar. 14–Sun., Mar. 21	Classes are excused for spring recess; semester midpoint
Fri., Mar. 26	Restricted course withdrawal deadline

March 2004

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April 2004

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May 2004

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June 2004

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July 2004

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August 2004

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Wed., Mar. 31	May graduation filing deadline (must be met to have name appear in commencement program)
Wed., Apr. 28	Restricted complete withdrawal deadline
Tues., May 4	Instruction ends
Wed., May 5	Reading day
Thurs., May 6–Sat., May 8; Mon., May 10–Wed., May 12	Final examinations
Thurs., May 13	Commencement
Fri., May 14	Residence halls close

2004 Summer Sessions

Check the 2004 *Summer Sessions Bulletin* for details and to confirm these dates.

Mon., Feb. 2–Wed., June 2	Registration and drop/add for first five-week session and eight-week session
Mon., Feb. 2–Wed., July 7	Registration and drop/add for second five-week session
Tues., Apr. 27	Final tuition payment deadline for all summer sessions (For students who register on or after the deadline, fees are due daily.)
Mon., May 31	Memorial Day holiday
Tues., June 1	Instruction begins for first five-week session and eight-week session
Tues., June 8	Unrestricted course and complete withdrawal deadline for first five-week session and eight-week session
Fri., June 18	Restricted course withdrawal deadline for first five-week session and eight-week session
Fri., June 25	Restricted complete withdrawal deadline for first five-week session
Thurs., July 1	August graduation filing deadline (must be met to have name appear in commencement program)
Fri., July 2	First five-week session ends
Mon., July 5	Classes are excused for Independence Day holiday
Tues., July 6	Instruction begins for second five-week session
Tues., July 13	Unrestricted course and complete withdrawal deadline for second five-week session
Fri., July 16	Restricted complete withdrawal deadline for eight-week session
Fri., July 23	Eight-week session ends
Fri., July 23	Restricted course withdrawal deadline for second five-week session
Fri., July 30	Restricted complete withdrawal deadline for second five-week session
Fri., Aug. 6	Second five-week session ends
Fri., Aug. 6	Commencement

Frequently Asked Questions

How do I apply to ASU Main? Complete an application and have all required transcripts and test scores sent directly to Undergraduate Admissions. See "Undergraduate Admission," page 59. For more information, call 480/965-7788.

How do I apply to ASU East? Complete an application and have all required transcripts and test scores sent directly to Undergraduate Admissions. See "Undergraduate Admission," page 59. For more information, call 480/727-3278.

How do I apply to ASU West? Contact the Admissions and Records Office at ASU West. See "Admission," page 657. For more information, call 602/543-8203.

What is the ASU Extended Campus? The ASU Extended Campus provides access to ASU courses and degrees evenings and weekends, by television, the Internet, at on- and off-campus sites, and through Independent Learning. See "ASU Extended Campus," page 25, and "ASU Extended Campus," page 671, or call 480/965-3986 for information and a course catalog.

What if I am a transfer student? Upon admission, note the number of semester hours on your Certificate of Admission. When registering, consult your department advisor to determine how transfer credits fit into the curriculum (see "Academic Advising," page 70). Have you met the First-Year Composition requirement? (See "First-Year Composition Requirement," page 81.) If you have completed 87 or more semester hours, file a program of study or declaration of graduation (see "Declaration of Graduation," page 83).

What if I have a disability or am a veteran? If you have a disability and will be requesting academic accommodations, see "Disability Resources for Students," page 43, and "Applicants with Disabilities," page 65. Veteran students using GI benefits, see "Veterans Services," page 40.

How do I get financial aid? In addition to applying for admission, complete the Free Application for Federal Student Aid (FAFSA) by the February 15 priority date. If you apply after the priority date, you will be considered a late applicant and are less likely to receive grants and Federal Work-Study due to funding limitations. You may obtain a paper FAFSA from any financial aid office or complete an electronic application at www.fafsa.ed.gov. See "Student Financial Assistance," page 40, and "Financial Aid," page 53.

How do I find a place to live and purchase a meal plan? Apply early (before March 1, 2003) for the best chance to live on campus beginning in fall semester 2003. Housing is not guaranteed. See "Residential Life," page 40, for information on student housing. Meal plans may be purchased in advance or upon arrival on campus. For more information, call Residential Life at 480/965-3515, and Campus Dining Services at 480/965-3464. For ASU East housing, call 480/727-1700, or see "Campus and Student Services," page 589, in the "ASU East" section, for more information on dining and housing.

What about orientation? Attend orientation on your campus, where questions regarding advising, class registration, student IDs, on-campus housing, and other pertinent topics are addressed. For information about Main Campus orientation, see "Orientation," page 66. Information regarding ASU East orientation can be obtained by calling 480/727-1203.

How do I get an ID, and what about parking? See "Proof of Identification," page 72, about obtaining an ASU student ID card. If you are planning to park at ASU Main, purchase a parking decal. See "Parking Decals," page 49. Parking on ASU East campus is free. ASU East students may obtain student ID cards at the OASIS in the Center Building.

What about placement examinations and university testing requirements? See "Placement Examinations," page 70, and "University Testing Requirements," page 69.

Before I register for classes, how do I get an advisor? Call the college of your major to schedule an appointment with an academic advisor. See "Academic Advising," page 70. For ASU East Academic Advising, see "Advising," page 588.

When and how do I register? See the *Schedule of Classes* for registration procedures and dates or access registration information online at www.asu.edu/registrar. Remember that you must first provide proof of measles immunity to the Student Health and Wellness Center. See "Immunization Requirements," page 66.

Once I am registered and ready to go, how can I ensure my success at ASU? Consider enrolling in UNI 100 Academic Success at the University. See "Division of Undergraduate Academic Services," page 115.

What's left to do now that the business is taken care of? Become involved in the university by getting to know professors, joining student organizations, and taking advantage of the many cultural, recreational, and social opportunities. For more information on ASU Main campus life, call Student Life at 480/965-6547, Sun Devil Involvement Center at 480/965-2255, or ASASU at 480/965-3161; for ASU East, call 480/727-3278. Investigate the challenges and advantages of the Barrett Honors College. See "The Barrett Honors College," page 120.

Academic Definitions

Academic Renewal. Under certain circumstances an undergraduate who has been readmitted to the university after an absence of at least five years may have the former record treated in the same manner as transfer credits. See "Academic Renewal," page 72.

Advanced Placement. Students who have taken an advanced placement course of the College Entrance Examination Board (CEEB) in their secondary school and who have taken an Advanced Placement Examination of the CEEB may receive credit. See "Advanced Placement," page 66.

AECP. The American English and Culture Program features an intensive course of study designed for adult international students who desire to become proficient in English as a second language. See "American English and Culture Program," page 65 and 677.

ASU East. ASU East is located at the former Williams Air Force Base. See "ASU East," pages 25 and 587.

ASU Extended Campus. The ASU Extended Campus offers courses evenings and weekends, via television and the Internet, at on- and off-campus sites, and through Independent Learning. See "ASU Extended Campus," pages 25 and 671.

ASU Main. ASU Main is the principal campus of ASU, located in Tempe. See "ASU Main," page 25.

ASU West. ASU West is the Phoenix campus of ASU, established to serve the educational needs of residents in western Maricopa County. See "ASU West," pages 25 and 656.

Audit Enrollment. A student who audits a course attends regularly scheduled class sessions but earns no credit. See "Audit Enrollment," page 74.

Buckley Amendment. See "Family Educational Rights and Privacy Act" in this section.

CLEP. As part of the College-Level Examination Program (CLEP), students who have taken a College-Level Examination of the College Entrance Examination Board may receive credit. See "College-Level Examination Program (CLEP)," page 66.

Comprehensive Exam. A comprehensive examination is intended to permit a student to establish academic credit in a field in which the student has gained experience or competence equivalent to an established university course. See "Comprehensive Examinations," page 69.

Concentration. A concentration is a formalized selection of courses within a major.

Cooperative Education. Cooperative Education is any educational program that requires alternating classroom and work experience in government or industry. The work experience exists for its educational value. See "Cooperative Programs," page 73.

Corequisite. A requirement to be met *while* taking one course, such as taking another particular course, is a corequisite. See also "Prerequisite" in this section.

Course Prefix. A course prefix is a three-letter designation assigned to a group of courses. The "Course Prefix Index," page 6, provides a comprehensive list. See also "Cross-Listing" in this section.

Credit Enrollment. One semester hour represents a minimum of one 50-minute class exercise per week per semester. A minimum of 120 semester hours is required for graduation with a baccalaureate degree. To obtain credit, a student must be properly registered and pay fees for the course.

Cross-Listing. One course may have more than one course prefix and may be offered by more than one instruction unit. Some units may require students to enroll in a course under a certain prefix to receive credit properly. Catalog course descriptions indicate courses that are cross-listed.

Cum Laude. An undergraduate student with a minimum of 60 semester hours of course work at ASU and a cumulative GPA of 3.40 to 3.59 graduates *cum laude.* See "Graduation with Academic Recognition," page 84. See also "Magna Cum Laude" and "Summa Cum Laude" in this section.

Declaration of Graduation. The Declaration of Graduation uses the Degree Audit Reporting System (DARS). DARS is an automated process that matches courses a student has completed with the requirements of a particular academic degree program, producing a report that shows the student which requirements are satisfied and which remain to be fulfilled. See "Declaration of Graduation," page 83.

Drop/Add. Drop/add is a process in which a student who has registered for courses for a semester or summer session may drop or add courses through the first week of classes in a semester or the first two days of a summer session. See "Drop/Add," page 75.

Family Educational Rights and Privacy Act. The federal Family Educational Rights and Privacy Act of 1974, also known as FERPA or the Buckley Amendment, sets forth the requirements governing the protection of the privacy of the education records of students who are or have been in attendance at ASU. See "Student Records," page 80.

Freshman. A student who has earned 24 or fewer semester hours is a freshman.

General Studies Requirement. This is a university requirement of all undergraduates. See "Meeting the General Studies Requirement," page 85.

GPA. The ASU grade point average (GPA) is obtained by dividing the total number of ASU grade points earned by the number of ASU semester hours graded. Grade point averages are rounded to the nearest hundredth of a grade point. See "Grade Point Average," page 76.

Grade Points. For the purpose of computing the GPA, grade points are assigned to each of the grades for each semester hour as follows: "A," four points; "B," three points; "C," two points; "D," one point; and "E," zero points.

Graduate Catalog. The *Graduate Catalog* describes the procedures and requirements for enrollment in the Graduate College. See "Graduate College," page 481.

Graduate-Level Courses. Courses numbered from 500 to 799 are designed for graduate students. See "Graduate-Level Courses," page 56.

Incomplete. A mark of "I" (incomplete) is given by the instructor only when a student who is otherwise doing acceptable work is unable to complete a course because of illness or other conditions beyond the student's control. See "Incomplete," page 74.

International Baccalaureate. Students who have taken a higher-level examination through the International Baccalaureate program may receive university credit. See "International Baccalaureate (IB) Diploma/Certificate," page 69.

Junior. A student who has earned from 56 to 86 semester hours is a junior.

Lower-Division Courses. Courses numbered from 100 to 299 are designed primarily for freshmen and sophomores. See "Lower-Division Courses," page 56.

Magna Cum Laude. A student with a minimum of 60 semester hours of course work at ASU and a cumulative GPA of 3.60 to 3.79 graduates *magna cum laude.* See "Graduation with Academic Recognition," page 84. See also "Cum Laude" and "Summa Cum Laude" in this section.

Major. A major is a formalized group of courses contained within the program of study. See "ASU Baccalaureate Degrees," page 11, and "ASU Graduate Degrees," page 494.

Minor. A minor is a formalized group of courses contained within the program of study available from some instruction units. See "Minors," page 110.

Omnibus Course. An omnibus course is offered on an experimental or tutorial basis when the course content is new or periodically changes. See "Omnibus Courses," page 56.

Pass/Fail Enrollment. A mark of "P" (pass) or "E" (fail) may be assigned for this grading option. This grading method may be used at the option of individual colleges and schools within the university. See "Pass/Fail Enrollment," page 75.

Placement Examination. A proficiency examination is given to waive a course requirement, validate certain transfer credits in professional programs, or determine a student's ability in a field where competence is an important consideration. See "Placement Examinations," page 70.

Prerequisite. A requirement to be met *before* registering for one course, such as completing another particular course, is a prerequisite. See also "Corequisite" in this section.

Probation. A student's college assumes responsibility for enforcing academic standards and may place any student on probation who has failed to maintain good standing. A student on academic probation is required to observe any rules or limitations the college may impose as a condition for retention. See "Probation," page 79.

Restricted Complete Withdrawal. From the fifth week to the transaction deadline for a semester and from the seventh day to the transaction deadline for a summer session, students may withdraw from all courses but receive a mark of "W" only from courses in which the instructor certifies that they are passing at the time of the withdrawal. See "Restricted Withdrawal," page 75.

Restricted Course Withdrawal. From the fifth week to the end of the 10th week of a semester and from the seventh day to the end of the third week of a summer session, students may withdraw with a mark of "W" only from courses in which the instructor certifies that they are passing at the time of withdrawal. See "Restricted Withdrawal," page 75.

Senior. A student who has earned 87 or more semester hours is a senior.

Sophomore. A student who has earned from 25 to 55 semester hours is a sophomore.

Summa Cum Laude. A student with a minimum of 60 semester hours of course work at ASU and a cumulative GPA of 3.80–4.00 graduates *summa cum laude.* See "Graduation with Academic Recognition," page 84. See also "Cum Laude" and "Magna Cum Laude" in this section.

TOEFL. The Test of English as a Foreign Language (TOEFL) is taken by students whose native language is not English. See "TOEFL," page 65, and "AECP," in this section.

Transcript. An official transcript lists in chronological order all courses taken at ASU. It includes all grades received. It is signed and dated by the registrar and displays the embossed seal of the university. Unofficial transcripts include all information shown on the official transcript, plus information concerning changes, additions, etc., to the record. See "Transcripts," page 77.

Unrestricted Course Withdrawal. During the first four weeks of a semester or the first six days of a summer session, a student may withdraw from any course with a mark of "W." See "Unrestricted Course Withdrawal," page 75.

Upper-Division Courses. Courses numbered from 300 to 499 are designed primarily for juniors and seniors. See "Upper-Division Courses," page 56.

General Information

Arizona State University has emerged as a leading national and international research and teaching institution. Located in the Phoenix metropolitan area, this rapidly growing, multicampus public research university offers programs from the baccalaureate through the doctorate for approximately 55,491 full-time and part-time students through ASU Main in Tempe; ASU West in northwest Phoenix; a major educational center in downtown Phoenix; ASU East, located at the Williams Campus (formerly Williams Air Force Base) in southeast Mesa; and other instructional, research, and public service sites throughout Maricopa County. See the "2002–2003 Enrollment" table below.

2002–2003 Enrollment

Type	Students
Total	55,491
ASU Main	47,359
ASU East	3,126
ASU West	6,630
National Merit Scholars	368

MISSION

Arizona State University's goal is to become a world-class university in a multicampus setting. Its mission is to provide outstanding programs in instruction, research, and creative activity, to promote and support economic development, and to provide service appropriate for the nation, the state of Arizona, and the state's major metropolitan area. To fulfill its mission, ASU places special emphasis on the core disciplines and offers a full range of degree programs—baccalaureate through doctorate, recognizing that it must offer quality programs at all degree levels in a broad range of fundamental fields of inquiry. ASU will continue to dedicate itself to superior instruction; to excellent student performance; to original research, creative endeavor, and scholarly achievement; and to outstanding public service and economic development activities. As a result of this dedication, ASU was named to Research Extensive (formerly Research I) status in 1994, recognizing ASU as a premier research institution.

ORGANIZATION

Arizona State University is part of a university system governed by the Arizona Board of Regents, a body with perpetual succession under the constitution and laws of Arizona. The board consists of eight citizens appointed by the governor of the state for terms of eight years, and two students with the elected governor and state superintendent of public instruction as members ex officio.

The regents select and appoint the president of the university, who is the liaison between the Arizona Board of Regents and the institution. The president is aided in the administrative work of the institution by the provosts, vice presidents, deans, directors, department chairs, faculty, and other officers. Refer to "Administrative Personnel," page 578.

The academic units develop and implement the teaching, research, and service programs of the university, aided by the university libraries, museums, and other services.

The faculty and students of the university play an important role in educational policy, with an Academic Senate, joint university committees and boards, and the Associated Students serving the needs of a large institution.

ACADEMIC ACCREDITATION AND AFFILIATION

See "Accreditation and Affiliation," page 683.

EQUAL OPPORTUNITY AND AFFIRMATIVE ACTION

It is the policy of ASU to provide equal opportunity through affirmative action in employment and educational programs and activities. Discrimination is prohibited on the basis of race, color, religion, national origin, citizenship, sex, sexual orientation, age, disability, special disabled veteran, other protected veteran, or Vietnam-era veteran status. Equal employment opportunity includes but is not limited to recruitment, hiring, promotion, termination, compensation, benefits, transfers, university-sponsored training, education, tuition assistance, and social and recreational programs.

ASU is committed to taking affirmative action in increasing opportunities at all levels of employment and to increasing participation in programs and activities by all faculty, staff, and students. Affirmative action is directed toward minority persons, women, special disabled veterans, other protected veterans, Vietnam-era veterans, and persons with disabilities.

University Policy Prohibiting Discriminatory Harassment

Harassment Prohibited. Subject to the limiting provisions of "Freedom of Speech and Academic Freedom" specified below, it is a violation of university policy for any university employee or student to subject any person to harassment on university property or at a university-sponsored activity.

Harassment Defined. Actions constitute harassment if (1) they substantially interfere with another's educational or employment opportunities, peaceful enjoyment of residence, or physical security, and (2) they are taken with a general intent to engage in the actions and with the knowledge that the actions are likely to substantially interfere with a protected interest identified above. Such intent and knowledge may be inferred from all the circumstances.

Freedom of Speech and Academic Freedom. Neither this nor any other university policy is violated by actions that

amount to expression protected by the state or federal constitutions or by related principles of academic freedom. This limitation is further described in the ASU First Amendment Guidelines, the current version of which supplements this policy and is available in the Office of General Counsel.

Relationship to the Work of the Campus Environment Team. If harassment is discriminatory, it falls within the education, monitoring, reporting, and referral functions of the Campus Environment Team. Harassment is discriminatory if taken with the purpose or effect of differentiating on the basis of another person's race, sex, color, national origin, religion, age, sexual orientation, disability, or Vietnam-era veteran status.

Student Antiretaliation Statement

Students have the right to be free from retaliation. Threats or other forms of intimidation or retribution against a student who files a complaint or grievance, requests an administrative remedy, participates in an investigation, appears as a witness at an administrative hearing, or opposes an unlawful act, discriminatory practice or policy, are prohibited. Individuals making such threats are subject to university disciplinary procedures. Students with complaints of retaliation should utilize the procedures available under the *Arizona Board of Regents Student Code of Conduct*, the Graduate Student Grievance Procedure, the Student Employee Grievance Procedure, the Sexual Harassment Policy, nondiscrimination policies, or other available administrative procedures as appropriate. For assistance with procedures, students should contact the dean of the particular college if the circumstances relate to a course or academic evaluation, or the dean of students for all other circumstances.

INTERGROUP RELATIONS CENTER

The first center of its kind on a college campus, the Intergroup Relations Center (IRC) works with students, staff, and faculty to promote positive intergroup relations, to prepare students for living in a diverse democracy, to create greater understanding between the different groups that exist at ASU, and to provide faculty, staff, and students opportunities to explore the rich diversity that is part of the ASU campus community. Through structured interaction programs, including intergroup dialogues, story circles, retreats, and institutes and via educational and training workshops, the center promotes diversity as one of the university's greatest assets. The educational work of the center encompasses gender, race/ethnicity, sexual orientation, age, disability status, nationality, adult reentry, and other salient social identities found at ASU.

Some of the programs and initiatives offered by the center include Voices of Discovery, a six-week student intergroup dialogue program that brings together small groups of African Americans and white/EuroAmericans, males and females, American Indians and white/EuroAmericans, Latinos and white/EuroAmericans, gays, lesbians, bisexuals, heterosexuals, religious and nonreligious students, and other groups to interact with and learn about each other. Leadership 2000, an annual off-campus retreat brings together 80 students from many different backgrounds to explore their own and others' diversity. Allies in Action, a diverse group of students sponsored by the IRC, works together to improve intergroup relations on the campus. Intergroup Relations Theatre and Music programs use the arts to interactively involve, entertain, and educate participants about issues of diversity. The center also offers programs for faculty and staff addressing issues of diversity in the workplace and the classroom and custom-designed programs, consultation, and intergroup conflict mediation services for a wide range of campus offices, academic departments, and student groups.

For more information, visit the center in SSV 278, call 480/965-1574, or access the IRC Web site at www.asu.edu/provost/intergroup.

HISTORY OF ARIZONA STATE UNIVERSITY

On February 26, 1885, House Bill 164, "An Act to Establish a Normal School in the Territory of Arizona," was introduced in the 13th Legislative Assembly of Arizona Territory by John Samuel Armstrong. The bill, strongly supported by Charles Trumbull Hayden of Tempe, passed the House on March 6 and the Council on March 11 and was signed by Governor F.A. Tritle on March 12, 1885, thereby founding the institution known today as Arizona State University. Under the supervision of Principal Hiram Bradford Farmer, instruction was instituted on February 8, 1886, when 33 students met in a single room on land donated by George and Martha Wilson of Tempe.

The institution began with the broad obligation to provide "instruction of persons...in the art of teaching and in all the various branches that pertain to good common school education; also, to give instruction in the mechanical arts and in husbandry and agricultural chemistry, the fundamental law of the United States, and in what regards the rights and duties of citizens."

With the growth of the state, especially the surrounding Phoenix metropolitan area, the school has carried forward this charter, accompanied by successive changes in scope, name, and governance.

The Early Years. For the first 14 years, the school was governed by six principals. At the turn of the century and with another new name, Normal School of Arizona, President Arthur John Matthews brought a 30-year tenure of progress to the school.

He assisted in changing the school to an all-college student status; the Normal School had enlisted high school students who had no other secondary educational facilities in Arizona. He embarked on a building schedule that included the state's first dormitories. Of the 18 buildings constructed while Matthews was president, six are still in use. His legacy of an "evergreen campus," with the import of many shrubs and trees and the planting of Palm Walk, continues to this day: the main campus is a nationally recognized arboretum.

Matthews also saw to it that the Normal School was accredited outside the state. His service on national education organization boards was conducive to this recognition. The school remained a teacher's college in fact and theory during Matthews' tenure, although the struggle to attain status as a university was ongoing.

An extraordinary event occurred March 20, 1911, when former President Theodore Roosevelt visited the Tempe school and spoke from the steps of Old Main. He had dedicated the Roosevelt Dam the day before and was impressed with Arizona. He noted that construction of the dam would benefit central Arizona's growth and that of the Normal School. It would be another year before the territory became a state.

During the Great Depression, Ralph W. Swetman was hired as president for a three-year term. This was a time of uncertainty for educational institutions. Although enrollment increased due to the depression, many faculty were terminated and faculty salaries were cut. The North Central Association became the accrediting agency for Arizona State Teachers College.

The Gammage Years. In 1933, Grady Gammage, then president of Arizona State Teachers College at Flagstaff, became president of Arizona State Teachers College at Tempe, a tenure that would last for nearly 28 years.

The Graduate Division was created in 1937, and the first master's program was established the same year.

On March 8, 1945, the three state institutions of higher learning came under the authority of one Arizona Board of Regents, which oversees ASU today.

The phenomenal growth of the college began after the end of World War II. Dr. Gammage had foreseen that the G.I. Bill of Rights would flood campuses everywhere with returning veterans. Many of the veterans who had received military training in Arizona had fallen in love with the state and vowed to return after the war. The numbers within one year were staggering: in the fall semester of 1945, 553 students were enrolled; over the weekend semester break in January 1946, enrollment increased 110 percent to 1,163 students. Successive semesters saw continuing increased enrollment.

Like his predecessor, Dr. Gammage oversaw the construction of a number of buildings. His greatest dream, that of a great auditorium, came to fruition after his death. He laid the groundwork for it with Frank Lloyd Wright, who designed what is now the university's hallmark building, Grady Gammage Memorial Auditorium, built in 1964.

Years of Growth and Stature. During the 1960s, with the presidency of Dr. G. Homer Durham, Arizona State University began its academic rise with the establishment of several new colleges (the College of Fine Arts, the College of Law, the College of Nursing, and the School of Social Work) and the reorganization of what became the College of Liberal Arts and Sciences and the College of Engineering and Applied Sciences. Perhaps most important, the university gained the authority to award the Doctor of Philosophy and other doctoral degrees.

The next three presidents—Harry K. Newburn, 1969–71, John W. Schwada, 1971–81, and J. Russell Nelson, 1981–89—and Interim President Richard Peck, 1989, led the university to increased academic stature, expansion of the campuses, and rising enrollment.

Under the leadership of Dr. Lattie F. Coor, from 1990 to June 2002, ASU grew to serve the Valley of the Sun through multiple campuses and extended education sites. His commitment to diversity, quality in undergraduate education, research, and economic development underscored the university's significant gains in each of these areas over his 12-year tenure. Part of Dr. Coor's legacy to the university was a successful fund-raising campaign. Through private donations, primarily from the local community, more than $500 million was invested in targeted areas that significantly impact the future of ASU. Among the campaign's achievements were the naming and endowing of the Barrett Honors College, the Katherine K. Herberger College of Fine Arts, and the Morrison School of Agribusiness and Resource Management at ASU East; the creation of many new endowed faculty positions; and hundreds of new scholarships and fellowships.

A New Vision. ASU now enters a new era with the tenure of its 16th president, Dr. Michael M. Crow, which began on July 1, 2002. At Dr. Crow's inauguration on November 8, 2002, he detailed his vision of ASU as the New American University. ASU has the unique opportunity to become a major metropolitan research university, serving the higher education needs of one of the largest metropolitan areas in the country and conducting leading-edge research.

The foundation to move forward with Dr. Crow's vision is in place. ASU admitted the largest and highest-quality freshman class ever in fall 2002 and has developed nationally recognized programs in a number of fields, including accounting, astrobiology, design science, ecology and evolutionary biology, electron microscopy, engineering, exercise science, music, nanotechnology, psychology, and solid-state science. ASU will assume a leadership role in biomedicine and biotechnology through its AZ BioDesign Center and its partnership in the International Genomics consortium in Phoenix.

Research Extensive Status. ASU was named to Research Extensive (formerly Research I) status by the Carnegie Foundation for the Advancement of Teaching in early 1994. Nationally, 88 universities have been granted this status, indicating successful garnering of support for research projects and educating future scientists.

Athletics

The original nickname for the Normal School of Arizona athletic teams was the Owls. Athletics other than Sunday hikes and lawn tennis were not part of the early curriculum.

During President Matthews' tenure, some team competition began. The Tempe Bulldogs saw some interesting and rough competition with the University of Arizona Wildcats. In the 1940s, the college's teams became the Sun Devils.

In 1979, the university joined the Pacific-10 Conference. In 1987, ASU became the first Arizona football team to play in the Rose Bowl, defeating the University of Michigan Wolverines 22–15. ASU made its second appearance in 1997 against Ohio State.

In 2000, ASU finished ninth nationally in the Sears Directors' Cup, which recognizes the top athletic programs in the country. Six teams finished in the top 20 nationally with three teams posting top 10 finishes. Men's swimming and diving finished 10th, women's tennis finished in a tie for fifth, while men's indoor track and field also finished 10th.

UNIVERSITY CAMPUSES AND SITES

ASU Main. ASU Main is located near the heart of metropolitan Phoenix in the city of Tempe (population 158,625). Nearby are the municipalities that make up the fast-growing Valley of the Sun: Chandler, Gilbert, Glendale, Mesa, Scottsdale, and other communities.

ASU Main comprises more than 700 acres and offers outstanding physical facilities to support the university's educational programs. The campus is characterized by broad pedestrian malls laid out in an easy-to-follow grid plan, spacious lawns, and subtropical landscaping.

ASU East. The newest of the ASU campuses, ASU East opened in 1996 and serves more than 3,000 undergraduate and graduate students. Located in the east Valley, the 600-acre campus offers many of the features of a small residential college in a suburban area while providing access to the resources of ASU Main in Tempe and the amenities of the metropolitan Phoenix area.

ASU East offers a variety of bachelor's and master's degrees, certificate programs, and, through partnerships with programs at ASU Main, select doctoral degrees. Sharing the campus with ASU East are two community colleges, an elementary school, a regional airport, a golf course, and several corporate research facilities. A partnership with Chandler-Gilbert Community College provides lower-division general education, general interest, and major prerequisite courses to ASU East students and transfers the credits seamlessly to ASU.

Fully mediated classrooms and specialized educational facilities such as the Microelectronics Teaching Factory, the Graphic Information Technology Facility, and the flight program's Altitude Chamber offer unique teaching-learning opportunities for ASU East students.

On-campus housing for married students and families in addition to traditional residence halls for single students are available at ASU East. The Freshman Year Experience residence hall at ASU East offers a specialized community that integrates a variety of academic resources into residential life.

A shuttle service provides transportation between ASU East and ASU Main. The campus, located at Power and Williams Field Roads in Mesa, is easily accessible via major interstate routes. For more information, see "ASU East," page 587.

ASU West. Arizona State University West, a vital component of ASU's multicampus structure, serves more than 7,000 students on its growing campus in northwest Phoenix. The four-year urban campus features a friendly, supportive atmosphere in the context of a nationally acclaimed, PAC-10 university. Courses at ASU West lead to 29 bachelor's degrees, nine master's degrees, and eight professional certificates through the Colleges of Arts and Sciences, Education, and Human Services and the School of Management.

The campus is located in the center of 300 acres. The surrounding undeveloped land holds promise as a future home for many new jobs, and hundreds of potential internships, classes, workshops and knowledge exchange opportunities. The next significant addition to the campus will be completed in August 2003 when a 400-bed, state-of-the-art student residence hall is expected to open at the start of the fall semester. Students will have the opportunity to live in an environment designed specifically to integrate their living and learning experiences in a setting that includes seminar rooms, computer facilities, and a community center for student activities.

The campus is dedicated to serving the evolving needs of high school graduates, working adults, and returning and continuing students. Expanding campus facilities and programs, along with a diverse student body, faculty, and staff, all contribute to a culturally rich academic and social campus environment.

ASU West's mission encompasses research and teaching, faculty-student research collaboration, interdisciplinary perspectives, and the development of university-community partnerships. Academic programs, classes, and student services are innovative and provide students with a high-quality education.

The campus is located in northwest Phoenix between 43rd and 51st Avenues on West Thunderbird Road.

For more information, see "ASU West," page 656. For complete information and course listings, see the *ASU West Catalog*.

ASU Extended Campus. The ASU Extended Campus allows individuals to experience ASU beyond the boundaries of the university's three physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies, including television, the Internet, and Independent Learning. Through the Extended Campus, students can access programs, including a variety of professional continuing education programs. ASU Extended Campus offers lifelong learning opportunities throughout Maricopa County and the state of Arizona. For more information, see "ASU Extended Campus," page 671.

ASU Downtown Center. The ASU Downtown Center is the anchor location of the ASU Extended Campus. Located in downtown Phoenix at 502 E. Monroe, the ASU Downtown Center offers a variety of daytime and evening courses and degree programs of interest to employees in private businesses and government agencies and to individuals seeking personal growth and enrichment. These offerings are scheduled at a variety of convenient times and offered through various modes of delivery. Professional continuing education, certificate programs, and lecture series are also available. Access to ASU library information and resources, ASU computing resources, and the Internet is available through the center's computer lab.

ASU Research Park. The mission of the ASU Research Park is to enhance Arizona's high-value research-based economic development and to build the university's capacity to educate and advance knowledge. To this end, the Research Park serves to attract new corporate and regional headquarters and research and development firms to Arizona—headquarters and firms that broaden the base for potential research, interact with graduate students, consult with university faculty, cosponsor seminars on research

topics, and provide employment opportunities for ASU graduates.

The Research Park has numerous major tenants, including ASM Lithography, Avnet CMG, Bright Horizons Family Solutions, Iridium Satellite, Motorola Labs, the Institute for Supply Management, Philips Electronics, and many others. The Research Park contains over 1.5 million square feet of developed space on 320 acres.

For more information, access researchpark.asu.edu on the Web.

Camp Tontozona. Located in the famed Mogollon Rim country near Kohl's Ranch, northeast of Payson, this continuing education facility serves the needs of academic departments conducting teaching and research in mountain terrain. The camp is also available to faculty, staff, graduate students, and alumni for family use. For more information, call 480/965-6851.

Deer Valley Rock Art Center. Deer Valley Rock Art Center, located two miles west of the Black Canyon Freeway on Deer Valley Road, is operated by the ASU Department of Anthropology in consultation with the Hopi, Yavapai, and Gila River Indian tribes. It includes more than 1,500 petroglyphs that cover the eastern slope of Hedgpeth Hills. For more information, call 623/582-8007.

The Arboretum. The Arboretum at Arizona State University is the entire 722-acre main campus. The Arboretum is home to a flourishing oasis of plants from around the world. This virtual outdoor classroom includes more than 300 species of trees and other woody ornamental and herbaceous plants from diverse geographic regions as well as the Sonoran Desert. The Arboretum contains one of the best collections of palms and conifers in the desert Southwest and a growing collection of native Southwestern plants. The Arboretum's date palm collection has received international recognition by the American Association of Botanical Gardens and Arboreta North American Plant Collection Consortium.

The Arboretum's collection began with Arthur J. Matthews. By the time Matthews' 30-year presidency was finished, nearly 1,500 trees of 57 species and more than 5,700 feet of hedges were planted. One of his most enduring landscape projects was the planting of Mexican Fan Palms along Palm Walk in 1916, which extends from University Drive south to the Student Recreation Complex. Today the Arboretum has expanded its collection to include nearly 4,000 trees of 164 species/varieties.

The Arboretum is open to the public free of charge 365 days a year from dawn to dusk. Walking tours of the various collections and points of interest are designated by signage denoting those areas. Many of the plants in the collection throughout campus are marked with identification plaques.

UNIVERSITY LIBRARY AND COLLECTIONS

ASU Main Libraries

The collections of the university's libraries comprise more than 3.6 million volumes, approximately 7 million microform units, and more than 32,565 periodical and serial subscriptions. Computer access to commercially and locally produced databases and the ability to borrow research materials from other libraries enhance local resources. ASU is a member of the Association of Research Libraries and the Center for Research Libraries.

For telephone numbers, see the "Libraries," page 509. For more information, access the Web site at www.asu.edu/libraries.

Charles Trumbull Hayden Library. The Charles Trumbull Hayden Library, designed by Weaver and Drover in 1966, houses the largest multidisciplinary collection at ASU. In addition to the open stack areas, separate collections and service areas include Access for Disability Accommodations; Circulation; Periodicals/Videos/Microforms; Government Documents Services; Interlibrary Loan and Document Delivery Services; Library Instruction, Systems, and Technology (L.I.S.T.); Reference; Reserve; and Archives and Manuscripts, which includes Special Collections, the Arizona Collection, the Chicano Research Collection, the Benedict Visual Literacy Collection, the Child Drama Collection, and the Labriola National American Indian Data Center. Archives and Manuscripts holds the papers of several major Arizona political figures, including Senator Carl Hayden, with historic materials about Arizona, Chicano, and Indian affairs.

Other special collections include materials by and about William S. Burroughs, the Press of Thomas Bird Mosher, and the Patten Herbal Collection. For more information, access the Web site at www.asu.edu/lib/hayden.

Architecture and Environmental Design Library. Located in the College of Architecture and Environmental Design/North building, this library has a general collection that focuses on architecture, design, graphic design, interior design, landscape architecture, and planning. The library's Special Collections and Archives, Architectural Drawings Collection, and Materials Resource Center provide additional opportunities for research. For more information, access the Web site at www.asu.edu/caed/RESOURCES/AEDLIBRARY/html/AEDLibrary.htm.

Music Library. A large collection of music scores, recordings, books, music reference materials, and listening facilities for individuals and groups is located on the third floor of the Music Building, West Wing. For more information, access the Web site at www.asu.edu/lib/music.

Daniel E. Noble Science and Engineering Library. The Daniel E. Noble Science and Engineering Library houses books, journals, and microforms in the sciences, engineering, and nursing; the Map Collection; and the U.S. Patent and Trademark Depository. For more information, access the Web site at www.asu.edu/lib/noble.

College of Law Library

Law Library. The John J. Ross–William C. Blakley Law Library is located on McAllister Avenue. See "Law Building and Law Library," page 301, for more information.

ASU West Library

Fletcher Library. Located at the ASU West campus, Fletcher Library utilizes a range of electronic systems, from

compact discs to telecommunications networks, to provide access to resources and delivery of materials. Its holdings include more than 315,000 volumes, 5,990 serial titles, and 1.4 million microforms selected to complement ASU West course offerings. For more information, access the Web site at www.west.asu.edu/library.

University Collections

Arizona Historical Foundation. Under a cooperative agreement with ASU, the Arizona Historical Foundation houses a library of several thousand volumes, manuscript collections, maps, and photographs, and a large collection of audiovisual materials. Housed in the Charles Trumbull Hayden Library, the collection's focus is on the history of Arizona and the Southwest. For more information, access the Web site at www.users.qwest.net/~azhistoricalfdn.

University Archives. The University Archives collection is available for use at the Luhrs Reading Room in Hayden Library. The collection (1885–present) comprises university theses and dissertations; administrative records of the university; historical photographs and personal papers of faculty, staff, and alumni; and student, faculty, and official university publications. The historic University Archives Building on Tyler Mall is the home of the 1907 Gallery, which hosts exhibits of historical photographs from the collections of the Department of Archives and Manuscripts. For more information, access the Web site at www.asu.edu/lib/archives/archives.htm.

PERFORMING AND FINE ARTS FACILITIES

ASU Art Museum. The ASU Art Museum serves students and scholars within and beyond the university and as a cultural resource for the Phoenix metropolitan area. The museum serves the global public through traveling exhibitions, publications that contextualize art in the larger issues of society, and its Web site.

Exhibitions, education programs, and publications are interdisciplinary and designed to engage viewers with art that is relevant to their lives. New technologies in the content of art and in the approaches to reaching new audiences are eagerly and openly adopted.

Collections and exhibitions focus on contemporary art, particularly new media and new methods of presentation; art by Latin American artists; art from the Southwest; prints, both historic and contemporary; and crafts, emphasizing ceramics. In 2002, the Ceramics Research Center was opened, presenting exhibitions and giving access to research in ceramics. The museum was founded by a gift of historic American paintings, which are on continuous display, including works by Gilbert Stuart, Albert Pinkham Ryder, Winslow Homer, Georgia O'Keeffe, and Romare Bearden. The contemporary art holdings include works by Nam June Paik, Lorna Simpson, Vernon Fisher, Sue Coe, and Enrique Chagoya. Ceramics, with a focus in 20th-century examples, include Peter Voulkos, Ken Price, Lucie Rie, and Robert Arneson. Exhibitions and collections are housed in galleries and study rooms within the international award-winning Nelson Fine Arts Center.

Educational programs include artist residencies and dialogs with classes, a student docent program, internships, research assistantships, lectures and symposia, in-gallery materials, community video projects with children, and school and public tours. For information on upcoming exhibitions and programs, call 480/965-2787.

ASU Downtown Center Galleria. The Galleria features work by ASU faculty, staff, students, and local artists. Exhibits rotate monthly. The Galleria participates in the monthly and annual art tours First Friday and Art Detour, sponsored by a local artists' group, ArtLink, Inc. For information on exhibitions, call 480/965-3046.

Computing Commons Gallery. Located on the ground floor of ASU's high-traffic, centrally located Computing Commons, the gallery extends the arts to a diverse community. This Institute for Studies in the Arts' (ISA) exhibition space has highly adaptable power and lighting options and more than 30 ethernet connections to facilitate work with a focus on art and technology.

Dance Multimedia Learning Center. The Department of Dance Multimedia Learning Center is a facility designed to promote and encourage the use of media and computer technology in dance education and performance at ASU.

Dance Studio Theatre. The Dance Studio Theatre is a 300-seat performance space that is the mainstage performance site for the 12 formal and informal concerts produced annually by the Department of Dance. The theatre is one of the only dance spaces in the country that is designed with interactive and telematic capabilities. The facility uses video-based motion sensing and enables dancers to interact with sound, lighting, images, and video in performance. High-speed Internet connectivity enables this space to connect with other telematic spaces for dual, multisite, and Web performances.

Digital Arts Ranch. The Institute for Studies in the Arts' (ISA) Digital Arts Ranch includes a black box theatre. The theatre features a matrix of video, audio and movement sensors, controllable projection screens, surround sound capable of Dolby 5.1 and DTS reproduction, shops for design and fabrication using a variety of materials, including wood, aluminum, brass, steel and plastic, and a CAD unit. The theatre space serves as the ISA's principal venue for arts and technology performance events.

Gallery of Design. Housed in the College of Architecture and Environmental Design, the Gallery of Design features traveling exhibitions on design and urban issues.

Paul V. Galvin Playhouse. Built to stage the largest productions of the ASU Theatre, the Paul V. Galvin Playhouse is a 496-seat proscenium-stage theatre set at the east end of the Nelson Fine Arts Center. The Department of Theatre's annual season of 12 to 15 plays also includes productions in the Lyceum and Prism theatres and the Nelson Fine Arts Center Studios.

Grady Gammage Memorial Auditorium. A versatile center for the performing arts designed by Frank Lloyd Wright and named for the late ASU President Grady Gammage, Grady Gammage Memorial Auditorium seats 3,000 and has won wide acclaim for its design and acoustics. In

addition to the great hall and related facilities—including the Aeolian-Skinner organ contributed by Hugh W. and Barbara V. Long—the building contains classrooms and workshops for the Herberger College of Fine Arts.

The Intelligent Stage. The Intelligent Stage is a research environment and performance space at the Institute for Studies in the Arts (ISA). It is dedicated to the expansion of studies in interactive performance technologies. Current research includes 3-D motion capturing and 2-D sensing technologies, body sensors for real-time control of digital media, and multisite performances through the use of shared data and streaming digital media. The Intelligent Stage serves the Motion Capturing Partnership, which includes the ISA, computer science, bioengineering, and PRISM (Partnership for Research in Stereo Modeling).

Katzin Concert Hall. Located in the new music building expansion, the Katzin Concert Hall seats 350 people. Primarily used for solo and chamber music recitals, the hall houses a nine-foot Hamburg concert Steinway piano. The acoustics are enhanced by the maple-paneled stage and the multifaceted walls and ceiling.

Louise Lincoln Kerr Cultural Center. Located in Scottsdale, the Louise Lincoln Kerr Cultural Center offers cultural events, especially in the performing arts, to the community.

Lyceum Theatre. A small but technically sophisticated 164-seat proscenium theatre, the Lyceum Theatre is a venue for faculty productions and a laboratory for the work of student playwrights, directors, and actors.

J. Russell and Bonita Nelson Fine Arts Center. Designed by Albuquerque architect Antoine Predock, the J. Russell and Bonita Nelson Fine Arts Center is a spectacular, 119,000-square-foot, village-like aggregate of buildings that includes five galleries of the ASU Art Museum, the Paul V. Galvin Playhouse, the University Dance Laboratory, seven specialized theatre and dance studios, a video studio, and a variety of scenic outdoor features, including courtyards, fountains, pools, and a 50-by-100-foot projection wall designed for outdoor video.

Northlight Gallery. The Northlight Gallery is dedicated to museum-quality exhibitions of historical and contemporary photography. Located in Matthews Hall, it is open during the academic year.

Organ Hall. Located in the new music building expansion, the Organ Hall houses the Fritts Organ. This tracker-action pipe organ is designed to capture the qualities of baroque European organs. The hall is designed to complement the organ with a barrel-vaulted ceiling and wooden benches to seat 140 persons.

Prism Theatre. The Prism Theatre is an alternative black-box space devoted to student productions.

Recital Hall. Located on the fifth floor of the Music Building, the Recital Hall is an intimate 125-seat facility that opens onto a rooftop courtyard.

Evelyn K. Smith Music Theatre. As part of the music complex, the Evelyn K. Smith Music Theatre, modeled after the Wagnerian Theatre in Bayreuth, Germany, rises five stories and seats an audience of 500. This theatre is the home of many operatic and musical productions.

Step Gallery. Located in the Tempe Center, the Step Gallery is dedicated to exhibitions by undergraduate students.

Sundome Center for the Performing Arts. As America's largest single-level theatre, the Sundome Center for the Performing Arts in Sun City West has 7,169 seats. The theatre is equipped with sophisticated, state-of-the-art lighting systems, and a single-span roof affords each seat a clear view. As one of Arizona's premier entertainment venues, the Sundome provides an array of top entertainment from Las Vegas-style concerts to classical ballets to celebrity lectures.

Television Station KAET. KAET, Channel 8, is the university's PBS station. Studios of the award-winning station are located in the Stauffer Communication Arts Building. To operate 24 hours a day, KAET employs more than 50 ASU students and interns. To learn more about KAET-TV, access its Web site at www.kaet.asu.edu, or call 480/965-3506.

University Dance Laboratory. A flexible performance space within the Nelson Fine Arts Center, the University Dance Laboratory is designed specifically for experimental dance productions. Along with the Dance Studio Theatre in the Physical Education Building East, the University Dance Laboratory is used by the Department of Dance for experimental performances.

Harry Wood Gallery. Housed in the Art Building (ART 120), the Harry Wood Gallery provides temporary exhibitions of the visual arts during the academic year. Works by undergraduate and graduate students, as well as the general public, are showcased.

COMPUTING FACILITIES AND SERVICES

Computers are fundamental tools for learning, instruction, and research in every college and department at ASU. The Information Technology (IT) department provides a variety of computing equipment and services available for use by students, faculty, and staff. IT also provides a wide variety of applications, including those required for development, research, and other learning needs. University-wide productivity software and knowledge-sharing resources are accessible through a high-speed campus network and from off campus via the Internet.

A wide range of university information is available online at www.asu.edu, the official ASU Web site. Prospective and current students can find details regarding undergraduate and graduate degree programs, financial assistance, housing, and student activities. The ASU Web site is also the gateway to many online services, including

1. finding and registering for classes;
2. viewing online grade reports;
3. checking e-mail (www.asu.edu/emma) and creating personal and course Web pages;
4. accessing courses online via myASU (my.asu.edu);
5. viewing campus event calendars;
6. searching the student-faculty-staff directory;

7. browsing general and graduate catalogs; and
8. obtaining information about ASU athletics.

IT provides several service centers, described below, for the ASU academic community.

Computing Commons. The Computing Commons building (CPCOM) provides a "technology hub" that draws together students, faculty, and staff from all disciplines on campus in an environment conducive to maximum creative interaction. The building and its facilities have drawn national recognition and acclaim as a model for the support of instruction and research in a technology-based environment. The Computing Commons houses a 253-workstation computing site, seven computer classrooms, two Classroom Support Centers, the Customer Assistance Center, a computer store, and the Computing Commons Gallery which is described under Performing and Fine Arts Facilities (see "Computing Commons Gallery," page 27).

Classroom Support. Classroom Support assists instructors in integrating technology into the educational process. To achieve this goal Classroom Support personnel provide equipment, technical support, maintenance, and instructor training for open-access classrooms, mediated classrooms, computer classrooms, and special events. Classroom Support Centers are located strategically around campus so that staff can provide help to instructors who request assistance. For more information, access the Web site at www.asu.edu/classroomsupport.

Computing Sites. In addition to the Computing Commons Atrium, there are three additional (IT or open access) computing sites located on the ASU Main campus, available for ASU faculty, staff, and students with an ASURITE UserID. Site configurations and hours of operation vary; current information is available on the Web at www.asu.edu/it/fyi/sites.

ASU Downtown Center Computer Lab. The ASU Downtown Center offers an alternative to the computer labs at ASU Main. This facility features 20 Pentium III-800 Mhz computers—all loaded with Microsoft Windows 2000 and Office 2000, Internet Explorer, Netscape, and other software. A high-speed laser printer and a color flatbed scanner are available, and faculty may use the ceiling-mounted computer projection system. The ASU Downtown Center is located in downtown Phoenix. It is a unique educational, applied-research, and community-service facility designed to address the multifaceted urban opportunities of the central Phoenix community. For more information, call 480/965-3046, or access the Web site at www.asu.edu/xed/dtcpclab.

Computer Accounts. Computer Accounts, located on the second floor of the Computing Commons in room 202, assists users with account access issues (including lost passwords), disk space quotas, accounts for non-ASURITE services (including mainframe computer access), and other account-related services. Most computing services are accessible through the standard ASURITE UserID and password, available online at www.asu.edu/asurite. Additional information about Computer Accounts is available on the Web at www.asu.edu/computeraccounts.

Customer Assistance Center. The Customer Assistance Center, located on the second floor of the Computing Commons in room 202, offers a library of reference manuals, computing periodicals, and other information concerning computing systems and software. Self-paced training is available for various software applications running under the Windows or Unix operating systems. The center also distributes communication, virus protection, and other site-licensed software, and how-to documentation in a "print-on-demand" format. Print on demand is also available on the Web at www.asu.edu/quicklook. Additional information about the center is available on the Web at www.asu.edu/cacenter.

Geographic Information Systems Lab. The Geographic Information Systems (GIS) Lab seeks to establish partnerships with faculty, staff, and students to acquire, create, and enhance research and creative endeavors through the effective use of GIS technologies. The lab is located on the second floor of the Computing Commons in room 235. Lab staff members assist researchers with hardware, software, and data to facilitate the creation of geographic information systems for spatial analysis, query, and display. The lab supports research from various disciplines and provides additional resources to students who are enrolled in classes for GIS instruction, serving as a focal point for GIS users to meet and share information and technical expertise. For more information, access the Web site at www.asu.edu/gislab.

Help Desk/Consulting. The IT Help Desk provides ASU students, faculty, and staff with centralized systems information and first-level assistance in resolving computing problems. The IT Help Desk assists with data recovery and repair; AFS filespace and permissions for Web sites; communication, e-mail, and virus protection software; and computing and equipment problem referral. Services are available by telephone at 480/965-6500, and by walk-in at the Customer Assistance Center, CPCOM 202. For more information, access the Web site at www.asu.edu/helpdesk.

Information Technology Instruction Support. The Information Technology Instruction Support (IT/IS) Group serves as a development center for the effective use of technology in the design and delivery of instruction. Staffed with faculty, researchers, and students skilled in the areas of system design, graphics, interactive software, web-based instructional design and delivery, and digital video production, this innovation-driven group enables faculty to maximize the impact of their instruction through the use of technology. From this perspective, IT/IS fosters technological innovation by serving as a research and development unit, a production group, and a training facility.

IT/IS collaborates with faculty in the coordination of cross-disciplinary research and production projects relating to the integration of technology with education. Through partnerships with ASU faculty and researchers, other educational institutions, as well as public and private community entities, grant-writing teams are assembled to

leverage support not otherwise available to a single academic unit or faculty member. Central to effective support services is the establishment of a partnership among the various support units within the university. IT/IS coordinates the efforts of these groups—which include the College of Extended Education, University Libraries, Disability Resources for Students, and the Office for Research and Sponsored Projects Administration—to provide faculty with a wide array of instruction support services.

IT/IS offers consultation and workshops tailored toward enhancing the instructional use of technology by the university teaching community. Sessions range from an introduction to technology in education through advanced and customized approaches for instructors in specific programs.

For more information about IT/IS, access the Web site at is.asu.edu.

Instruction Support Lab. The Instruction Support (IS) Lab provides an environment in which faculty may seek and receive one-on-one, guided, or independent support for course development and delivery. Expert staff work closely with faculty to refine and develop their skills and confidence in the design and delivery of instruction through a variety of technology-supported means, both synchronous and asynchronous. Located in CPCOM 213, the IS Lab provides faculty, university professionals, and graduate students with a unique opportunity to integrate technology with instruction. The IS Lab sponsors workshops and demonstrations and serves as a dynamic clearinghouse of information and referrals for effective integration of technology with education. For more information about IS Lab resources, support, and workshops, access the Web site at is.asu.edu/islab.

ALUMNI ASSOCIATION

Founded in 1894, the Alumni Association is a volunteer-led organization committed to serve and unite alumni for the purpose of advancing the interests of ASU and its alumni. The association, located in MAIN 200, provides a variety of services for ASU alumni, as well as a series of events scheduled around the country.

With more than 250,000 alumni living in the United States and throughout the world, the association plays an important role as the university's primary support organization. Comprising more than 50 groups, the campus, college, club, and chapter organizations (4Cs) of the association provide opportunities for all alumni to stay involved with the part of ASU that interests them most.

Members of the Board of Directors are elected each spring. See "ASU Alumni Association Board of Directors," page 584. For more information about the association or its board of directors, call 1-800-ALUMNUS or 480/965-ALUM (2586), or access the Web site at www.asu.edu/alumni.

PROGRAM ASSESSMENT AND THE OFFICE OF UNIVERSITY EVALUATION

The Office of University Evaluation is a research and service facility that focuses on assessing and improving the effectiveness of the university's academic and support programs. The office conducts, coordinates, and manages research designed to measure the degree to which courses, curricula, and academic programs impart knowledge and skills to students, as well as the quality of support provided to students. The results of these studies, or assessments, are used to enhance both the support provided to students and the intellectual integrity of an ASU education.

In order for the university to assess and improve its programs, periodic measurement of student experiences, perceptions, and intellectual growth must be obtained. When asked by the university, students are expected to participate in one or more evaluative procedures, such as the ASU Report Card. These evaluative procedures are designed to



ASU cheerleaders teach incoming freshmen "Onward to Victory," ASU's fight song, during Spirit Night in Wells Fargo Arena.

Tim Trumble photo

assess the efficacy of the total university experience, including teaching and learning and support programs and are not used in individual grading. The information obtained is one of the means used to improve the quality of the educational experience for this and future generations of ASU students.

For more information, call the office at 480/965-9291, or contact them via e-mail at oue@asu.edu. The Office of University Evaluation's Web site is www.asu.edu/oue.

LEARNING AND TEACHING EXCELLENCE

The Center for Learning and Teaching Excellence is dedicated to enhancing teaching and learning possibilities at ASU. To support this mission, the center provides a variety of training, support, and professional development programs for faculty, academic professionals, graduate students who have teaching responsibilities, and academic departments throughout the university. Our resources and services specifically focus on advancing improvements in student learning, especially the manner in which teachers promote and foster that learning.

Some of the center's goals are

1. assisting faculty, programs, and departments to assess and develop instructional approaches;
2. providing workshops designed to enhance specific instructional practices for all who teach;
3. serving as a clearinghouse of information about activities, events, resources, and projects that may enhance teaching and learning;
4. developing synergistic relationships with existing campus units;
5. providing instructional assistance to new faculty on campus;
6. encouraging reflective use of instructional technologies; and
7. collaborating with other campus units to secure grant moneys for new course development, exploration of innovative teaching methods, and/or research in effective instruction.

For more information, call 480/965-9401.

Learning and Teaching Excellence Courses. Sections of LTE 598 are offered in the annual Summer Institute on College Teaching and Winter Institute on College Teaching, designed for faculty and teaching assistants who wish to develop diverse strategies for enhancing their students' learning.

LEARNING AND TEACHING EXCELLENCE (LTE)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

RESEARCH CENTERS, INSTITUTES, AND LABORATORIES

These units serve the university's mission in research. They are overseen by eight of the colleges, the Office of the Vice President for Research and Economic Affairs, and the ASU East provost.

Center for Research on Education in Science, Mathematics, Engineering, and Technology. The Center for Research on Education in Science, Mathematics, Engineering, and Technology (CRESMET)—an alliance of the ASU Colleges of Education, Engineering and Applied Sciences, and Liberal Arts and Sciences—was initiated in 1999, growing out of what was previously the Center for Innovation in Engineering Education. The mission of the center is to bring together individuals, programs, and organizations interested in improving K–20 science, mathematics, engineering, and technology education to research, develop, and assess educational theories, curricula, courses, and administrative policies that impact science, mathematics, engineering, and technology education. The center also encourages and supports wide-scale sharing and implementation of effective approaches to producing a more scientifically and technologically literate populace and more capable science, mathematics, engineering, and technology majors.

Research. CRESMET pursues research and development that demonstrates coherent, consistent, and conceptually powerful mathematics, science, engineering, and technology education from kindergarten through college (K–20).

Partnering. CRESMET supports collaborations across the traditional boundaries of university, community, business, and local education agencies.

Sharing. CRESMET establishes communication avenues for intellectual and material products proven effective in supporting powerful learning in science, mathematics, engineering, and technology fields.

For more information, visit CRESMET in ECG 303, call 480/965-5350, or access the CRESMET Web site at www.eas.asu.edu/~cresmet.

College of Architecture and Environmental Design

Herberger Center for Design Excellence. The Herberger Center for Design Excellence is the research, outreach, and publication arm of the College of Architecture and Environmental Design. The center facilitates and promotes research, scholarship, and creative activity among the faculty and students of the college in the fields of architecture, interior design, industrial design, graphic design, landscape architecture and urban design, and environmental planning.

In keeping with its outreach mission, the Herberger Center also publishes reports, newsletters, and books that help to inform debate on key design and planning issues in the desert southwest. The center works closely with the faculty to publish books, working papers, and conference proceedings that promote scholarship in the planning and design disciplines.

The Joint Urban Design Program (JUDP), based in downtown Phoenix, is the center's outreach arm. It facilitates interaction among college faculty, students, and the broader community, and offers design as a way to further dialogue

and to address urban issues. The JUDP conducts intensive workshops, (community-based charrettes) that help neighborhoods, groups, and other city stakeholders focus on concerns and strategies to respond to critical needs. Student groups and faculty work with the JUDP to identify real world problems that they address in studio projects. For more information, call 480/727-5146, or access the JUDP Web site at www.asu.edu/caed.

College of Education

Center for Indian Education. The Center for Indian Education is an interdisciplinary research and service center established in 1959. It promotes studies in American Indian policy and administration that contribute to scholarship and effective practices in education, professional training, and tribal capacity building. It is structured to foster relations between the university and sovereign tribes and to provide training and technical assistance for community programs. The center publishes the *Journal of American Indian Education* and sponsors workshops and colloquia that bring together scholars and tribal community leaders.

The center provides leadership through a group of American Indian faculty and is organized on the basis of scholarly expertise of the faculty. In addition to College of Education faculty, responsibilities are shared by faculty from the School of Social Work, the School of Justice Studies, the College of Liberal Arts and Sciences, and the College of Law. Areas currently studied include administrative leadership, policy analysis, bilingual education, health and welfare policy, justice studies, and program development in professional studies.

For more information, visit the center in ED 402, call 480/965-6292, or access the center's Web site at coe.asu.edu/cie.

CRESMET. See "Center for Research on Education in Science, Mathematics, Engineering, and Technology," page 31.

Education Policy Studies Laboratory. Located within the College of Education, the Education Policy Studies Laboratory (EPSL) conducts and coordinates original research in areas such as student performance standards, assessment, curriculum, and commercialism in schools. EPSL not only disseminates its analyses and reports to policy makers and educators, but concentrates on providing the public with readable accounts of research.

The EPSL houses two research units—the Commercialism in Education Research Unit (CERU), which is the only national academic research center dedicated to schoolhouse commercialism, and the Education Policy Research Unit (EPRU), which conducts original research and facilitates implementation of educational innovations.

For more information, contact Alex Molnar, EPSL director and professor of Educational Leadership and Policy Studies, EDB L1-01, 480/965-1886, or access the laboratory's Web site at www.asu.edu/educ/epsl.

Southwest Center for Education Equity and Language Diversity. The Southwest Center for Education Equity and Language Diversity conducts, supports, and promotes research, scholarship, and innovative practice in language education designed for minority students in public schools. The center gives priority to scholarship and field-based work relating to educational equity and the systematic usage of heritage languages and cultures. The aim is to integrate these resources into the educational experience of all children and youth.

The center's scope of work is driven by a need to merge several related topics into a single articulated conversation: biliteracy; promoting the role of public education to strengthen communities; and enabling binational collaboration among educators. The long-term vision is to help develop a new pedagogy tailored to the needs of the bicultural region the center serves. The integration of these themes shapes the scope of work for the center in the following areas:

1. Within the broad scope of educational policy research, the center focuses on scholarly inquiry that contributes to informed and enlightened discourse on language policy for schools and society, especially on the harmonious coexistence of English, the national language, and Spanish, the second most used language in our society.
2. Life in the American Southwest is bicultural and increasingly binational. In this Pan-American context, bilingualism will gain in importance. Equally important will be the collective ability of residents on both sides of the border to work harmoniously in pursuit of a common destiny that will be ever more intertwined. Schools must help children and youth develop skills and predispositions to face this challenge.
3. Mexico and the United States are becoming more interdependent. In this context, Mexican educators should have opportunities to contribute to improving education for Mexican immigrant children in U.S. schools. To enable this, schools must create pilot projects and an infrastructure for collaboration among institutions and individuals on both sides of the U.S.-Mexico border.

For more information, visit the Southwest Center for Education Equity and Language Diversity in ED 440, call 480/965-7134, or access the center's Web site at www.asu.edu/educ/sceed.

College of Engineering and Applied Sciences

Center for Low Power Electronic Research. The Center for Low Power Electronic Research is a collaborative effort of the University of Arizona and ASU to address fundamental, industry-relevant research problems in the design of ultra-low power microelectronic systems. The center is formed under the State/Industry/University Cooperative Research initiative of the National Science Foundation (NSF). The NSF and the State of Arizona recognize that Arizona has the key ingredients to become a leader in this technology. It has the world's leading companies involved in the manufacture of portable computing and communication systems. The technical areas of focus of the center include

1. basic materials, alternative materials, and their fabrication;
2. device design optimization;
3. design of digital, analog, and hybrid low power circuits; and
4. power-based physical design for single- and multichip VLSI systems.

For more information, visit the center in ENGRC 115, or call 480/965-8654, or access the Engineering Research Services Web site at www.eas.asu.edu/~ers.

Center for Solid State Electronics Research. The Center for Solid State Electronics Research (CSSER) focuses on research in the areas of epitaxial semiconductor crystal growth, device characterization and modeling, defect behavior in semiconductors material characterization, environmentally benign and other novel processing, fine line lithography, surface analysis, and transport. Major programs address semiconductor device modeling, transport theory, optoelectronics, feroelectrics, semiconductor processing, microwave devices, and ultra-submicron and nano-structured devices. New thrust areas include molecular electronics and MEMS.

For more information, visit CSSER in ENGRC 115, call 480/965-3708, or access the CSSER Web site at ceaspub.eas.asu.edu/csser.

Center for Systems Science and Engineering Research. The Center for Systems Science and Engineering Research (SSERC) has established four focus areas: nonlinear dynamical systems, control theory and its applications, mathematical neuroscience, and scientific computing and interdisciplinary systems engineering. The center is jointly sponsored by the College of Engineering and Applied Sciences and the College of Liberal Arts and Sciences. Its main goals are the creation and enhancement of interdisciplinary and cooperative research, graduate education, and public service programs in the areas of systems science, applied mathematics, and computation.

For more information, visit the SSERC in GWC 606, call 480/965-8382, or access the SSERC Web site at www.eas.asu.edu/~sserc.

CRESMET. See "Center for Research on Education in Science, Mathematics, Engineering, and Technology," page 31.

Institute for Manufacturing Enterprise Systems. The Institute for Manufacturing Enterprise Systems (IMES) is a joint venture of the W. P. Carey School of Business and the College of Engineering and Applied Sciences, established to enhance manufacturing research and industrial collaboration at the interface between the two colleges. IMES's mission is to establish ASU as an international leader in the creation and dissemination of new knowledge in the area of global manufacturing for the new economy. It particularly focuses on how manufacturing impacts Arizona. Research thrust areas include virtual manufacturing, enterprise systems, knowledge management, and software in the system solution.

For more information, visit the institute in GWC 402, or call 480/965-3709, or access the Engineering Research Services Web site at www.eas.asu.edu~ers.

Telecommunications Research Center. Telecommunications play a vital role in home, commercial, entertainment, educational, scientific, and military systems. The Telecommunications Research Center focuses its interests and activities in research and educational programs. The approach is to conduct basic and applied research, develop technologies, and provide education programs in all major areas of telecommunications, from signal generation to reception. The targeted areas of excellence are antennas, propagation, and scattering; microwave circuits, devices, and measurements; optical communications; signal processing; broadband switching; and wireless communication systems. Ultramodern laboratories and computational facilities are associated with the center.

For more information, visit the center in GWC 411, call 480/965-5311, or access the center's Web site at trc.eas.asu.edu.

College of Law

Center for the Study of Law, Science, and Technology. Located in the College of Law, the Center for the Study of Law, Science, and Technology conducts research, edits *Jurimetrics: The Journal of Law, Science and Technology* in cooperation with the American Bar Association Section on Science and Technology, and sponsors seminars, workshops, and conferences. Through these activities, the center seeks to contribute to the formulation and improvement of law and public policy affecting science and technology and to the wise application of science and technology in the legal system. Current areas of research include communications and telecommunications law, computer-related law, forensic science and statistics, legal issues and biotechnology, law and medicine, and law and social science.

For more information, visit the center in LAW 201, or call 480/965-2124.

College of Liberal Arts and Sciences

Arizona Center for Medieval and Renaissance Studies (ACMRS). The Arizona Center for Medieval and Renaissance Studies is a research unit serving affiliate scholars from ASU, Northern Arizona University, and the University of Arizona. It represents a variety of disciplines, including history, literature, philosophy, religion, language, music, art, and science. ACMRS enriches academic offerings in medieval and renaissance studies by sponsoring one or two visiting professors each year. Graduate research assistantships are also available through the center.

Significant opportunities for the study of the Middle Ages and the Renaissance exist at ASU. Hayden Library has an extensive microfilm collection and many rare books in medieval and renaissance studies. ACMRS also sponsors a lecture series each semester covering a variety of topics.

Other programs include an annual conference, a public symposium, a summer study abroad program at the University of Cambridge (United Kingdom), and student exchange programs with the University of Copenhagen (Denmark) and the University of Kalmar (Sweden).

Since 1996, ACMRS has published Medieval and Renaissance Texts and Studies (MRTS), a major series of editions, translations, and reference works. In collaboration with the University of Massachusetts at Dartmouth and the University of Kansas, ACMRS sponsors and coedits *Mediterranean Studies,* an annual interdisciplinary journal publishing articles on all aspects of the Mediterranean region. ACMRS also sponsors a book series titled *Arizona Studies in the Middle Ages and the Renaissance,* published by Brepols (Belgium).

ACMRS also partners with the Renaissance Society of America and the University of Toronto in *Iter,* a massive, retrospective, online medieval and renaissance bibliography covering all languages and disciplines, and is the official site of the Medieval Academy of America's online data project offering information on medieval centers, programs, committees, and regional associations in North America.

For more information, visit ACMRS in SS 224, call 480/965-5900, or access the ACMRS Web site at www.asu.edu/clas/acmrs.

Cancer Research Institute. Significant advances in the treatment of human cancer and other serious medical problems depend upon scientists well trained in organic chemistry, biochemistry, and biology. The Cancer Research Institute provides graduate students with the specialized training necessary for research in the discovery and development of effective anticancer drugs. Among various activities, laboratory personnel are pursuing a unique program concerned with isolation, structural identification, and synthesis of naturally occurring anticancer agents from marine animals, plants, and marine microorganisms.

For more information, visit the institute in CRI 209, or call 480/965-3351.

Center for Asian Studies. Through its East Asian and Southeast Asian studies programs, the Center for Asian Studies serves as research coordinator for Asian studies' faculty and graduate students in a variety of disciplines. The center sponsors colloquia and research conferences. It also publishes two scholarly *Monograph Series* and a newsletter on Southeast Asian studies, *Suvannabhumi,* which have an international readership. Graduate students may apply for research assistantships in the center and its program.

The center works with the office of International Programs to administer student exchange programs with a number of universities in Asia. The center also sponsors an Asian film series each semester. A reading room is located in the center office suite offering a variety of Asian and English language publications and newspapers from and about Asia.

For more information, visit the center in WHALL 105, or call 480/965-7184.

Center for Meteorite Studies. The nation's largest university collection of extraterrestrial materials is available for research in the Center for Meteorite Studies. Teaching and research on meteorites, meteorite craters, and related areas of space and planetary science are accomplished through the regular academic units in cooperation with the center.

For more information, visit the center in PS C151, or call 480/965-3576.

Center for Solid State Science. The Center for Solid State Science is a research unit within the College of Liberal Arts and Sciences.

The membership comprises faculty and academic professional researchers and research support personnel, most of whom hold simultaneous appointments in affiliated academic units. The Center for Solid State Science is the ASU focal point for interdisciplinary research on the properties and structure of condensed phases of matter at the interfaces between solid-state chemistry and physics, earth and planetary science, and materials science and engineering. It also supports interdisciplinary approaches to science and engineering educational outreach activities.

The center provides an administrative home for large, multidisciplinary, block-funded research projects. These include the NSF-supported Materials Research Science and Engineering Center (MRSEC) and the Interactive Nano-Visualization for Science and Engineering Education (IN-VSEE) project. To support these activities, members of the center operate modern and sophisticated research facilities and organize regular research colloquia and symposia.

Principal topical areas of research in the center include studies of structure and reactivity of surfaces and interfaces, electronic materials, advanced ceramics and glasses, synthesis of new materials, high-pressure research, development of techniques in high-resolution electron microscopy and micro-structural and chemical analysis, development of visualization techniques at different scales of magnification for science education and community outreach.

The research facilities of the center include the Center for High Resolution Electron Microscopy (CHREM) and the Goldwater Materials Science Laboratories (GMSL).

CHREM. The center operates several ultra high-resolution and ultra high-vacuum electron microscopes and supports microscopy methods and instrumentation development, including holography, position- and time-resolved nano-spectroscopy, and energy-filtered imaging and diffraction. The center provides high-resolution capability for a large external group from other universities and industry.

GMSL. These facilities include

1. the Materials Facility (MF), which provides a wide range of synthesis and processing capabilities for preparation of specimen materials. MF also provides thermal analysis for study of solid-state reactions and Auger and X-ray photoelectron spectroscopy for analysis of surface compositions and electronic structure of surfaces;
2. the Materials Science Electron Microscopy Laboratory (MSEML), which provides state-of-the-art electron microscopes for analysis of microstructures, including imaging and diffraction, and high spatial resolution chemical analysis using energy dispersive X-ray and electron energy loss micro-spectroscopy;
3. the Ion Beam Analysis of Materials (IBeAM) facility, which provides compositional and structural determination of the surface and near-surface regions (0–2mm) of solids by ion beam analysis where elemental composition and depth distribution information are needed. Channeling experiments are

used to determine crystal perfection and site occupancy;

4. the Secondary Ion Mass Spectrometry (SIMS) laboratory, which provides depth profile and point composition analysis with very high chemical sensitivity, on the order of one part per billion, including isotopic analysis for many materials. SIMS is also used as a chemical microscope, to image elemental distributions on specimen surfaces;
5. the Scanning Probe Microscopy Laboratory (SPM), which provides facilities for nanoscale viewing of solid surfaces using scanning tunneling microscopy (STM), atomic force microscopy (AFM), and related techniques. The SPM laboratory serves as a focus for undergraduate research training programs and educational and outreach activities;
6. the Facility for High Pressure Research, which provides facilities for synthesis of new materials and for geochemistry/geophysics studies at up to 25 Gpa (250,000 atmospheres) and temperatures greater than 2000° C. These facilities are complemented by diamond anvil cells capable of in situ studies at up to one million atmospheres. This laboratory provides a focus for core research projects within the MRSEC;
7. the Goldwater Materials Visualization Facility (GMVF), which consists of a battery of linked workstations for remote operation of instruments and data collection, capture of images in real time, and advanced computing and simulation of materials. The GMVF is used in research and in undergraduate and graduate education, as well as in educational and community outreach; and
8. other specialized laboratories under development, which include high-resolution X-ray diffraction for thin film characterization, optical spectroscopy, and nuclear magnetic resonance spectroscopy for solid-state studies and research on materials under extreme conditions.

These facilities provide the primary teaching and research resources used by students in the Science and Engineering of Materials interdisciplinary Ph.D. program and the undergraduate option for Materials Synthesis and Processing. They are also used extensively by students in disciplinary programs from affiliated departments.

For more information, visit the center in PS A213, call 480/965-4544, or access the Web site at www.asu.edu/clas/csss.

Center for the Study of Early Events in Photosynthesis. The ASU Center for the Study of Early Events in Photosynthesis was established in 1988 as part of a joint grant program of the Department of Energy, the National Science Foundation, and the Department of Agriculture. In 1990, it was designated a Regents Center of the University. Since September of 1995, it has been funded by the Office of the Vice President for Research and Economic Affairs and the College of Liberal Arts and Sciences. The center consists of about 90 students, postdoctoral associates, and research scientists led by 15 faculty members in the Department of Chemistry and Biochemistry and the Department of Plant Biology. These research groups share a common goal: understanding the process of photosynthesis, which is responsible for producing all of our food and filling the vast majority of our energy and fiber needs. The impetus for development of the center was the premise that photosynthesis is a complex problem that will only yield to an investigation using a wide variety of approaches and techniques. Thus, the center serves as an infrastructure supporting individual ASU scientists and fostering multidisciplinary cooperative research projects.

The ultimate objective of the research is the elucidation of the basic principles governing the biochemical and biophysical processes of photosynthetic energy storage. This goal is being realized via investigation of the early events of photosynthesis, including: light absorption and excitation transfer in photosynthetic antennas; the mechanism of primary photochemistry in plant and bacterial systems; secondary electron transfer processes; structure and assembly of photosynthetic antennas, reaction centers, and electron transfer proteins; pigment-protein interactions; artificial and biomimetic photosynthetic solar energy conversion systems; and mechanisms of biological electron transfer reactions.

The center is equipped with state-of-the-art instrumentation that allows students to do frontier research in a broad range of disciplines. Equipment includes a variety of pulsed lasers for measurements with time resolution ranging from sub-picoseconds to seconds, a 500 MHz NMR instrument, an EPR spectrometer, a protein X-ray facility, spectrophotometers, fluorometer; a protein sequencer, and an amino acid analyzer.

The center sponsors a weekly Photosynthesis Seminar Series and brings in visiting scientists from around the world to carry out collaborative research. Undergraduate, graduate, and postdoctoral training programs in the Department of Chemistry and Biochemistry and within the Plant Biology curriculum are central components of the center's activities.

For more information, visit the center in PS D207, or call 480/965-1963.

CRESMET. See "Center for Research on Education in Science, Mathematics, Engineering, and Technology," page 31.

Exercise and Sport Research Institute. The Exercise and Sport Research Institute (ESRI) is an interdisciplinary research unit located in the Department of Kinesiology and serves, in part, as a research facility for the interdisciplinary doctoral program in exercise science. Faculty and graduate students within ESRI investigate a wide range of topics concerning physical activity, including different age cohorts, levels of health, levels of ability and fitness, levels and types of training, and physical and emotional stresses, nutrition, and genetic backgrounds. Where applicable, these aspects are studied using an interdisciplinary approach. ESRI is affiliated with a number of clinical and research institutions in the Phoenix area.

ESRI houses numerous specialized research laboratories. *Biomechanics* applies the laws of mechanics to the study of human movement. Current research examines kinematic and kinetic determinants of locomotion patterns in walking, running, cycling, and swimming; neuromusculoskeletal modeling and computer simulation of locomotion in clinical

and sport applications; ergonomics; and mechanisms underlying upper extremity repetitive strain injuries. *Exercise physiology* is the study of physiologic systems (cardiovascular, respiratory, muscular, endocrine, metabolic) under conditions of stress, particularly exercise stress. Both acute exercise responses and chronic adaptations resulting from exercise training are considered in relation to health and performance and are investigated in several specialized labs. The *Exercise Biochemistry Lab* examines subcellular systems involved in the provision and regulation of energy transfer during exercise. The *Exercise Endocrinology Lab* studies interrelationships of exercise and training with stress, hormones, neurotransmitters, and the immune system. Research conducted in the *Applied Exercise Physiology Lab* is aimed at better understanding how physical activity and exercise influence the health, fitness, and athletic performance of able-bodied and physically-challenged individuals. Research in the *Motor Control Lab* investigates how movement is regulated and controlled via the nervous system in normal and pathological populations. Special emphases include motor deficits attributed to basal ganglia dysfunction and upper extremity coordination, particularly finger and hand posture, in reaching and prehensile movements. *Motor development* studies how human movement is generated and evolves throughout the lifespan. Current research focuses on learning and development of bimanual coordination. Timing and coordination of perceptual-motor skills are measured in normal developing children, persons with Down syndrome, and adults to investigate cerebral asymmetries and specificity of learning. The *Sport and Exercise Psychology Lab* examines the relationship between psychological constructs and physical activity and the influence of participation in physical activity on psychological phenomena. Current research is designed to examine the influence of physical activity, fitness, and particular sport practices on psychophysiological mechanisms and cognitive functioning; the effect of psychological skills for performance enhancement; motivational aspects of physical activity across the lifespan; and the effects of exercise on mental health.

For more information, visit ESRI in PEBE 159, or call 480/965-7906.

Hispanic Research Center. The Hispanic Research Center (HRC) at ASU is an interdisciplinary unit, dedicated to research and creative activities, that is university-wide but administered through the College of Liberal Arts and Sciences. The HRC performs basic and applied research on a broad range of topics related to Hispanic populations, disseminates research findings to the academic community and the public, engages in creative activities and makes them available generally, and provides public service in areas of importance to Hispanics.

Faculty, staff, and advanced graduate students organize into working groups to develop a broad range of specific projects and lines of inquiry within the general categories of Hispanic entrepreneurship, science and technology, information and data compilation and dissemination, the Hispanic polity, and the arts. Ongoing activities of the HRC, primarily funded by external grants, include the Arizona Hispanic Business Survey, the *Bilingual Review Press,* the Community Art and Research Outreach (CARO), Chicana and Chicano Space: Art Education Web site, Digital Divide Solutions Project, Project 1000, and the Western Alliance to Expand Student Opportunities.

CARO sponsors creative activities and research in collaboration with community-based organizations and ASU faculty.

For more information, visit the HRC in CFS 104, call 480/965-3990, or access the HRC Web site at www.asu.edu/clas/hrc.

Institute of Human Origins. The Institute of Human Origins (IHO), founded in 1981 by Donald Johanson, became part of the College of Liberal Arts and Sciences in 1997. IHO is a multidisciplinary research organization dedicated to the recovery and analysis of the fossil evidence for human evolution and the establishment of a chronological framework for human evolutionary events. IHO's scientists carry out field research at sites in Africa, the Middle East, and Asia. IHO houses the largest collection of *Australopithecus afarensis* casts (including "Lucy," a 3.2 million-year-old human ancestor) in the world as well as an extensive collection of other fossil hominid casts. IHO's library contains more than 3,000 volumes, numerous journals, videotapes, audiotapes, and slides related to human evolution and fossil sites. IHO produces periodic newsletters, offers lecture series, conducts tours and workshops, and supports numerous informal science education outreach projects.

For more information, visit IHO in SS 103, call 480/727-6580, or access the IHO Web site at www.asu.edu/clas/iho.

Joan and David Lincoln Center for Applied Ethics. The Joan and David Lincoln Center for Applied Ethics (LCAE) is a university-wide center for applied ethics that is administratively housed in the College of Liberal Arts and Sciences. Its mission is

1. to develop and coordinate a strong focus on theoretical and applied ethics across intellectual disciplines and professional programs within the university,
2. to support teaching and creative research in ethics, and
3. to foster collaboration between the university and its varied publics to address major ethical challenges facing contemporary society.

For more information, visit LCAE in AG 355, call 480/727-7691, or access the Web site at www.asu.edu/clas/lincolncenter.

Latin American Studies Center. Arizona maintains an ever-growing interest in Latin America that draws upon an extensive experience of historical and geographical ties. The Latin American Studies Center is the focal point for these interests at ASU. Through its program, the center serves the university community and maintains strong ties with various Latin American organizations in the state and the nation. Principal activities are coordinating Latin American studies at the undergraduate and graduate levels; sponsoring student exchange programs; organizing events featuring Latin American arts and culture, numerous seminars, and research conferences; publishing a wide range of profes-

sional materials; and undertaking and facilitating research about the region.

The center administers student exchange programs with the Catholic University of Bolivia and three Mexican universities—the Autonomous University of Guadalajara, the Autonomous University of Nuevo Leon, and the University of Sonora. Each spring several ASU students are selected to attend courses at the Latin American universities while Bolivian and Mexican students attend ASU. The center also has an exchange agreement with the Pontific Catholic University of Ecuador for faculty and students as well as summer programs in Quito, Ecuador, and Ensenada, Mexico.

The center is a member of the American Modern Language Association, Consortium of U.S. Research Programs for Mexico, Consortium for Latin American Studies Association, Pacific Coast Council on Latin American Studies, Rocky Mountain Council for Latin American Studies, Consortium of Latin American Studies Programs, and Conference on Latin American History.

The center directly encourages research, not only through its research conferences, but also through close coordination with the Latin American collection of Hayden Library and networking with Latin American universities.

For more information, visit the center in SS 213, or call 480/965-5127.

College of Public Programs

Center for Nonprofit Leadership and Management. The Center for Nonprofit Leadership and Management (CNLM) promotes the understanding and improved practice of nonprofit organizations. The center coordinates a nonprofit sector research program, facilitates educational offerings in nonprofit studies, serves as a convener on topical issues, and provides selected technical assistance and information services. The center facilitates relationships among students, faculty, and community organizations across a range of research and outreach activities. In addition, the center convenes leaders and managers from the nonprofit, business, and government sectors on topical issues pertinent to building nonprofit capacity in the region. The center supports the activities of three complementary nonprofit leadership and management education programs: the ASU American Humanics Program (undergraduate certificate), a postbaccalaureate program (graduate certificate), and a noncredit program (extended education certificate). For more information, call 480/965-0607, or access the Web site at www.asu.edu/copp/nonprofit.

Center for Urban Inquiry. The Center for Urban Inquiry focuses on civic involvement. The center's mission is to examine the unique features of the new urban West in the United States, particularly intersections of growth and development with citizen activism and community building. By harnessing the unique resources of the university, the center engages in partnerships with urban citizens, including youths, to increase awareness, promote inclusion, and address needs. Center programs include seed grants to students working in teams in pursuit of urban research and community service; service learning that involves students in community building; technical assistance to neighborhood organizations, schools, and hospitals; and the production of works that appeal broadly to urban audiences, including performances, exhibits, and videos. For more information, call 480/965-9216, or access the center's Web site at www.asu.edu/copp/urban.

Morrison Institute for Public Policy. Established in 1981 by the Morrison family of Gilbert, Arizona, as a unit within the School of Public Affairs, the institute conducts research on public policy matters, informs policy makers and the public about issues of importance, and advises leaders on choices and actions. Morrison Institute offers a variety of services to public and private sector clients and pursues its own research agenda. Services include policy research, program evaluation, and public outreach. The institute's interests, research, and publications span such areas as education, urban growth, human services, workforce development, economic development, and arts and culture.

For more information, call 480/965-4525, access the institute's Web site at www.asu.edu/copp/morrison, or write

MORRISON INSTITUTE FOR PUBLIC POLICY
ARIZONA STATE UNIVERSITY
PO BOX 874405
TEMPE AZ 85287-4405

Herberger College of Fine Arts

Ceramics Research Center. The Ceramics Research Center was established in 2002 as part of the ASU Art Museum. It features selections from the more than 3,000 ceramics works in the collection. Works are shown in open storage, in a gallery with changing exhibitions, and in the Susan Harnly Peterson Ceramics Archive. The center offers an opportunity for hands-on study and enjoyment of one of the outstanding ceramics collections in the country. For more information, call 480/965-2787, or access the museum's Web site at asuartmuseum.asu.edu.

Institute for Studies in the Arts. The Institute for Studies in the Arts (ISA) is an interdisciplinary research center within the Herberger College of Fine Arts (HCFA) at ASU. Its infrastructure has been developed especially to facilitate interdisciplinary digital arts and includes a collaborative relationship with the College of Engineering and Applied Sciences (CEAS). The ISA supports creation, research, development, presentation, and education at the intersection of the arts and technology.

The institute offers courses and training programs in interdisciplinary digital media and performance and in signal processing and programing for the arts. Courses are designed for graduate students exploring both the theory and practice of interdisciplinary collaboration between the arts and technology. Faculty include ISA artists, visiting artists, a faculty appointee jointly serving HCFA and CEAS and affiliated CEAS faculty.

ISA facilities include Digital Arts Ranch—a black-box theater with a matrix of video, audio, and movement sensors; controllable projection screens; surround sound capabilities; shops for design and fabrication; a CAD unit; the Intelligent Stage—a research environment and performance space dedicated to the expansion of studies in interactive performance technologies, including 3-D motion capturing

and 2-D sensing technologies; a state-of-the-art Audio Lab and Digital Imaging Lab: the Technology Development Studio—staffed by an electronics engineer and research assistant from the ASU Department of Electrical Engineering and dedicated to the development and creation of software and hardware tools for creative applications—and the Computing Commons Gallery, a highly adaptable exhibition space for works with a focus on art and technology.

For more information, call 480/965-9438, or access the ISA Web site at isa.asu.edu.

W. P. Carey School of Business

Arizona Real Estate Center. The Arizona Real Estate Center (AREC), established in 1980, serves a multifunction research and educational role to foster better understanding of the real estate sector of the Arizona economy. Housing, commercial real estate, and construction activity data for Arizona and Maricopa County are collected by the center and are utilized for a variety of ongoing projects, including the calculation of affordability indexes and the computation of housing appreciation figures for the metropolitan Phoenix area.

For more information, call 480/965-5440, access the AREC Web site at www.wpcarey.asu.edu/seid/arec, or write

ARIZONA REAL ESTATE CENTER
PO BOX 874011
TEMPE AZ 85287-4011

Bank One Economic Outlook Center. The Bank One Economic Outlook Center (EOC), established in 1985, specializes in economic forecasts for Arizona and the Western states. The center publishes the *Bank One Arizona Blue Chip Economic Forecast* (monthly), *Greater Phoenix Blue Chip Economic Forecast* (quarterly), *Western Blue Chip Economic Forecast* (10 issues per year), and *Blue Chip Job Growth Update* (monthly), an update of current job growth in the United States. The center also publishes *Mexico Consensus Economic Forecast* (quarterly), a forecast and historical data on the Mexican economy.

For more information, call 480/965-5543, access the EOC Web site at www.wpcarey.asu.edu/seid/eoc, or write

BANK ONE ECONOMIC OUTLOOK CENTER
PO BOX 874011
TEMPE AZ 85287-4011

Center for the Advancement of Small Business. The Center for the Advancement of Small Business (CASB) is a 21st-century leader in business education, practice, and research providing high-quality, relevant programs, and information services focused on small business since 1994. The center enables students and existing small and medium-size businesses to participate, contribute, and compete in the global economy.

The center provides students from all disciplines with programs and resources that prepare them for positions of leadership in small and medium-size businesses, and aids small and medium-size businesses in the continuous improvement of their human resources and business practices. CASB also engages in applied research on entrepreneurship and the emerging changes and trends in small business.

For more information, visit CASB in BAC 101, call 480/965-3962, access the CASB Web site at www.wpcarey.asu.edu/seid/casb, or write

CENTER FOR THE ADVANCEMENT
OF SMALL BUSINESS
PO BOX 874406
TEMPE AZ 85287-4406

CAPS Research. CAPS (Center for Advanced Purchasing Studies) Research was established in November 1986 by a national affiliation agreement between the ASU W. P. Carey School of Business and the Institute for Supply Management. It is the first and only program of its kind in the nation and is located in the Arizona State University Research Park, about eight miles south of the ASU Main campus. CAPS Research conducts in-depth research into the problems facing the purchasing profession today and, through its studies, seeks to improve purchasing effectiveness and efficiency and the overall state of purchasing readiness.

For more information, call 480/752-2277, access the Web site at www.capsresearch.org, or write

CAPS RESEARCH
ASU RESEARCH PARK
2055 E CENTENNIAL CIRCLE
PO BOX 22160
TEMPE AZ 85285-2160

Center for Business Research. The Center for Business Research (CBR) has been a consistent source of information on the Arizona and metropolitan Phoenix economies since 1951. Both the business community and the public have access to the economic indicators produced by the ongoing projects of the center, including quarterly net migration estimates for Arizona and Maricopa County. CBR also conducts projects under the sponsorship of private and public agencies. Recent examples include the economic impact of the Fiesta Bowl, a study of seasonal migration to Arizona, and an analysis of the Arizona Lottery. A monthly publication of the center, *AZB/Arizona Business*, plays a major role in disseminating to the public the economic information compiled by the research centers of the Seidman Institute. The staff within the center is available to respond to inquiries and to provide available data.

For more information, call 480/965-3961, access the CBR Web site at www.wpcarey.asu.edu/seid/cbr, or write

CENTER FOR BUSINESS RESEARCH
PO BOX 874011
TEMPE AZ 85287-4011

Center for Services Leadership. Since 1985 the Center for Services Leadership (CSL) has been a leading university-based hub devoted to the study of services marketing and management. The CSL addresses how any company can improve internal service processes and use service and customer satisfaction as a competitive advantage. The center encourages firms to share the best ideas and practices for adaptation across industries. Though grounded in marketing, the center's work is cross-functional, integrating con-

cepts and techniques from marketing, operations, human resources, and management.

The center's areas of expertise include customer retention and loyalty; service quality; service delivery; professional services such as healthcare, accounting, and consulting; customer satisfaction; services strategy; service culture; and service recovery. A leader in the business and academic communities, the Center for Services Leadership work advances the knowledge base in the field and provides applicable frameworks, concepts, and tools.

The center offers its partner firms topflight executive education in services through the annual "Activating Your Firm's Service Culture" symposium, the annual "Services Marketing and Management" institute program, and the annual "Information Technology Services Marketing" course and provides customized executive education programs and research projects tailored to and conducted for charter member firms.

The center also actively supports the W. P. Carey School of Business M.B.A. program that offers a specialization in Services Marketing and Management. This specialization infuses strong company-based experience and encourages summer internships.

For more information, visit the CSL in BAC 440, call 480/965-6201, or write

CENTER FOR SERVICES LEADERSHIP
PO BOX 874106
TEMPE AZ 85287-4106

L. William Seidman Research Institute. The mission of the L. William Seidman Research Institute is to encourage and support applied business research by serving as a public access point to the W. P. Carey School of Business. Specific goals include transferring new knowledge to the public; supporting faculty and student research; encouraging the development of educational programs grounded in business research; and conducting high-quality, applied business research.

The institute encourages research activity by providing research support services to the faculty, staff, and students of the college. These services include facilitating grant preparation and assistance in grant administration. The institute's research centers act as the focal point for involving faculty and students in applied research on important issues identified by the business community.

The institute also serves an important role in the broader educational mission of the W. P. Carey School of Business by disseminating the findings of research conducted by the faculty, students, and research center staff, as well as the results of business research from other sources around the world. This is accomplished through a variety of mechanisms: newsletters and research reports; seminars and conferences; Internet Web pages; media interviews and press releases; and by responding to inquiries from businesses, public officials, and the community. For more information, call 480/965-5362, access the institute's Web site at www.wpcarey.asu.edu/seid, or write

L. WILLIAM SEIDMAN RESEARCH INSTITUTE
PO BOX 874011
TEMPE AZ 85287-4011

Institute for Manufacturing Enterprise Systems. See "Institute for Manufacturing Enterprise Systems," page 33, for information about this joint venture of the W. P. Carey School of Business and the College of Engineering and Applied Sciences.

Vice President for Research and Economic Affairs

Center for Environmental Studies. Established in 1974, the primary mission of the Center for Environmental Studies is to facilitate collaborations among faculty researchers and to aid decision making about environmental issues. Through its collaborations, both with ASU faculty and partners from government, business, and the educational community, the center advances the identification of key local and global environmental issues and collects reliable information to be used by scholars, policy makers, and the general public. For more information, access the CES Web site at ces.asu.edu.

The center is also home to the Central Arizona–Phoenix Long-Term Ecological Research (CAP LTER) project, one of only two urban sites in the NSF-funded LTER network. The CAP LTER project focuses on an arid-land ecosystem profoundly influenced, even defined, by the presence and activities of humans, and involves more than 50 associated faculty from biology, ecology, engineering, geography, geology, sociology, urban planning, and anthropology. For more information, access the CAP LTER Web site at caplter.asu.edu.

The center administers an NSF-funded Integrative Graduate Education and Research Training (IGERT) grant to develop a multidisciplinary program in urban ecology. The program's research component engages students in wide-ranging and multidisciplinary investigations into the ecology of cities, with the CAP LTER project providing the research infrastructure. For more information, access the IGERT Web site at www.asu.edu/ces/igert.htm.

The center also facilitates applied environmental research projects undertaken by the Southwest Center for Environmental Research and Policy (SCERP), a consortium of five U.S. and four Mexican universities. SCERP develops a research agenda for the study of air and water quality, hazardous waste problems, environmental health issues, and growth management questions in the border region. For more information, access the Web site at www.scerp.org.

For more general information about the center, contact the director, Center for Environmental Studies, Tempe Center (located at the southeast corner of University and Mill), 480/965-2975, or access the center's Web site at ces.asu.edu.

ASU East

Sustainable Technologies, Agribusiness, and Resources Center. The focus of the Sustainable Technologies, Agribusiness, and Resources (STAR) Center is to bring together multidisciplinary researchers whose mission is to study sustainable processes and systems, whether natural or human designed, that will be efficient and less consumptive and will promote conservation of the earth. For more information, call 480/727-1249, or access the STAR Center Web site at www.east.asu.edu/research/star.

Student Services

The university is committed to the belief that an education involves more than attending class. While the acquisition of knowledge is a central part of the university experience, learning about others, about independence and leadership, and about living in a complex society are equally important. Student Affairs' services and developmental programs reflect this philosophy.

UNDERGRADUATE ADMISSIONS

For many undergraduates, the first introduction to ASU is through the recruitment and admission programs of Undergraduate Admissions. Personal contact with prospective students through high school and community college visits and through student visits on campus are some of the approaches that provide information about the academic programs and support services available at ASU. A primary goal of Undergraduate Admissions is to identify, inform, motivate, recruit, and enroll students from ethnic groups underrepresented at ASU. Orientation programs ease the students' (and parents') transition to the ASU campus. Undergraduate Admissions also coordinates and supports the ASU Parents Association. For more information about undergraduate admissions, call 480/965-7788, or visit the Web site at www.asu.edu/admissions. For more information about the ASU Parents Association, call 480/965-7625.

STUDENT FINANCIAL ASSISTANCE

Pursuing a college education is an important life decision as well as a major financial investment. The cost of a college education can be a major concern for many students and their families. The ASU Student Financial Assistance Office is committed to helping students, within the limits of available funds, meet college costs. Options range from merit scholarships to financial aid awards–grants, loans, and employment.

Approximately two-thirds of ASU students rely on some form of financial assistance to meet their educational expenses. For more information, call 480/965-3355, or visit the Web site at www.asu.edu/fa.

REGISTRAR

Management of the registration system and maintenance of academic records are the primary responsibilities of the Office of the Registrar. Registration is available through SunDial, the ASU touch-tone registration and fee payment system, or in person at the UASB Registrar site, OASIS General Information site at ASU East, or Registration Services at ASU West. The Student Information System stores academic records and improves the quality of data used in academic advising. The Office of the Registrar coordinates applications for graduation and undergraduate readmission, course changes and scheduling, transcript services, applications for residency, and verification of enrollment. For more information, call 480/965-4747, or visit the Web site at www.asu.edu/registrar.

Veterans Services

This office offers complete educational services for U.S. veterans and their eligible dependents. Counseling about admissions, registration, and veterans benefits is available. Veterans programs provide service by advising all interested veterans and dependents about educational benefits and their optimum use. Students must apply each semester to receive veterans benefits. The program also assists veteran students in obtaining suitable paid tutors, when needed, using their federal benefits. Students receiving veterans educational benefits are not eligible to receive pay for audited courses. Veterans must achieve satisfactory GPAs and semester hours progress toward their academic programs for continued educational benefits, as stated under "Satisfactory Academic Progress," page 79. The university must report this progress to the Department of Veterans Affairs each term. Failure to maintain the minimum GPA established by the university and/or the veteran's college may result in academic probation or disqualification. Although veterans may be eligible for educational benefits while on academic probation, benefits could be affected by a continuing probation status. The Veterans Services Section is located in SSV 148. For more information, call 480/965-7723.

RESIDENTIAL LIFE

Living in one of the ASU residence halls provides students the opportunity to make the most of their college experience. Special residential communities for freshmen, honors students, and students in particular academic areas offer opportunities and activities that enrich the educational experience.

The Freshman Year Experience program (see "Freshman Year Experience," page 41) provides a unique environment of classrooms, live-in tutors, academic advisors, and other support services designed to help freshmen develop skills for success.

Because the demand for campus housing tends to exceed space availability in the residence halls, students are encouraged to apply for housing early (before March 1, 2003) for the best chance to live on campus for fall semester 2003. Housing is not guaranteed. Students must be admitted to ASU before applying for housing. Requests for specially modified rooms for students with disabilities should be noted on the application.

Students will receive residence hall application information with their admission certificate. For more information, visit the Web site at www.asu.edu/reslife, call 480/965-3515, or write to

RESIDENTIAL LIFE
ARIZONA STATE UNIVERSITY
PO BOX 870212
TEMPE AZ 85287-0212

Information about ASU Main optional meal plans may be obtained by calling 480/965-3464 or writing

CAMPUS DINING
ARIZONA STATE UNIVERSITY
PO BOX 871101
TEMPE AZ 85287-1101

ASU East Housing

On-campus housing at ASU East ranges from residence hall rooms for single students to two- to four-bedroom homes for students with families. A distinct freshman residence hall is available for students participating in ASU East's Freshman Year Experience program. For more information, see "Williams Campus Housing and Residential Life," page 591, call 480/727-1700, or access the Web site at www.east.asu.edu/sta/u-life/housing.

STUDENT DEVELOPMENT

ASU students experience success through active involvement in learning and within their community. Student Development enhances student learning through academic support services and programs and encourages student involvement in the community through participation in cocurricular programs, clubs, employment, leadership opportunities, organizations, and service.

Freshman Year Experience

A student's freshman year is a time to learn new ideas, meet new people, and grow as an educated citizen ready to contribute to the community. Freshman Year Experience (FYE) provides a strong foundation for all freshmen. The program fosters the student's academic and personal success through academic support services, faculty interaction, and student involvement with the university community. FYE helps freshmen achieve academic success by coordinating services and programs in settings designed just for first-year students.

FYE features the following:

1. Tutoring support offered at no cost to all freshmen by tutors who live in the residence halls, creating an academic-focused atmosphere. Tutoring centers in the residence halls are open five evenings each week.
2. Academic advising in FYE sites, with academic advisors employing a developmental approach to advising.
3. Computer labs at FYE sites available 24 hours each day. Lab attendants are available during evening hours to provide assistance.
4. A full complement of freshman courses offered at FYE sites, such as freshman-level English, history, mathematics, and UNI 100 Academic Success at the University.
5. Personal development and support programs, which feature presentations from departments focusing on academic expectations, freshman transition, major and career choices, and other related developmental issues.
6. Living and learning communities for freshmen majoring in Architecture and Environmental Design; Business; Education; Engineering and Applied Sciences; Fine Arts; and Public Programs (Broadcasting, Communications, and Journalism).

FYE is open to all freshmen regardless of their place of residence (on or off campus). Halls designated as FYE sites in 2002–2003 are Manzanita, Mariposa, Ocotillo, Palo Verde Complex, Sahuaro, San Pablo, and Sonora. For more information, call 480/965-6947, or access the Web site at www.asu.edu/fye.

Learning Resource Center

The Learning Resource Center (LRC) provides academic support to ASU students through tutoring in most disciplines, Supplemental Instruction™ (SI), peer coaching, academic success workshops, and computer-assisted instruction. The LRC provides scheduled small-group tutoring to ASU students in all grade levels in approximately 100 courses, including math, languages, business, physics, chemistry, and computer science. SI provides students in traditionally challenging courses with the opportunity to meet with an SI leader, a student who has successfully completed the course, for collaborative study-skills sessions that focus on the course material.

The peer coaching program assists ASU students on or at risk of academic probation by providing a structured learning environment that focuses on helping students develop time- and stress-management skills. The academic success workshops offer the opportunity to develop general academic skills and college adjustment/survival skills such as coping with test anxiety, organizational skills, and critical thinking. Computer-assisted instruction is open to all ASU students, staff, and faculty, and addresses learning software applications, Internet use and research, and e-mail.

For more information, call the LRC at 480/965-6254, or access the Web site at www.asu.edu/lrc.

Co-Curricular Programs

Co-Curricular Programs (CPP) encourage involvement by providing opportunities for student and faculty interaction outside the traditional classroom setting. Faculty from a variety of different disciplines collaborate with CCP to offer programs that foster dialogue, lead to the exchange of ideas, and provide out-of-class learning experiences. Each year, CCP sponsors a number of annual events, such as the Classic Film Series, the Student/Faculty Retreat, and the Last Lecture Series. In addition, CCP offers specialty programs geared toward the interests of students in various majors. The CCP Student Advisory Board assists in the development and promotion of programs for the campus community.

For more information on CCP programs or the Student Advisory Board, call 480/965-9600, or access the Web site at www.asu.edu/vpsa/partnerships.

Child and Family Services

Child and Family Services (CFS) provides resource and referral services to students, faculty, and staff. Information about the Campus Children's Center (480/921-2737), Child Development Laboratory (480/965-7267), Child Study Laboratory (480/965-5320), and the College of Education Preschool (480/965-2510) may be obtained at CFS or by calling the programs directly. CFS maintains a child care referral database and coordinates workshops and discussion groups on child and elder care issues. CFS also provides information on child care subsidies, one-time emergency funds, and the location of infant care facilities. Educational materials and listings of additional on- and off-campus activities, programs, and services for children and their families are available at the CFS office, MU 14C.

For more information, call 480/965-9515, or visit the Web site at www.asu.edu/vpsa/family.

For specific information about child care at ASU East, call 480/727-1400; at ASU West, call 602/543-5437.

Sun Devil Involvement Center

Located on the third floor of the Memorial Union, the Sun Devil Involvement Center provides opportunities for student involvement through clubs, coalitions, community service, fraternities and sororities, leadership, programming, and student government. For more information, call 480/965-2255, or visit the Web site at www.asu.edu/mu/sdic.

Student Organization Resource Center

The Student Organization Resource Center provides opportunities for students to get involved with established campus organizations and helps students start new organizations. The center maintains a list of all registered groups, assists with the coordination of major events, and provides a resource desk where students can access information on student activities and leadership opportunities. Members of REACH, a student paraprofessional organization, staff an information desk and are available for outreach sessions. For more information, call 480/965-2255, or visit the Web site at www.asu.edu/clubs.

Student Leadership Programs

Student Leadership Programs (SLP) serve as a resource to students, faculty, and staff interested in individual and student organization leadership development. The SLP office serves a wide variety of leadership development resources, including a library complete with books, articles, and audio and visual materials; leadership seminars; and the Emerging Leaders Program, an eight-week interactive learning experience designed to introduce students to leadership opportunities at ASU. Staff is available for presentations; workshop facilitation; and advising, guidance, and coordination of efforts in leadership development. For more information, call 480/965-2255, or visit the Web site at www.asu.edu/mu/slp.

Leadership Development Classes. A series of leadership development classes are offered to provide students an opportunity through class activities, discussions, and experiences to understand leadership theories and models, to develop leadership skills, and to apply leadership knowledge through service and internships. For more information, access the Web site at www.asu.edu/mu/slp.

Greek Life

Involvement in a fraternity or sorority can be one of the most rewarding aspects of a student's college experience. Fraternities and sororities provide opportunities for leadership development, academic success, campus involvement, community service, social interaction, brotherhood/sisterhood, and intramural participation. Nineteen fraternities are governed by the Interfraternity Council and 11 sororities hold memberships in the Panhellenic Council. The National Panhellenic Council offers six predominantly African American fraternities and sororities for involvement with community service, cultural learning, and a deep sense of tradition. The Hispanic Greek Council, three fraternities and three sororities, offers Hispanic students an opportunity to work on service projects, give back to the Latina/Latino culture, and network within the Hispanic community. In addition to the benefits of lifelong membership, many of the fraternities and sororities have chapter houses or residence hall floors that provide a rewarding living/learning option for their members. For more information, call Greek Life at 480/965-2255, or visit the Web site at www.asu.edu/mu/greeklife.

Community Service Program

The Community Service Program strives to engage students, faculty, and staff in meaningful cocurricular service. Through the integration of academic studies with public service, the campus community is provided with intentional avenues to serve the societal needs of Valley communities. By engaging students in worthwhile service while promoting a lifelong commitment to citizenship and social justice, the Community Service Program not only augments curricular learning but also affords students the key opportunity to turn learning into social action.

For more information, visit the Community Service Program, located at the Sun Devil Involvement Center on the third floor of the Memorial Union, access the Web site at www.asu.edu/mu/community, or call 480/965-2255.

Short-Term Service Projects. The Community Service Program collaborates with Valley-wide agencies and campus entities to provide meaningful episodic service events such as Alternative Spring Break, the Fall Service Plunge, and the Martin Luther King Jr. Day of Service. Current information can be found in updated listings in the office and on the Web site on a weekly basis.

Cocurricular Service Learning Opportunity Clearinghouse. A detailed clearinghouse of information from more than 400 social service and nonprofit agencies across the Valley of the Sun offers information about internships, postgraduation opportunities, and long-term service. Students can use this resource to design a service experience that complements their academic, personal, and professional goals.

Cocurricular Service Learning in the Classroom. The Community Service Program works with faculty and instructors on campus to successfully integrate cocurricular service learning into the classroom setting. Information

regarding courses that integrate cocurricular service learning is available for students, and the resources are open to students as they seek to meet course requirements.

Workshops and Skill-Building. Throughout the year, the Community Service Program offers workshops and presentations around service-related topics to develop strong campus leaders and exceptional civic leaders for the future. Topics may include servant leadership, volunteer management, event planning, and reflection. Workshop series information is available in the office.

Programming and Visual Arts

Programming and Visual Arts (PVA) connects students with opportunities to participate in the visual arts and programming on campus. Programs supported by PVA include a student-run film committee, weekly comedy shows—*Barren Mind Improv* and *Farce Side Comedy Hour*—and an annual silent art auction, which showcases emerging ASU artists.

PVA also maintains the Memorial Union's Art Collection. Located throughout the Memorial Union, this permanent collection is composed of paintings, fine art prints, photographs, sculptures, and tapestries. The collection includes works of faculty, alumni, and students from the ASU School of Art, as well as works of other recognized artists. For more information, call 480/965-2255, or visit the Web site at www.asu.edu/mu/vpa.

MEMORIAL UNION

The Memorial Union (MU) serves as the campus community center for students, faculty, staff, and guests of ASU. Opportunities for student involvement are abundant with programs and services that enhance the ASU experience. Students can connect through activities, clubs, community service, organizations, student government, and the arts.

A variety of student employment opportunities are available at the MU. Some of the student positions include administrative clerk, building manager, computer lab attendant, event assistant, information desk associate, and Sparky's Den associate. The MU offers flexible work schedules to accommodate class schedules. Promotion from within the various work groups is encouraged.

The building's features include an art café; computer lab and workroom; Internet stations; multipurpose meeting rooms; study and group work areas; and Sparky's Den: a recreation center with bowling, billiards, and a video arcade.

Services provided in the MU include banking facilities and several ATMs, a card and gift shop, catering, infant care facilities, film developing, food venues, a general store, a hair salon, Internet stations, a music store, a post office, and a travel agency. For more information about any of these services or to explore employment, call the MU Information Desk at 480/965-5728, or visit the Web site at www.asu.edu/mu.

STUDENT LIFE

Student Life strives to enhance student learning and student achievement by fostering a positive, inclusive campus environment; providing services to meet the needs of a diverse student body; and empowering students to advocate for their needs and interests by developing leadership and life skills. Opportunities for leadership and community involvement help students prepare for their roles as responsible citizens. Students learn and sharpen their leadership skills through their involvement in student activities, workshops, community service, and student government. For more information, access the Web site at www. asu.edu/studentlife.

Adult Re-Entry Program. The Adult Re-Entry Program offers a variety of services to assist students age 25 and older in reaching their academic goals, such as preenrollment assistance, orientation, peer mentoring, resource and referral information, support groups, and scholarships. The Adult Re-Entry Center in MU 14 provides a welcoming environment for individual or group study. For more information, call 480/965-2252, or visit the Web site at www.asu.edu/studentlife/reentry.

Associated Students of Arizona State University (ASASU). ASASU is the student government of the university and the official representative of the student body in matters of university governance and budgeting. Through paid, volunteer, or elected positions, students can become active, contributing members of ASASU. Students can select from a wide variety of activities and services, including College Councils, Student Senate, Student Legal Assistance, Safety Escort Service, Co-op Bike Repair Service, Environmental Issues, Internships, and Homecoming and spring event committees. For more information, call 480/965-3161, or visit the Web site at www.asu.edu/asasu.

Danforth Chapel. Built in 1948 as a multifaith chapel and retreat for the university community to use for prayer, meditation, weddings, memorial services, baptisms, Bible study groups, and worship, Danforth Chapel continues to provide opportunities for those functions. The chapel is located on Cady Mall between the Memorial Union and Hayden Library. For more information, call 480/965-3570, or visit the Web site at www.asu.edu/studentlife/danforth.

Disability Resources for Students. Disability Resources for Students (DRS) facilitates equal access to educational and cocurricular programs, campus activities, career exploration, and employment opportunities for qualified ASU students with disabilities, ensuring they are provided with mandated reasonable and effective accommodations. A U.S. Department of Education TRIO Student Support Services Grant also allows DRS to incorporate a unique academic enhancement model into the disability support services program for 270 selected students with disabilities who meet TRIO eligibility requirements. Disability documentation is required and information regarding disabilities is confidential. DRS is located on the first floor of Matthews Center. For more information, call 480/965-1234 (voice) or 480/965-9000 (TTY), fax 480/965-0441, or visit the Web site at www.asu.edu/drs.

Educational Opportunity Center. This community outreach service focuses on first-generation, low-income individuals. The center offers vocational testing and guidance as well as assistance in application for admission,

scholarships, and financial assistance at a postsecondary institution suited to a particular individual's needs. Services are free, partially funded by the U.S. Department of Education. The center has a main office at 1000 East Apache Blvd., Suite 118, in Tempe and satellite offices around Maricopa County. For more information, call 480/894-8451, or visit the Web site at www.asu.edu/studentlife/eoc.

International Student Office. The International Student Office (ISO) is responsible for the administration and coordination of the ASU international student program. The ISO's principal responsibilities and services include administrative support, counseling, initial orientation, visa administration, and campus and community activities which promote international awareness and enrich the educational experiences of students. The ISO is located in SSV 265. For more information, call 480/965-7451, or visit the Web site at www.asu.edu/studentlife/iso.

Multicultural Student Center. The Multicultural Student Center (MSC) supports the transition, retention, and graduation of multicultural students by engaging them in various support services and programs within a culturally affirming environment. University success courses, one-on-one guidance, consultation, and referral are offered to address the academic, personal, and cultural needs of multicultural students. The Hispanic Mother/Daughter Program and the Native American Achievement Program strive to increase the persistence and graduation rates of students within the Hispanic and American Indian communities. Summer opportunities, such as the Academic Program Promoting Leadership Enrichment and Service (APPLES) and the Native American Summer Institute, assist students with the transition and adjustment to university life. The Asian Lead Academy and Black Youth Recognition Conference provide outreach to the community in an effort to help junior high and high school students develop academically, personally, and professionally. The student coalitions, as well as other multicultural student organizations, provide cultural programming and academic support to African American, American Indian, Asian, Asian Pacific American, Hispanic/Latino, gay, lesbian, bisexual, transgendered, and women student communities.

The MSC office is located in SSV 394. For more information, call 480/965-6060, or visit the Web site at www.asu.edu/studentlife/msc.

Student Advocacy and Assistance. Student Advocacy and Assistance guides students in resolving educational, personal, and other campus impediments toward successful completion of their academic goals. Student Advocacy and Assistance links students with appropriate university and community resources, agencies, and individuals; collaborates with faculty and staff in the best interest of the students; and follows through to bring efficient closure to student concerns. Student Advocacy and Assistance is located in Student Life. SSV 263. For more information, call 480/965-6547, or visit the Web site at www.asu.edu/studentlife/advocacy.

Student Judicial Affairs. Student Judicial Affairs oversees the review of conduct issues, involving both students and student organizations, as set forth by the Arizona Board of Regents *Student Code of Conduct.* This code is designed to balance the rights and needs of the individual with the responsibility of the individual to meet the needs of the community. Outreach and education are provided to students, faculty, and staff in areas such as student rights and responsibilities, campus and community standards, and university policies. Referrals for student conduct issues are accepted from faculty, staff, students, or observers. The Student Judicial Affairs designee reviews all referrals. Students who are found to have violated the *Student Code of Conduct* are subject to appropriate sanctions for student misconduct. Student Judicial Affairs is located in the Office of Student Life, SSV 263. For more information, call 480/965-6547, or visit the Web site at www.asu.edu/studentlife/judicial.

Student Legal Assistance. Student Legal Assistance counsels and advises students regarding their legal rights and responsibilities. This service is offered free of charge to currently enrolled ASU students. Notary services are also available. Typical consultation topics include auto-related issues, criminal matters, debt, domestic relations, wills, towing and traffic violations, landlord/tenant issues, and miscellaneous issues. Student Legal Assistance is located in the Memorial Union, Room 329. For more information, call 480/965-6307, or visit the Web site at www.asu.edu/studentlife/legal.

Upward Bound Program. Upward Bound is a college preparatory program designed to increase the academic skills and motivational levels of participants (low income, potential first-generation college students) to encourage their completion of high school, as well as enrollment in and graduation from postsecondary institutions. The year-round program includes summer residential components funded by the U.S. Department of Education. The Upward Bound Program office is located in SSV 276. For more information, call 480/965-6483, or visit the Web site at www.asu.edu/studentlife/ub.

Veterans Upward Bound. This program is designed for low-income, first-generation veterans who wish to pursue postsecondary education but whose life experiences did not adequately prepare them for the educational requirements of today. College preparation instruction in writing, reading, mathematics, general science, study skills, and computer literacy are provided to suit each veteran's individual needs. Veterans lacking a high school diploma can also prepare for obtaining their General Education Development (GED) while participating in Veterans Upward Bound. Interest inventory assessments and career advising are also available. All services are free, funded by the U.S. Department of Education. The Veterans Upward Bound office is located at 1000 East Apache Blvd., Suite 106, in Tempe. For more information, call 480/965-3944, or visit the Web site at www.asu.edu/studentlife/vub.

COUNSELING AND CONSULTATION

Counseling and Consultation offers a range of confidential, short-term counseling and psychological services for ASU students. Staff members are available to discuss any important personal concern a student may be facing, partic-

ularly issues related to the adjustment to university life. Professional help in the following areas is available: psychological issues, personal concerns, interpersonal issues, and crisis intervention. Counseling and Consultation staff members have a strong commitment to meeting the needs of students of color and nontraditional students. The Counseling Center staff consists of both male and female mental health professionals, including psychologists, counselors, psychiatric providers, and social workers. Students are initially seen by an individual counselor for assessment. Continuing services in the form of individual, couples, or group meetings are then offered on a short-term basis depending upon the student's need and staff availability.

Counseling and Consultation offers counseling groups on topics such as women's and men's issues, eating disorders, substance abuse, stress management, multicultural/diversity issues, and interpersonal relationships. Other services available to the ASU community include consultation and outreach programming. Career interest testing is offered to both students and non-students.

Crisis intervention for students experiencing mental health emergencies is available. During normal working hours, students may call and request same day appointments to discuss urgent situations. After office hours, EMPACT Suicide Prevention Center, Inc., is available for crisis consultation by calling 480/921-1006.

Counseling and Consultation provides training for psychologists through its internship training program for doctoral trainees in clinical and counseling psychology. This program is accredited by the American Psychological Association. In addition, counseling practicum training is provided to master's and doctoral students enrolled in ASU graduate programs.

Confidentiality in counseling is of utmost importance. Information about a student is not released without that student's written permission, except in the case of imminent danger to self or others, child/adult abuse, court order, or where otherwise required by law. Notations of counseling are not a part of a student's academic record.

ASU students may schedule an initial counseling appointment either by phone (480/965-6146 or 480/965-4726) or in person. There is no cost for the initial personal consultation. Students may receive up to three counseling sessions for no fee. Fees are charged for additional sessions, career testing, and psychiatric services. Fee reductions and waivers are available. Office hours are 8 A.M. to 5 P.M. Monday through Friday. Counseling and Consultation is located at two sites on campus, SSV 334 and SHW A168. Additional information is available on the Counseling and Consultation Web site at www.asu.edu/vpsa/counseling.

For information about counseling services at ASU East, call 480/727-1255; at ASU West, call 602/543-8124.

Testing Support Services. Testing Support Services (TSS) offers courses to help students prepare for the following graduate entrance exams: the Graduate Record Exam (GRE), the Graduate Management Admissions Test (GMAT), and the Law School Admission Test (LSAT). Students may obtain information about test preparation workshops by phone (480/965-6777), in person, or from the TSS Web site at www.asu.edu/vpsa/tss. The TSS office is located in SSV 382 and is open 9 A.M. to 6 P.M. Monday through Thursday and 9 A.M. to 5 P.M. Friday.

STUDENT HEALTH AND WELLNESS CENTER

Services. The Student Health and Wellness Center offers fully accredited outpatient health care to all students enrolled at ASU. The professional staff, consisting of physicians, nurse practitioners, registered nurses, dietitians, and health educators, has special interest and training in college health care. Consultant physicians in dermatology, orthopedics, and other specialties are on-site and are available by referral from a member of the Student Health and Wellness Center professional staff.

Additional services include comprehensive women's health care, immunizations, a travel clinic, and an allergy clinic for students needing periodic injections. The pharmacy at the Student Health and Wellness Center provides many prescription and over-the-counter medications at reasonable costs. Radiology and laboratory services are also available.

A notarized parental "consent to treat" form is required before a student under 18 can receive treatment at the Student Health and Wellness Center. A copy of the parental consent form may be obtained from the Student Health and Wellness Center's Web site at www.asu.edu/health.

For information about Student Health Services at ASU East, call 602/222-6568.

Health Education. The Student Health and Wellness Center provides educational programs on nutrition, stress management, alcohol and other drug use and abuse, sexuality, and sexually transmitted diseases, including the Human Immunodeficiency Virus (HIV). Peer education programs provide students an opportunity to gain experience in health education and to enhance presentation skills. Services and educational brochures are available at the Student Health and Wellness Center and at other locations on campus.

Hours. Students are strongly encouraged to schedule appointments to minimize waiting time and to allow students the opportunity to establish a relationship with one clinician. Appointments are available by calling 480/965-3349. Patients with urgent health care problems may be seen at the Student Health and Wellness Center's Acute Care Clinic on a same-day basis. The clinic is open weekdays from 9 A.M. to 5:30 P.M.

Fees. Full-time students are not charged for primary care visits at the Student Health and Wellness Center. There are charges for consultant visits, radiological procedures, laboratory procedures, medications, certain special or surgical procedures, and certain health education services. Patients receiving medical treatment off campus, such as consultations, emergency care, and hospitalization, are responsible for any resulting charges.

Insurance. *While the Student Health and Wellness Center provides comprehensive ambulatory care, it is not a substitute for health insurance.* Medical insurance coverage is strongly recommended for all students and is required for international students. Eligible students and dependents may enroll in health insurance coverage arranged by ASU.

Dependents must complete an application and may require underwriting approval by the insurance carrier. The coverage assists students in paying for laboratory and radiology procedures, off-campus consultations, hospitalization, surgery, and emergency and after-hours care. Students may purchase health insurance through SunDial, the ASU touch-tone telephone registration system, or at any registrar site. For more information, call the Student Health and Wellness Center's insurance office at 480/965-2411.

Bridge Discount Program. This discount program reduces the total health care costs for certain services rendered at the Student Health and Wellness Center. Students enrolled in this program are charged co-payments for specialist visits, basic x-rays, and laboratory tests. More information is available on the Web site at www.asu.edu/health, or by calling 480/965-2411.

STUDENT MEDIA

Student Media offers the largest combined news products for the university, produced completely by student employees and volunteers.

The *State Press* campus newspaper, one of the largest daily newspapers in Arizona, is published five days a week by ASU students who make editorial decisions with the support of experienced university staff. It is distributed free of charge on the main campus, at ASU West and ASU East, and in downtown Tempe.

The ASU Web Devil is Student Media's online news center and community guide, with local news and listings of restaurants, hotels, apartments, transportation, campus maps, and interesting cultural and entertainment opportunities within the community surrounding ASU. Access the Web site at www.asuwebdevil.com.

Sun Devil Television (SDTV) broadcasts on Channel 2 to ASU residence halls, Greek housing, the Towers apartment building, the Memorial Union, the Student Recreation Center, and various departments that utilize the university cable system. Student employees and volunteers produce several news and entertainment programs a day. Music videos and premium movies are also aired nightly.

Hayden's Ferry Review is published twice a year. This award-winning national literary and art magazine brings together in one publication the finest contemporary literature and art. It features established and emerging writers and artists from across the country. Access the Web site at www.haydensferryreview.org.

All of these products provide students with on-the-job training in newswriting, photography, editing, broadcast reporting and production, on-line reporting, design, and advertising. They also address the many informational needs of the university community, not only through stories about the campus and local and national events, but through paid classified and display advertisements by area merchants; campus groups; and university faculty, students, and staff.

Student Media provides complete prepress services, including graphics and design, to the university community. For more information, call 480/965-7572.

CAREER SERVICES

Career Services provides advising for individual career planning concerns and offers information about numerous career fields and permanent positions. Students are encouraged to use the Career Education Center throughout their academic careers. A computerized career planning system assists students in evaluating and making career choices. Career Services offers workshops and classroom presentations on career planning, interviewing skills, résumé writing, and a myriad of additional career-related topics. Advisors are available to assist students on an individual basis in career planning and employment.

Hundreds of employers from business, industry, government, social service agencies, health organizations, and educational institutions come to ASU to interview students seeking permanent positions and career-related summer, intern, and co-op employment. Career Services facilitates these interviews for both employers and students to meet each group's needs and interests. In addition, career and job fairs are scheduled throughout the year.

The agency's services support students' career development throughout their college experience, and Career Services encourages participation in programs as early as the student's freshman year. The ASU Main campus office is located in SSV 329. For more information, call 480/965-2350.

ASU East students may contact the Career Preparation Center at 480/727-1411. The office is located on the lower level of the Academic Center Building.

STUDENT RECREATION COMPLEX AND RECREATIONAL SPORTS

The Student Recreation Complex (SRC) is the place to become involved and meet people with similar interests in an active lifestyle. Opportunities for involvement are plentiful, as Student Affairs' Recreational Sports is one of the largest programs of its kind in the country, serving more than 27,000 students annually. Programs offered include intramural sports, informal recreation, fitness, aquatic and sports skills classes, outdoor recreation, children and family programs, sport clubs, adaptive recreation for individuals with long- or short-term disabilities, a wellness program, safety education, experiential learning, and special events.

A variety of student employment opportunities, with flexible work schedules, are available at the SRC. Student positions include: facility managers, lifeguards, weight room supervisors, equipment room attendants, administrative assistants, personal trainers, group fitness instructors, outdoor trip leaders, Web developers, graphic designers, and access control monitors.

Located on the south end of Palm Walk, the SRC is one of the finest student recreation facilities in the United States. Features include a variety of resistance and cardiorespiratory equipment, a 9,000 square-foot weight room, three large gymnasiums, 14 indoor racquetball courts, one squash court, martial arts, aerobics and sport club rooms, outdoor equipment rental, and adaptive weight equipment. Outdoor facilities include a lighted, multiuse complex with four fields, a .43-mile perimeter walking and jogging path, four sand volleyball courts, 14 tennis courts, and a 70-meter

swimming pool with two movable bulkheads that allow the pool to be divided into three parts for simultaneous multiuse programming.

For more information, call 480/965-8900, stop by for a tour, or visit the Web site at www.asu.edu/src.

ARIZONA PREVENTION RESOURCE CENTER

The Arizona Prevention Resource Center (APRC) is a partnership among ASU, the Governor's Division of Drug Policy, the Arizona Department of Education, the Arizona Department of Health Services, and the Arizona Department of Juvenile Correction.

The APRC serves as a centralized source for individuals, schools, and communities throughout Arizona to support, enhance, and initiate programs focused on the prevention of the use of tobacco products and the use and abuse of alcohol and other drugs; gangs and violence; and other areas, such as health promotion, domestic violence, and dropout prevention. The APRC operates in the following program areas:

1. Clearinghouse—provides accurate, timely, and personalized prevention information and materials through an in-house library, access to national sources, and linkages between prevention programs in Arizona.
2. Training and Technical Assistance—provides high quality, responsive training and technical assistance for organizations and individuals undertaking prevention programs in local communities and schools; focus is on research-based (promising and proven) practices.
3. Evaluation and Accountability—coordinates and provides leadership for a statewide evaluation strategy for accountability in alcohol and other drug prevention and treatment programs; produces an annual inventory of substance abuse and gang prevention and treatment programs in Arizona; designs and conducts contracted evaluations of community-based prevention programs; and promotes accountability in all aspects of APRC operations.
4. Strategic Initiatives and Planning—promotes effective collaboration between prevention and treatment program leadership; broadens the funding base for prevention programs; researches and develops strategies for comprehensive statewide systems and accountability.

For more information, call 480/727-2772 or toll-free at 1-800-432-2772, visit the Web site at www.azprevention.org, or write

ARIZONA PREVENTION RESOURCE CENTER
ARIZONA STATE UNIVERSITY
PO BOX 872208
TEMPE AZ 85287-2208

Information can also be obtained by fax, at 480/727-5400, or at 542 East Monroe Street in Phoenix, Building D.

The Arizona Drug and Gang Prevention Resource Center (ADGPRC), located with the APRC, provides similar information and technical assistance for communities to help them focus strategically on drug and gang prevention issues.

The ADGPRC can be contacted at 480/727-5015 or toll-free at 1-888-432-2347, or visit the Web site at www.asu.edu/adgprc.

INTERCOLLEGIATE ATHLETICS

The university is a member of the National Collegiate Athletic Association, Division I, and the Pacific-10 Conference. The university has 22 varsity intercollegiate sports and more than 500 participants. Intercollegiate athletics at ASU are governed by a board of faculty, students, and staff under the regulations of the Arizona Board of Regents, the NCAA, the Pacific-10 Conference, and the university. Policies are administered by Intercollegiate Athletics. All athletic grants-in-aid and scholarships are administered in coordination with Intercollegiate Athletics.

RELIGIOUS ACTIVITIES

Various religious centers representing most major religious groups are available near ASU Main and provide students with opportunities to participate in programs of religious worship and to meet other students through social activities. For more information, call the Campus Interfaith Council at Danforth Chapel, 480/965-3570.

OTHER OPPORTUNITIES FOR STUDENT INVOLVEMENT

Communication Activities: Performances. Participants write, compile, and perform scripts for presentation in diverse on- and off-campus settings through the Hugh Downs School of Human Communication. For more information, call 480/965-5061.

Dance. The Department of Dance presents 12 to 14 faculty- and/or student-directed concerts a year. Interested students should attend open auditions, held at the start of each semester. Dance Arizona Repertory Theatre (DART) provides preprofessional experience in a contemporary modern dance model. Opportunities include working with community programs and nationally recognized artists, performing, and learning teaching methodologies. For more information, call 480/965-1891.

Forensics. The ASU Forensic squad, associated with Pi Kappa Delta national forensic honorary association, travels to trophy tournaments across the country. For more information, call the director of Forensics at 480/965-5095.

Music. Performing organizations with the School of Music provide opportunities for involvement and credit, including bands, Lyric Opera Theatre, symphony orchestra, and university choral organizations. For more information, call 480/965-3371.

Theatre. The University Theatre presents four to six faculty-directed productions and 10 to 15 student-directed productions a year. Audition information is available from the Department of Theatre, GHALL 232, 480/965-5337.

Fees, Deposits, and Other Charges

The Arizona Board of Regents reserves the right to change fees and charges without notice. The latest *Schedule of Classes* usually includes up-to-date amounts. The following fees apply to credit and noncredit (audit) registrations.

DEFINITIONS

Resident tuition refers to the charge assessed to all resident students who register for classes at ASU. *Nonresident tuition* refers to the charge assessed to nonresident students, as established in Arizona Board of Regents' Policy 4-102.

ACADEMIC YEAR TUITION

The resident and nonresident tuition for fall and spring semesters is shown in the "2002–2003 Resident and Nonresident Tuition" table, on this page. The amounts listed are per semester hour each academic term. For more information on classification for fee status, see "Residency Classification Policies and Procedures," page 51.

Students registered for seven or more resident hours or 12 or more nonresident hours are considered full-time for tuition payment purposes. See "Enrollment Verification Guidelines," page 73.

Note: The rate for one hour is charged if the student is registered for only a zero-hour class.

Graduate College Differential Fees. Certain graduate programs assess an additional differential fee. These fees differ according to college and/or program. Contact the program advisor for details on these fees.

Off-Campus and Independent Learning Courses. For information on fees, see "Distance Learning and Technology," page 676.

Summer Sessions Fees. The 2003 registration fee per semester hour is $131, except for law students. The registration fee per semester hour for law students is $301. For more information, see "Summer Sessions," page 504, and the *Summer Sessions Bulletin.*

OTHER FEES, DEPOSITS, AND CHARGES

Special Class Fees and Deposits. Certain university classes require payment of fees or deposits for materials, breakage, and rentals. These fees and deposits are listed in the *Schedule of Classes* for each semester.

Student Recreation Complex Fee. All students (except university employees) who take at least one class at ASU Main must pay a mandatory Student Recreation Complex fee. Students enrolled for seven or more hours are charged $25 per semester. Students registered for fewer than seven hours pay $12 per semester, and summer students pay $12 per session. See the latest *Schedule of Classes* for more information.

2002–2003 Resident and Nonresident Tuition

Hours	Resident*	Nonresident*
1	$ 131.00	$ 460.00
2	262.00	920.00
3	393.00	1,380.00
4	524.00	1,840.00
5	655.00	2,300.00
6	786.00	2,760.00
7	1,254.00	3,220.00
8	1,254.00	3,680.00
9	1,254.00	4,140.00
10	1,254.00	4,600.00
11	1,254.00	5,060.00
12 or more	1,254.00	5,514.00

* Tuition is subject to change. In addition to tuition, students are charged other fees (e.g., the Student Recreation Complex fee and financial aid trust fee).

Financial Aid Trust Fee. All students must pay a financial aid trust fee. Students enrolled for seven or more hours are charged no more than 1 percent of the current tuition. The fee for students enrolled six or fewer hours is half that charged students enrolled for seven or more hours. The total summer sessions fee does not exceed the amount for a student enrolled for seven or more hours. Fees collected from students are matched by the State of Arizona and used to create the Arizona Student Financial Aid Trust Fund, from which student grants are awarded under the usual financial aid eligibility criteria used by the ASU Student Financial Assistance office.

Arizona Students' Association (ASA) Fee. The ASA is a nonprofit lobbying organization that represents Arizona's public university students to the Arizona Board of Regents, State Legislature, and U.S. Congress. In 1997, students at the state universities voted to change the mechanism for funding the ASA. A $1 fee is charged to each student every semester. Any refunds for this fee are provided through the ASA Central Office.

Late Registration. The fee assessed for registrations on or after the first day of each session is $35. This fee is also assessed on registration payments received after the fee payment deadline but processed before the class enrollment purge.

Admission Application. The nonrefundable fee for undergraduate admission or readmission applications to a degree program is $50. The nonrefundable fee for graduate admission applications to a degree program is $45. The nonrefundable fee for graduate nondegree applications or applica-

tions for readmission to a degree program after a lapse in enrollment is $15.

Transcripts. The Office of the Registrar releases official transcripts *only upon the written request of the student.* The request must include the following information about the student:

1. name;
2. former name(s);
3. date of birth;
4. first and last dates of attendance;
5. return address;
6. phone number;
7. specific mailing address for each transcript ordered;
8. ASU ID number; and
9. Social Security Number (SSN).

Students must also select one of the following options to be displayed on the transcript (if the student attended ASU before 1980, these ID/SSN options are not available):

1. ASU ID only;
2. SSN only;
3. both ASU ID and SSN displayed; or
4. neither ASU ID or SSN displayed.

The Request for Official Transcript form is available online at www.asu.edu/registrar/forms.

The Office of the Registrar does not issue a transcript if the student has a financial records hold. The student must supply a specific address if the transcript is to be mailed.

The fee for an official transcript is $6 per copy. "Rush" transcripts (requested to be printed and picked up on the same day) will cost $5 in addition to the total cost of the transcripts ordered. Special delivery requests via Federal Express or U.S. Express Mail, instead of regular mail, will cost $17.50 per delivery address, in the 48 contiguous U.S. states, in addition to the cost of the transcript(s). The additional cost of special express deliveries to addresses outside the contiguous states (e.g., Hawaii, Alaska, and other countries) varies. Students are billed the initial $17.50 as part of this credit card transaction and sent a bill for the remainder. Fees are subject to change without notice.

Unofficial transcripts may be requested in person at the Office of the Registrar, any registrar site, or by mail or fax (480/965-2295) if a signed release is enclosed. There is no charge for an unofficial transcript. Also, students may view and print their own unofficial transcripts via the Web using ASU Interactive at www.asu.edu/registrar.

Note: Pre-1980 records are not available via the Web.

All in-person transcript requests require presentation of photo identification. Requests are not accepted from third parties without a written release from the student. For information on parental access to records, see "Access to Records," page 80.

Copies of Education Records Other Than ASU Transcripts. For fewer than six pages, there is no charge. For six to 10 pages, the total charge is $2. For 11 to 15 pages, the total charge is $3. Copies of additional pages cost $1 for every five pages copied.

Comprehensive Examination. This fee is paid by all students seeking to establish credit by examination and is $50 per semester hour.

Private Music Instruction. The fee for one-half hour of instruction weekly is $60. The fee for one hour of instruction weekly is $100.

Musical Instrument Rental Charge. The charge for use of university-owned musical instruments is $25 per semester. Consult the School of Music for specific information.

Binding and Microfilm Fees. The binding fee for a thesis or dissertation is $17 per copy. This fee is subject to change. Additional charges may be required depending on the size and nature of the document. The dissertation microfilming fee is $55 and is subject to change.

Sun Card/ID Card. The replacement fee is $15.

Parking Decals. A parking decal must be purchased, in person or by using the SunDial touch-tone telephone system, 480/350-1500, for motor vehicles parked on campus except in areas where metered parking or visitor lots are available. Photo identification is required. Annual decals for controlled access parking start at $50. Decals are sold on a first-come, first-served basis. For more decal sales information, call 480/965-6124, or visit the Web site at www.asu.edu/dps/pts.

Each vehicle registered at ASU Parking and Transit Services must comply with Arizona emission standards (A.R.S. § 15-1627G) during the entire registration period. The fee for this emission inspection is $25 per vehicle.

Everyone is encouraged to support travel reduction measures by carpooling, bicycling, walking, or using mass transit or the university shuttle bus whenever possible.

Parking Violations. Due to a high demand for parking, regulations are strictly enforced. Fines range from $10 to $100. Appeals to parking citations may be filed within 14 calendar days to Parking and Transit Services and, after payment, may be further appealed to the Parking Citation Appeals Board. Unpaid parking citations are delinquent financial obligations subject to the provisions of the "Delinquent Financial Obligations," page 51. The vehicle of any person owing three or more unpaid parking citations or $100 in unpaid parking citations is subject to impoundment. An $85 minimum fee is assessed if impoundment is required. For more information, call 480/965-4527.

Returned Checks. Checks returned by a bank are assessed a $15 service charge with repayment needed within five business days of notification. A second $12 service charge is made if the returned check is not repaid within this five-day period. Repayment of a returned check must typically be in cash.

ASU may have arrangements with its bank to redeposit automatically for a second time checks for which there are insufficient funds. No service charge is assessed by ASU until a check is returned to ASU; however, the payer may be assessed a service charge by the payer's financial institution.

Students paying fees with a check that is subsequently not honored by a financial institution are subject to involuntary withdrawal from the university if repayment is not

made. All students involuntarily withdrawn are charged according to the standard refund schedule as of the involuntary withdrawal date, as determined by the university.

On-Campus Housing. The cost of ASU Main housing varies. In 2002–2003 the typical cost for graduate students was $3,400 per academic year. Meal plans are purchased separately. For more information, see "Residential Life," page 40, or call 480/965-3515.

TRANSPORTATION

To reduce air pollution and traffic congestion, students are encouraged to travel to and from campus by means other than automobile and to reduce transportation needs through careful class scheduling. Nearby on-campus parking is limited and tightly controlled.

Alternative transportation modes are used by thousands of ASU students. ASU is served by a regional transit service; monthly and reduced-fare semester passes are available on campus. In addition, an inexpensive express shuttle runs between ASU Main in Tempe and ASU West in northwest Phoenix; another shuttle runs among ASU Main, Mesa Community College, and ASU East in Mesa; and a Free Local Area Shuttle (FLASH) is available around the periphery of ASU Main. A free Neighborhood Flash also is available for the ASU community connecting the Escalante and University Heights neighborhoods with the Riverside/Sunset and Lindon Park neighborhoods through downtown Tempe and ASU Main.

Bicycle ridership at ASU is estimated to be more than 15,000 students daily. Ample racks in many locations enable the parking and securing of bicycles. Bicycle use is restricted only in those areas of campus where pedestrian traffic is sufficiently heavy to make such use a hazard. The Bike Co-op Repair Service provides assistance with bicycle maintenance.

For more information on commute alternatives, call 480/965-1072.

PAYMENT METHODS AND DEADLINES

SunDial. The SunDial system, at 480/350-1500, allows students to register for classes, drop and add classes, and make fee payment from any touch-tone phone. Students paying fees with available financial aid, debit cards, Visa, MasterCard, or Discover are encouraged to use the SunDial system. Refer to the *Schedule of Classes* for more information.

Debit/Credit Cards. ASU accepts debit cards, Visa, MasterCard, and Discover. Debit/credit card payments through SunDial are processed online with the bank. See the *Schedule of Classes* for information about using debit/credit cards by mail or campus payment boxes.

Checks. Checks payable for the exact amount of charges and without a restrictive endorsement are generally acceptable, except for students on check-use suspension due to a previously returned check.

Veterans Deferred Payment. The Veterans Readjustment Assistance Act allows veterans to apply for deferred payment of fees, books, materials, and supplies required for courses. To assist eligible students, a Veteran Promissory Note may be issued deferring payment during their first semester of benefits. Visit the Veterans Services section at SSV 148, or call 480/965-7723 for information on meeting the requirements. ASU may deny this privilege if the student has had previous delinquent obligations.

Payment Deadlines. Fees must be paid by the deadline dates and times indicated or the registration is voided. A fee payment deadline is printed on all Schedule/Billing Statements, which may be obtained at the UASB Registrar site or via the Web at www.asu.edu/interactive, and in the *Schedule of Classes.*

REFUNDS

Academic Year Resident and Nonresident Tuition. Students withdrawing from school or individual classes receive a refund as described in the "Fall and Spring Withdrawal Refunds" table:

Fall and Spring Withdrawal Refunds

Withdrawal Date	Refund
Before first day of the semester	100%*
One through 7 calendar days	80%
8 through 14 calendar days	60%
15 through 21 calendar days	40%
22 through 28 calendar days	20%
After the 28th calendar day	No refund

* A $35 processing fee is subtracted per session.

The university provides a prorated refund for first-time students receiving financial aid; therefore, the refund schedule is the minimum amount refundable to these students.

Withdrawal occurs on the calendar day that withdrawal is requested, either in person at a registrar site or by phone using SunDial. Students withdrawing for medical or other extenuating circumstances must contact their college for refunds that may be available under these circumstances.

Summer Sessions Fees. Students withdrawing from any summer session or individual classes receive a refund as described in the "Summer Sessions Withdrawal Refunds" table. *Refunds are based on the session days and not the class meeting dates for any particular class.*

Summer Sessions Withdrawal Refunds

Withdrawal Date	Refund
Before first day of session	100%*
First and second days of session	80%
Third day of session	60%
Fourth day of session	40%
Fifth day of session	20%
After fifth day of session	No refund

* A $35 processing fee is subtracted per session.

Special Class Fees and Deposits. After the first week of classes, refunds, if any, are determined only by the department or school offering the course. Refund determination is

based on withdrawal date, type of activity, and costs already assessed by the department or school.

Private Music Instruction. If a student must drop a music course because of illness or other emergency beyond the student's control, not more than half of the instruction charge may be refunded, as determined by the School of Music.

Late Registration. This fee is not refundable.

Student Recreation Complex Fee. This fee is refundable only upon complete withdrawal, in percentage increments per the refund schedule.

Financial Aid Trust Fee. This fee is not refundable.

Official Transcripts. Overpayments by mail of $5 or less are refunded only by specific request.

Graduation Fee. Overpayments by mail of $5 or less are refunded only by specific request.

Residence Halls. Refunds to students departing from ASU Main residence halls before the end of the academic year are computed on the following basis.

Charges and Deposits. Housing payments and deposits are refunded as prescribed by the Residential Life License Agreement that students sign when they apply for residence hall accommodations. Students should refer to the Residential Life Schedule of Charges and Deadlines for specific information on refunds.

Other University Charges. Other university charges are normally not refundable, except for individual circumstances.

Payment of Refunds. Refunds require student identification and are made payable only to the student for the net amounts due the university. When the last day of a refund period falls on a weekend or holiday, a withdrawal form must be submitted to one of the registrar sites during operating hours on the workday preceding the weekend or holiday. Refunds are normally paid by check, payable to the student, and are mailed to the student's local address.

Parking Decal Refunds. Prorated refunds are available through the last business day in April.

Forfeiture of Refunds. Refunds are subject to forfeiture unless obtained within 90 days of the last class day of the semester for which the fees were originally paid.

DELINQUENT FINANCIAL OBLIGATIONS

Arizona Board of Regents' Policy 4-103B, which applies to ASU, states the following:

1. Each university shall establish procedures to collect outstanding obligations owed by students and former students.
2. Each university shall maintain a system to record all delinquent financial obligations owed to that university by students and former students.
3. Students with delinquent obligations shall not be allowed to register for classes, purchase parking decals, receive cash refunds, or obtain transcripts, diplomas, or certificates of program completion. The university may allow students to register for classes, obtain transcripts, diplomas, or certificates of program completion if the delinquent obligation is $25 or less.
4. Unpaid obligations shall remain a matter of record until students and former students satisfy their financial obligations or until satisfactory arrangements for repayment are made with the university.
5. The university may write off delinquent financial obligations of students according to accepted accounting principles and after appropriate collection efforts. No such write-off shall operate to relieve the student of liability for the obligation nor shall such write-off entitle the student to release of any transcripts, diplomas, certificates of program completion, or to register for further university classes until such obligation is actually paid.
6. Each university shall include this policy in its bulletin or catalog.

A late charge of $12 is assessed for any balances due the university not paid within 30 days of the initial due date, with a second $12 late charge assessed if these amounts are not paid within 30 days of the first late charge, and a third $12 late charge is assessed if these charges are not paid within 60 days of the first late charge. Procedures to be followed for disputed charges are available from the Student Accounts section of Student Business Services, located in SSV 230.

RESIDENCY CLASSIFICATION POLICIES AND PROCEDURES

The Arizona Board of Regents is required by law to establish uniform guidelines and criteria for classifying students' residency to determine those students who must pay nonresident tuition. The following is a summary of the general guidelines used to determine residency for tuition purposes. All of the evidence is weighed under the presumption that a nonresident student's presence in Arizona is primarily for the purpose of education and not to establish domicile and that decisions of an individual about the intent to establish domicile are generally made after the completion of an education and not before.

To obtain resident status for tuition purposes, independent students must establish their residence in Arizona at least one year before the last day of regular registration for the semester in which they propose to attend ASU. Arizona residence is generally established when individuals are physically present in the state with the intention of making Arizona their permanent home.

Mere physical presence in Arizona for one year does not automatically establish residency for tuition purposes. Adult students and emancipated minors must combine physical presence in Arizona for one year with objective evidence of their intent to make Arizona their permanent home. If these steps are delayed, the one-year period is extended until both presence and intent have been demonstrated for one full year. In addition to physical presence and intent, the student must demonstrate financial independence for the two tax

years immediately preceding the request for resident classification. The student must demonstrate objective evidence of self-support and that he or she was not claimed as an income tax deduction by his or her parents or any other individual for two years. An adult student is defined as being at least 18 years of age at the beginning of the domicile year. For a complete definition of an emancipated minor, refer to the Arizona Board of Regents' residency classification policies, available in the Residency Classification section, SSV 146.

No person is considered to have gained or lost resident status merely by attending an out-of-state educational institution.

Aliens. Students who are aliens are subject to the same requirements for resident status as are U.S. citizens. In establishing domicile, aliens must not hold a visa that prohibits establishing domicile in Arizona.

Refugees. Refugees may qualify as resident students by virtue of having been granted refugee status in accordance with all applicable laws of the United States and having met all other requirements for residence in Arizona.

Exceptions to the General Residency Rule

Students may be eligible for resident status for tuition purposes if they can meet one of the following criteria on or before the last day of regular registration.

Legal Dependents. If a student and his or her parents are domiciled in Arizona and have not met the one-year residency requirement but the parents are entitled to claim the student as a dependent for federal and state tax purposes, the student may be eligible for resident status for tuition purposes.

Transferred Employees. If students are domiciled in Arizona and have not met the one-year residency requirement but are employees or spouses of employees who have been transferred to Arizona by their employers for employment purposes, the students may be eligible for resident status for tuition purposes.

Members of the Military. If students are not domiciled in Arizona but are members of the U.S. Armed Forces stationed in Arizona or are the spouses or dependent children of a member (as defined in A.R.S. § 43-1001), the students may be eligible for resident status for tuition purposes. If military service is concluded while enrolled, students do not lose resident status while they are continuously enrolled in a degree program. If individuals are domiciled in Arizona immediately before becoming members of the U.S. Armed Forces, they do not lose resident status because of their absence while on active duty with the military as long as they maintain Arizona affiliations and file Arizona state tax.

A student who is a member of an Arizona National Guard or Arizona Reserve unit may be eligible for resident status for tuition purposes. A student may also be eligible if he or she has been honorably discharged from the armed forces of the United States, has declared Arizona as his or her legal residence one year before discharge, and has taken the other appropriate actions, including filing an Arizona income tax return. A student who is the spouse or dependent of a member of the armed forces who has claimed Arizona as his or her legal residence and filed Arizona income tax for one year before enrollment may be eligible for resident status for tuition purposes.

Teachers and Classroom Aides. If a student is under contract to teach on a full-time basis or is employed as a full-time non-certified classroom aide at a school within a school district, the student is eligible to pay resident tuition only for courses necessary to complete the requirements for certification by the State Board of Education.

Native Americans. Students who are members of a Native American tribe whose reservation lies both in Arizona and an adjacent state and who are residents of that reservation may be eligible for resident status for tuition purposes.

Procedures for Establishing Resident Status

All students are responsible for obtaining residency classification for tuition purposes before registering and paying their fees. This procedure requires students to complete and file an Arizona residency information form. This form is required of all new and returning students as part of the admission or readmission process. Students classified as nonresidents who believe they may qualify for resident status must file a petition with the Residency Classification section. This petition must be filed by the last day of regular registration. A student seeking resident status must also file supporting documentation necessary to provide a basis for residency classification (source[s] of support, driver's license, voter's registration, vehicle registration, etc.). Students whose residency petitions are in process at the fee payment deadline are responsible for paying nonresident tuition. However, an appropriate refund is issued if resident status is later granted for that semester.

Any student found to have made a false or misleading statement concerning resident status is subject to dismissal from the university.

Failure to file a timely written petition for reclassification of resident status for tuition purposes constitutes a waiver of the student's right to apply for the given semester. Petition deadlines are published each semester in the *Schedule of Classes*. Extensions to the deadlines are not permitted.

Residency classification is an extremely complex issue. The information presented here is a summary and does not address each individual's situation; therefore, students are encouraged to make a personal visit to the Residency Classification section to discuss their individual circumstances as soon as possible. Guidelines for determination of residency for tuition purposes are subject to review and change without notice. For more information, call the Residency Classification section at 480/965-7712, or access the Web site at www.asu.edu/registrar/residency.

Financial Aid

The primary responsibility for financing a college education belongs to students and their families (see the "2002–2003 Typical Student Budgets" table, page 55). The Student Financial Assistance Office helps students, within the limits of available funds, meet college costs. Financial assistance is available as scholarships, grants, loans, and employment. This aid has been made available collectively by the university, alumni, private foundations, civic groups, individuals, and state and federal governments.

To be considered for financial aid, all students must complete the Free Application for Federal Student Aid (FAFSA). This application should be completed in January or early February preceding the academic year the student anticipates attending ASU. The priority date for applying is February 15. Applications completed after this date are processed; however, they are considered late applications. Late applicants are less likely to receive federal work-study, grants, and scholarships due to funding limitations.

Additional documentation may be requested to verify application data. Students receive an award notification once their file is complete. Applicants should read carefully all correspondence received.

Students receiving aid are required to meet minimum standards of satisfactory academic progress. In addition to maintaining the minimum GPA defined for good academic standing, students must complete the hours for which they are funded during the academic year. Failure to meet these standards results in the suspension of aid for subsequent semesters until the deficiency is satisfied.

Students can access personal information regarding financial aid through the SunDial phone system at 480/350-1500 or by accessing ASU Interactive at www.asu.edu/interactive. Students can access the following information:

1. documents still needed to complete a financial aid file; and
2. award information.

Documents needed to complete the aid file can be printed from the Student Financial Assistance Web site at www.asu.edu/fa.

TYPES OF FINANCIAL AID AND MAJOR PROGRAMS

ASU students receive financial aid resources totaling more than $273 million. There are four categories of financial aid: scholarships, grants, loans, and employment.

Scholarships

There are two sources of scholarships at ASU: university-funded scholarships and private donor scholarships. Many scholarships are offered on the basis of academic merit. However, financial need criteria may also be included in the selection of recipients. Other considerations are GPA, leadership qualities, and community service.

The Scholarship Office coordinates all scholarship programs. High school students should contact their high school counselors or visit the scholarship Web site at www.asu.edu/fa/scholarships to determine the appropriate process for obtaining a variety of scholarships available to entering freshmen. Other undergraduate students may contact the Scholarship Office or search the Web site for available scholarships. In addition, many academic units provide scholarship funding and select students based on a variety of criteria, which include artistic talent, musical ability, and athletic performance. Students seeking these scholarships should contact the appropriate academic unit directly.

Educational Tax Credits. Students may be eligible for either the Hope Scholarship Credit or the Lifetime Learning tax credit. Additional information about these tax credits is available on the Web at www.asu.edu/sbs.

Consult a personal tax advisor about qualifications for the Hope Scholarship Credit, and Lifetime Learning tax credit.



Interior of the Student Services Building John MacIsaac photo

Private Donor Scholarships. Most of these scholarship funds are provided by employers, private individuals, organizations, and corporations. In most cases, the private donor specifies the criteria used by the Scholarship Office to identify candidates for a particular scholarship.

University Scholarships. These scholarships generally cover tuition and/or fees. The largest source for university scholarships is the waiver program authorized by the Arizona Board of Regents. In addition, many scholarships are funded from a general endowment fund. Some of the typical areas targeted for these scholarships are top academic seniors in Arizona high schools, students who demonstrate leadership, students who demonstrate scholastic or scientific abilities, students with disabilities, and nontraditional students.

Grants

Grants are gift assistance from the federal government, the state, or the university that do not have to be repaid.

Federal Pell Grant. Funded by the federal government, the Pell Grant is awarded to students who demonstrate significant financial need. Pell Grant eligibility is determined by the U.S. Department of Education. All students are informed of their eligibility for the grant through the Student Aid Report. The maximum award for the 2002–2003 academic year was $4,000.

Federal Supplemental Educational Opportunity Grant. The Supplemental Educational Opportunity Grant (SEOG) is a federally funded, campus-based program. A limited amount of funding is available through the program. The amount received will depend upon a student's financial need, the amount of other assistance awarded, and the availability of funds. Maximum grant awards for 2002–2003 were $1,000.

Leveraging Educational Assistance Partnership (LEAP). This is a three-partner program of federal, state, and university funding. Students with a high financial need may receive this particular form of funding. It is restricted to residents of Arizona. The maximum grant for 2002–2003 was $1,250.

Student Aid Trust Grant. Provided in partnership between ASU students and the state legislature, these funds are provided primarily to resident, undergraduate or underrepresented students with a high financial need. The maximum grant for 2002–2003 was $2,000.

University Grants. University grants are generally reserved as the last grant program to be used to resolve a student's need. Funded by the university, grants are available for both resident and non-resident students. The maximum grant awards for 2002–2003 were $2,000.

Loans

Loans are forms of financial assistance available from sources such as the federal government and private lenders that must be repaid and will include any accrued interest.

William D. Ford Direct Student Loan. Through the William D. Ford Direct Student Loan program, the federal government loans money to students based on the university's determination of the student's financial need and cost of education. Repayment begins after the student graduates, leaves school, or drops below half-time enrollment. Under this program there are two loan types: subsidized and unsubsidized. With a subsidized Direct Student Loan, the federal government pays the interest on the loan principal during the student's in-school status, grace, and other authorized periods of deferment.

The school may determine that the student is eligibile for an unsubsidized Direct Student Loan. In this program, the federal government does not pay the interest during the student's in-school status, grace, or other authorized periods of deferment. As the student proceeds through school, interest will accrue and will be added once the student enters repayment. Otherwise, conditions and terms for the two programs are the same.

The variable interest rate is adjusted every July 1. The current interest rate can be found at www.ed.gov/directloan. The rate cannot exceed 8.25 percent. In addition, there is a 3 percent loan origination fee deducted from each disbursement. The federal government provides several options for repayment once the student has left school. For students who are considered dependent based on their financial aid application, the following total annual loan limits for subsidized and unsubsidized apply: freshmen may borrow up to $2,625 per year; sophomores, up to $3,500 per year; and juniors and seniors, up to $5,500 per year. For students who are considered independent, the following annual loan limits apply: freshmen may borrow up to $6,625, of which only $2,625 can be subsidized; sophomores, up to $7,500, of which only $3,500 can be subsidized; and juniors and seniors, up to $10,500, of which only $5,500 can be subsidized.

Federal Perkins Loan. The Federal Perkins Loan program is funded by the federal government and is awarded based on financial need. The school is the actual lender, and repayments after graduation are made to the university at a 5 percent interest rate. Like the subsidized Student Loan, no interest accrues on the Perkins Loan during the student's in-school status, grace, or other authorized periods of deferment. If funding is available, deferment and cancellation provisions may apply to graduates working in community service, qualifying law enforcement, and teaching occupations. Maximum awards for 2002–2003 were $3,000.

Parent Loan for Undergraduate Students. Under the Parent Loan for Undergraduate Students (PLUS), parents may borrow money from the federal government on behalf of their dependent students. With this loan, interest is not deferred and repayment begins within 60 days after the final disbursement for the enrollment period. The PLUS approval is based on the parents' credit history. There is a variable interest rate adjusted every July 1 that cannot exceed 9 percent. The maximum loan amount is determined by subtracting all other financial aid from the student's cost of education. If parents are determined ineligible for a PLUS and students need additional funds, they should contact the Student Financial Assistance office to determine their eligibility for an unsubsidized Direct Student Loan.

2002–2003 Typical Student Budgets

Item	Dependent		Independent
	At-Home	On/Off Campus	On/Off Campus
Room	$ 1,000	$ 3,728	$ 5,098
Board	1,071	2,138	2,138
Personal/Miscellaneous	2,254	2,254	2,887
Transportation	1,071	1,071	1,288
Total living[1]	$ 5,396	$ 9,191	$ 11,411
Resident tuition	$ 2,508	$ 2,508	$ 2,508
Special fees	77	77	77
Books/supplies	748	748	748
Resident total	$ 8,729	$ 12,524	$ 14,744
Additional tuition for nonresidents[2]		$ 8,520	$ 8,520
Nonresident total		$ 21,044	$ 23,264

[1] Loan fees are not included in this amount. Total living expense items are estimates. Amounts vary based on personal choice.

[2] Amounts of nonresident tuition are shown in the "2002–2003 Resident and Nonresident Tuition" table, page 48.

Employment

The Student Employment Office provides employment opportunities to students who must work to meet educational expenses or who wish to work because they feel the experience can be a valuable part of their education. Students may choose between hourly and Federal Work-Study programs.

Federal Work-Study. The Federal Work-Study program encourages community service work and jobs that complement and reinforce educational or career goals. Funds for this program are provided on a matching basis by the federal government and the university. Students employed under this program receive the same pay rates as other students being employed on campus. In this program, students must demonstrate a financial need as established through completion of the Free Application for Federal Student Aid (FAFSA).

University Hourly. The university, with its own resources, hires many students on a part-time basis. Although the jobs are similar to those under the Federal Work-Study Program, the university provides the entire amount of the student's wage.

Part-Time Off-Campus. The university receives requests for assistance from many agencies and companies throughout the area to help them recruit and hire students on a part-time basis. This job listing service provides opportunities for students not only to earn funds to support their education, but to gain experience in the areas of their majors or career interests.

Taxability of Financial Aid Programs

Scholarships, grants, fellowships, and stipends (but not loan funds) are taxable income to the recipient, except for the portion of these funds used for tuition, registration, and other university fees, or books, supplies, and equipment required for the courses being taken. Special tax regulations also apply to nonresident alien students and may require withholding of taxes at the time of aid disbursements to these individuals. Information on the taxability of scholarships can be obtained from the following Internal Revenue Service (IRS) publications and forms: *Publication 4—Student's Guide to Federal Income Tax; Publication 519—U.S. Tax Guide for Aliens; Publication 520—Scholarships and Fellowships; Form 1040EZ and Instructions—Income Tax Return for Single and Joint Filers With No Dependents;* and *Form 1040NR and Instructions—U.S. Nonresident Alien Income Tax Return.*

These publications and forms can be obtained by calling the IRS at 1-800-829-FORM (3676) or by accessing the IRS Web site at www.irs.ustreas.gov.

Classification of Courses

COURSE INFORMATION

Information about all lower- and upper-division courses offered at ASU Main and ASU East appears in the *General Catalog*, available on the Web at www.asu.edu/aad/catalogs. Course information at this Web site is more current than in the printed catalog.

ASU Main and ASU East graduate-level courses are described in the *Graduate Catalog*. ASU West courses are described in the *ASU West Catalog*.

Classes scheduled for the current or upcoming fall or spring semester are listed in the *Schedule of Classes*. Classes scheduled for the summer sessions are listed in the *Summer Sessions Bulletin*. Class schedules are available on the Web at www.asu.edu/registrar/schedule.

COURSE LISTINGS

See "Course Prefix Index," page 6, for the location of all ASU courses by prefix. See the "Key to Course Listings" diagram, below, for help in understanding listings.

Campus Code. Campus codes are used in the *General Catalog* only for courses in prefixes used by both ASU East and ASU Main. Campus codes are used for all courses offered at ASU Main (M), ASU East (E), and ASU West (W) in the *Schedule of Classes* and the *Summer Sessions Bulletin*.

Semester Offered. In the *General Catalog* and *Graduate Catalog*, the semester offered shows when the academic unit *plans* to offer the course. Refer to the *Schedule of Classes* and the *Summer Sessions Bulletin* in print or on the Web for the actual course offerings.

Prerequisites and Corequisites. Some requirements, known as prerequisites, must be met *before* registering for a course. Other requirements, called corequisites, must be met *while* taking a course. A student registering for a course should be able to show that prerequisites have been met and that corequisites will be met as stated in the catalog or *Schedule of Classes* or must otherwise satisfy the instructor that equivalent preparation has been completed.

General Studies Code. See "General Studies," page 85, for an explanation of the General Studies requirement, which applies to students pursuing a bachelor's degree.

COURSE NUMBERING SYSTEM

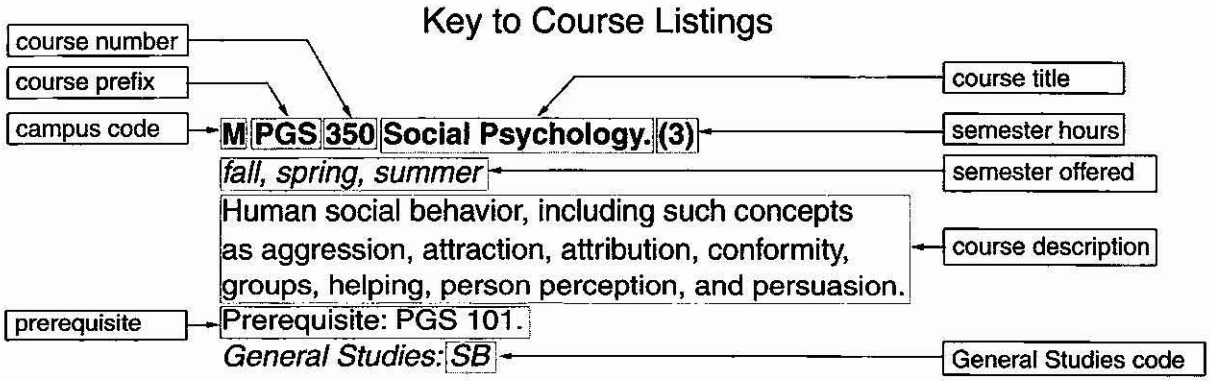
Lower-Division Courses. Lower-division courses, numbered from 100 to 299, are designed primarily for freshmen and sophomores. Certain classes are closed to freshmen who lack the designated prerequisites or whose majors are outside the unit offering the course. This information is available in the *General Catalog*, in the *Schedule of Classes*, or from the student's academic advisor.

Upper-Division Courses. Upper-division courses, numbered from 300 to 499, are designed primarily for juniors and seniors. Prerequisites and other restrictions should be noted before registration. Courses at the 400 level apply to graduate degree requirements for some graduate programs when approved by the Graduate College.

Graduate-Level Courses. Graduate-level courses, numbered from 500 to 799, are designed primarily for graduate students. However, an upper-division undergraduate student may enroll in these courses with the approval of the student's advisor, the course instructor, the department chair, and the dean of the college in which the course is offered. If the course does not meet an undergraduate graduation requirement, it may be eligible for use in a future graduate program on the same basis as work taken by a nondegree graduate student. See "Reserving of Course Credit by Undergraduates," page 73.

Omnibus Courses

Omnibus numbers are used for courses offered on an experimental or tutorial basis or for courses in which the content is new or periodically changes. Academic units use



Michael J. Martin graphic

their prefixes with omnibus course numbers. The general nature of the work required for a particular omnibus course is consistent from unit to unit, but subject matter varies. Omnibus courses are often offered for a variable number of semester hours. See the appropriate academic unit in the *General Catalog* or major in the *Graduate Catalog* for omnibus courses.

Within the catalogs and *Schedules of Classes,* abbreviations are frequently used with a colon to introduce specific omnibus course topics (e.g., IBS 494 ST: Regional Business Environment of Southeast Asia). See the "Omnibus Course Abbreviations" table below.

Omnibus Course Abbreviations

Abbreviation	Title	Number
AP	Applied Project	593, 693, 793
CW	Conference and Workshop	594
FW	Field Work	583, 683, 783
FYS	First-Year Seminar	191
HC	Honors Colloquium	497
P	Practicum	580, 680, 780
PS	Pro-Seminar	498
R	Research	592, 692, 792
RC	Reading and Conference	590, 690, 790
RM	Research Methods	500, 600, 700
S	Seminar	591, 691, 791
ST	Special Topics	194, 294, 394, 494, 598

OMNIBUS UNDERGRADUATE COURSES

191 First-Year Seminar. (1–3)
Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.

194, 294, 394, 494 Special Topics. (1–4)
Covers topics of immediate or special interest to a faculty member and students.

484 Internship. (1–12)
Structured practical experience following a contract or plan, supervised by faculty and practitioners.

498 Pro-Seminar. (1–7)
Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.

499 Individualized Instruction. (1–3)
Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.

First-Year Seminar. The First-Year Seminar series is specifically designed to meet the needs of the first-year student. Faculty members volunteer to direct the seminars and choose course topics according to their own interests and areas of specialization. Class size is restricted so that, early in their college careers, students may interact directly with some of the best faculty the university has to offer.

Honors Courses. The courses listed as 298 and 492 Honors Directed Study, 493 Honors Thesis, 497 Honors Colloquium, and all courses with the HON prefix are reserved for students in the Barrett Honors College. These courses range from one to six semester hours. Consulting with an honors advisor before enrolling is recommended.

OMNIBUS GRADUATE COURSES

500, 600, 700 Research Methods. (1–12)
Course on research methods in a specific discipline.

580, 680, 780 Practicum. (1–12)
Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.

583, 683, 783 Field Work. (1–12)
Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.

584, 684, 784 Internship. (1–12)
Structured practical experience following a contract or plan, supervised by faculty and practitioners.

590, 690, 790 Reading and Conference. (1–12)
Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, writing a literature review of a topic.

591, 691, 791 Seminar. (1–12)
A small class emphasizing discussion, presentations by students, and written research papers.

592, 692 Research. (1–12)
Independent study in which a student, under supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.

593, 693, 793 Applied Project. (1–12)
Preparation of a supervised applied project that is a graduation requirement in some professional majors.

594 Conference and Workshop. (1–12)
Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.

595, 695, 795 Continuing Registration. (1)
Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending thesis or dissertation, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.

598 Special Topics. (1–4)
Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.

599 Thesis. (1–12)
Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.

792 Research. (1–15)
Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.

799 Dissertation. (1–15)
Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.

The preceding courses are described in announcements of the Graduate College and are also available in the respective departments. Under special circumstances, arrangements may be made at the dean's request, through the approval of the senior vice president and provost, to increase the standard semester hours of credit.

Visiting Student Program. The numbers 597, 697, and 797 in the LAW prefix have been reserved for the Visiting Student Program in the College of Law.

SPECIALIZED PREFIXES

Elementary Education Program Courses. Some elementary education methodology courses use the prefix EDB for purposes of registration. These courses are reserved for students admitted to professional programs. EDB courses are converted to permanent ASU education courses (with other prefixes) following the drop-add period, as determined by the registrar's calendar.

Graduate College Courses. Courses with the prefix GRD numbered 791 are reserved for doctoral students participating in the Preparing Future Faculty (PFF) program administered by the Graduate College. PFF students are required to take one semester hour for each of the semesters they are enrolled in the program. Students enroll for the first-year exploratory phase. Those accepted into the second-year participatory phase enroll for one semester hour each semester.

International Programs Overseas Courses. Courses with the prefix IPO numbered 495 and 595 are reserved for International Programs study abroad and exchange programs. For most programs, participating students register for 18 semester hours. After completion, undergraduate students receive credit for the study completed, with a minimum of 12 semester hours and a maximum of 18 semester hours; graduate students receive credit with a minimum of six semester hours and a maximum of 12 semester hours.

IPO courses numbered 495 and 595 are converted to ASU credit for recording courses taken abroad.

IPO courses numbered 494 and 598 may be taken for one semester hour. Students register for these courses under the title "Study Abroad." At the conclusion of the program and the transfer of overseas courses to the students' ASU records, a grade of "Y" is entered for the course.

For some special international programs, students register and receive credit for fewer semester hours.



The Memorial Union offers a variety of programs, services, and opportunities for student involvement, such as the Art Café, an eatery where students, faculty, and staff demonstrate their talents in the performing and visual arts. Tim Trumble photo

Undergraduate Enrollment

Arizona State University shares with other colleges and universities a tradition of service and academic excellence that is hundreds of years old. Its purpose is the exchange of knowledge and the pursuit of wisdom. ASU is committed to providing a setting where faculty and students are challenged to exchange ideas and information within an atmosphere of intellectual honesty.

The university offers its students unique opportunities to enjoy both a rich cultural heritage and a diverse student population. Anyone giving evidence of suitable preparation, by way of acceptable academic credentials, is welcome to the university without regard to race, religious creed, or national origin.

Under the constitution and the laws of the State of Arizona, jurisdiction over ASU has been vested in the Arizona Board of Regents. The regents, in turn, grant broad legal authority to the president, the administration, and the faculty to regulate student life within reasonable limits.

By enrolling, a student voluntarily assumes certain obligations of conduct and performance. These obligations include acting with honesty, integrity, and fairness in all campus and community activities. They also include avoiding certain behaviors, such as: the irresponsible use of alcohol; the use, possession, or distribution of illegal drugs; and verbal or physical assaults. Should a student intentionally or inadvertently become involved in questionable campus-related actions or activities, the university will investigate the circumstances and will enforce its standards of conduct through prescribed procedures contained in the *Student Code of Conduct.*

The primary purpose for the *Student Code of Conduct* is to set forth the standards of conduct expected of students who choose to join the university community. Students and student organizations are expected to become familiar with and adhere to this code. Violations of the *Student Code of Conduct* will result in university disciplinary action being taken and appropriate sanctions being imposed for the misconduct. Copies of the *Student Code of Conduct* are available in the Office of Student Life, SSV 263, or on the Web at www.asu.edu/studentlife/judicial.

The university further reserves the right to take necessary and appropriate action to protect the safety and welfare of the campus community and will cooperate with appropriate law enforcement agencies in their efforts to ensure a safe and secure environment.

STUDENT SERVICES AT ASU

Arizona State University is a richly diverse academic setting with more than 50,000 students. The ASU student may be a traditional 18- to 24-year-old, a recent high school graduate, a community college transfer, someone returning to college to pursue a degree, or a professional studying for an advanced degree or career change. The ASU student may live in residence halls, in on-campus housing for sororities or fraternities, or in one of the many communities in the metropolitan Phoenix area. Each of the 50 states and more than 100 countries have students enrolled at ASU.

The university is organized into several distinct administrative areas. Student Affairs, one of these areas, is responsible for the delivery of a variety of services and developmental programs in support of students' educational pursuits. These programs and services are based upon human development research that advocates that a person develop culturally, emotionally, intellectually, morally, physically, psychologically, socially, and spiritually.

Special attention is given not only to the recruitment of a high-achieving, culturally diverse student body, but also to the creation of an energetic campus environment that both catalyzes the mature development and advances the academic endeavors of students.

Enrollment services to students begin with recruitment, admissions, student financial assistance, on-campus housing, and registration programs. Student Affairs encourages students to explore the facilities, services, and human resources available. ASU departments guiding students in their educational experience include Career Services, Counseling and Consultation, the Memorial Union and Student Development, Recreational Sports, Residential Life, the Student Health and Wellness Center, Student Life, and Student Media. Each of these areas provides specialized learning opportunities, contributing to an environment that fosters both personal and academic growth.

Undergraduate Admission

Arizona State University welcomes an application for admission from any individual seeking to benefit from the university's broad spectrum of educational programs and services.

For information and application materials, prospective students may call 480/965-7788, access the Web site at www.asu.edu/admissions, or write

UNDERGRADUATE ADMISSIONS
ARIZONA STATE UNIVERSITY
PO BOX 870112
TEMPE AZ 85287-0112

Undergraduate Admissions offers tours of ASU, University Information Sessions, and admission appointments Monday through Friday (except days that are official university holidays). For more information, call 480/727-7013.

Requests for specific information relating to academic programs or student services should be addressed to the appropriate department, school, division, or college.

Admission Procedures for Freshman and Transfer Applicants

Individuals interested in admission to an undergraduate program at ASU need to have the following items on file at

Undergraduate Admissions (non-U.S. citizens should see "International Student Admissions," page 64, for additional *requirements*): the required application, fee, official transcripts, and test scores.

Application for Admission. Prospective students must complete and sign the Application for Undergraduate Admission. As with other state-supported colleges and universities, ASU distinguishes between resident and nonresident students with regard to tuition. Residents of Arizona are required to provide residency information, which is part of the admission application. Any student who does not provide residency information is classified as a nonresident for tuition purposes. For more information, call Residency Classification at 480/965-7712.

Students who are admitted for a specific semester and do not enroll must submit a new application (and application fee for nonresident applicants) if they wish to apply for a subsequent semester. All documents are destroyed one year after the semester for which the student has applied if the student is not enrolled in a degree program. Any misrepresentation or falsification on the admission application, including failure to report any college or university attendance, is cause for cancellation of admission enrollment and/or any credits earned.

Application Fee. *All applicants classified as nonresidents* must submit a $50 nonrefundable application fee.

Official Transcripts. Applicants are responsible for requesting transcripts from each educational institution attended. Official transcripts must be *mailed directly to Undergraduate Admissions by the records office of the issuing institution(s). ASU does not accept transcripts sent or carried by hand by the applicants themselves or transmitted by facsimile (fax) machine.* High school transcripts must show GPA and date of graduation. ASU requires an English translation of all foreign language transcripts.

ACT or SAT. See "Freshman Applicants," page 60, to determine which test scores ASU requires. Undergraduate Admissions may investigate any test score that is inconsistent with a student's academic record or previous scores.

A report of the test scores should be sent to Undergraduate Admissions directly from

ACT
PO BOX 168
IOWA CITY IA 52243-0168

or the

COLLEGE BOARD ADMISSIONS TESTING PROGRAM
PO BOX 592-R
PRINCETON NJ 08542-0590

Application Time Line. ASU urges applicants to have their materials sent as soon as possible to enable university officials to make an early decision concerning the applicant's admission and to permit the student to take part in preregistration and orientation. Applicants should allow four weeks after all necessary items are received for an admission decision to be made.

Early Notification Date. Applicants whose files are complete (all necessary documentation has been received) by November 1 receive notification by December 1. Applicants whose files are complete by December 1 receive notification by January 15.

Admission Before Receipt of Final Transcript. Admission may be granted to high school seniors who submit a six-semester or seven-semester transcript that shows academic quality or rank in class in keeping with admission standards and who complete the steps in the undergraduate admission procedures. Admission is official when verification of high school graduation showing the final GPA and the date of graduation has been received in the mail by Undergraduate Admissions directly from the high school. Final transcripts must be received a minimum of 45 days in advance of the start of the semester. An admission may be canceled if the final verification shows that the applicant has not met the university requirements for admission or that more than two deficiencies remain.

Transfer applicants enrolled in other colleges and universities may be considered for admission on the basis of meeting all admissions requirements, except for a final transcript of work in progress. This final transcript must be sent to Undergraduate Admissions directly from the issuing institution immediately after the work in progress has been completed. Transcripts carried by hand are not accepted. *Admission is official only after the final transcript has been received showing that the applicant has met the university admission requirements.* In the event the applicant does not qualify or has falsified application documents, admission and registration are canceled, and any registration fees paid are returned.

Undergraduate Admission Standards

The Arizona Board of Regents establishes undergraduate admission standards for the university in general. *Particular colleges, divisions, schools, or departments within the university may establish stricter standards, which are given in the respective sections of the catalog and should be noted by students planning to enroll in any of these programs.*

Freshman Applicants

Undergraduate Admissions requires freshman applicants' official high school records. To be eligible for admission to ASU, a freshman must have graduated from a recognized high school with satisfactory scholarship defined as meeting both the general aptitude and basic competency requirements shown in the "Basic Competency Requirements" table, page 61, and the "General Aptitude Requirements for Freshmen" table, page 62. Applicants who have enrolled in any college-level course must also meet requirements in the "General Aptitude Requirements for College Transfers" table, page 63.

Applicants with a maximum of one deficiency in no more than two competency areas—provided the competency areas are not both math and science—may be admitted with conditions subject to removing the deficiencies within two calendar years of university enrollment. See "Meeting Basic Competencies," page 79, for an explanation of procedures to meet these competencies.

Basic Competency Requirements

High School Courses		Test Scores		College Courses
English				
Four years high school: English composition/literature-based	*or*	Minimum test score: ACT English—21 or SAT I verbal—530	*or*	One transferable three-semester-hour college-level course in English composition
Fine Arts				
One unit of fine arts or a combination of two semesters of fine arts	*or*	NA	*or*	One transferable three-semester-hour college-level fine arts course
Foreign Language				
Two years of the same foreign language	*or*	NA	*or*	One year of transferable college study in the same foreign language
Laboratory Science				
Three years high school, one each from three of the following: biology, chemistry, earth science, integrated sciences, or physics. An advanced-level course may be substituted for one subject area.	*or*	Two years high school lab science (biology, chemistry, earth science, physics, integrated sciences) plus minimum SAT II: subject test score on one of the following: Biology Achievement—590 Chemistry Achievement—600 Physics Achievement—620 ACT Science Reasoning—20 The test score may not be from any subject from which high school credit was earned.	*or*	Three transferable four-semester-hour college-level lab science courses in different subject areas. An advanced-level course may be substituted for one subject area.
Mathematics				
Four years high school: one year Algebra I, one year Geometry, one year Algebra II, and one year advanced mathematics	*or*	Minimum test score: ACT Math—24 or SAT I Math—540	*or*	One transferable three-semester-hour college-level course in mathematics for which Algebra II is a prerequisite
Social Science				
Complete both *A* and *B*. A. One year high school American history B. One year high school social science (e.g., anthropology, European history, geography, government, world history)	*or*	Minimum SAT II: subject test score on American History and Social Studies Achievement—560 Minimum SAT II: subject score on World History Achievement—580	*or*	One transferable three-semester-hour college-level American history course One transferable three-semester-hour college-level social science course

If the applicant is unable to meet these specific admission requirements, it is possible to file a letter of appeal and three letters of recommendation with the Undergraduate Admissions Board:

UNDERGRADUATE ADMISSIONS BOARD
ARIZONA STATE UNIVERSITY
PO BOX 870112
TEMPE AZ 85287-0112

The decision of the board is final and any conditions set by the board for future admission supersede all other admission criteria or exceptions. The applicant must be able to meet at least one of the following criteria to be considered for appeal:

1. an upward grade trend during the high school career or an upward grade trend during the senior year;
2. positive recommendations from secondary school administrators, faculty, or counselors based on considerations such as academic potential, work experience, and leadership ability;
3. an average score of 500 (50 if taken before 2002) or greater on the General Education Development (GED) examination; or
4. completion of at least 12 semester hours of college freshman-level academic studies (at a community college or at a university or both) with a GPA of 2.50 or higher on a 4.00 = A scale in courses in English, social sciences, mathematics, physical or natural sciences, foreign languages, fine arts, or the humanities.

General Aptitude Requirements for Freshmen

Residency Classification	Class Rank		Composite Score ACT		Composite Score SAT		GPA (4.00 = A)[1]
Arizona residents[2]	top quarter	*or*	22	*or*	1040	*or*	3.00 competency GPA
Nonresidents[3]	top quarter	*or*	24	*or*	1110	*or*	3.00 competency GPA

[1] The GPA is calculated on courses that are used to fulfill competency requirements.

[2] Resident freshmen who carry a competency GPA from 2.50 to 2.99 or who rank in the top 26–50% of the graduating high school class may be admitted with conditions.

[3] All nonresident freshmen who believe they have had a strong high school background and who rank in the top 26–50% of their graduating classes or who carry a competency GPA from 2.50 to 2.99 may apply and are considered on a case-by-case basis. Based on the review, the applicants may be admitted with conditions, deferred until additional course work is completed, or denied.

Transfer Applicants

Transfer applicants must submit official academic records from all colleges and universities attended. Transfer applicants under the age of 22 who have not completed an Arizona General Education Curriculum (AGEC) or associate's degree or higher must submit official high school records and meet basic competency requirements. Students who have not completed first-semester freshman composition from a regionally accredited institution must also submit official SAT or ACT test scores.

Arizona Applicants. An Arizona applicant for transfer admission must have a cumulative GPA of 2.00 (4.00 = A) or higher in all work undertaken at previous institutions of higher learning. A minimum of 24 college or university transferable semester hours must have been earned to be considered a transfer applicant.

Arizona transfer applicants must have the respective minimum GPAs to be admitted to the professional programs in the following areas: computer science—2.50; construction—2.25; economics—2.50; engineering—2.50; and technology—2.25. Other academic units may have different GPA requirements to enroll in junior- or senior-level courses.

Nonresident Applicants. A non-Arizona applicant for transfer admission must have a cumulative GPA of 2.50 or higher on a 4.00 = A scale in all work undertaken at previous institutions of higher learning. Applicants who have at least a 2.00 on a 4.00 = A scale and who believe that they have a strong academic record are considered on a case-by-case basis.

Transfer Credit

Credit is awarded for traditional course work successfully completed at institutions of higher learning as indicated by ASU and the Arizona Board of Regents. *Whether the specific credits can be applied toward a degree depends on the requirements of the department, division, school, or college in which the student is enrolled.* There are several qualifications:

1. Transfer credit is not given for courses in which the lowest passing grade ("D") or a failing grade was received.
2. While some courses successfully completed but evaluated on nontraditional grading systems (e.g., pass/fail) may be acceptable for transfer, colleges in the university may not accept such credits to fulfill graduation requirements.
3. Grades and honor points earned at other colleges and universities are considered for admission but are not included in computing the student's cumulative GPA at ASU.

The following types of credits cannot be transferred to ASU:

1. credits awarded by postsecondary institutions accredited in the United States that lack candidate status or accreditation by a regional accrediting association;
2. credits awarded by postsecondary institutions for life experience;
3. credits awarded by postsecondary institutions for courses taken at noncollegiate institutions (e.g., governmental agencies, corporations, industrial firms); and
4. credits awarded by postsecondary institutions for noncredit courses, workshops, and seminars offered by other postsecondary institutions as part of continuing education programs.

Acceptable academic credits earned at other institutions that are based on a different unit of credit than the one prescribed by the Arizona Board of Regents are subject to conversion before being transferred to ASU. Once a transfer course equivalency is determined, it stands unless the student changes majors and the course is required by the new major.

Veterans Exception. By Arizona statute, no failing grades received by a veteran at an Arizona university or community college before military service may be considered when determining admissibility. This exception applies only to veterans who

1. are honorably discharged;
2. have served in the armed forces of the United States for a minimum of two years; and
3. have previously enrolled at a university or community college in Arizona.

General Aptitude Requirements for College Transfers[1]

Residency Classification	Transferable Semester Hours	GPA (4.00 = A)	Materials Required
Arizona residents	1–23	2.00 college GPA plus general aptitude requirements for freshman plus competency requirements	Application, college and high school transcripts, and ACT or SAT scores
	24 or more	2.00 college GPA plus competency requirements	Application, college and high school transcripts, and ACT or SAT scores
Nonresidents[2]	1–23	2.50 college GPA plus general aptitude requirements for freshman plus competency requirements	Application, college and high school transcripts, and ACT or SAT scores
	24 or more	2.50 college GPA plus competency requirements	Application, college and high school transcripts, and ACT or SAT scores

[1] Students 22 years of age or older and students who have completed an AGEC, an associate's, or a higher degree at the time of enrollment do not need to submit high school transcripts or test scores.

[2] All nonresident transfers who have earned a 2.00–2.49 cumulative GPA are encouraged to apply and are considered on a case-by-case basis. Based on the review, the applicants may be admitted with conditions, deferred until additional course work is completed, or denied.

Military service records must be submitted, including form DD 214.

Community Colleges. A maximum of 64 semester hours are accepted as lower-division credit when transferred from community, junior, or two-year colleges.

Students Attending Arizona Community Colleges. To determine the equivalency of courses offered by Arizona community colleges and courses offered at ASU, a student should refer to the *Course Applicability System* in consultation with an academic advisor. For more information, access the Web site at az.transfer.org/cas.

The *Course Applicability System* addresses only the acceptability of a course, not its applicability to any specific major, thus the need to consult with an advisor. Community college students who plan to transfer to ASU at the end of their first or second years are strongly advised to follow the ASU transfer guides when taking courses to meet the requirements of the curricula they select. ASU transfer guides are available at www.asu.edu/provost/articulation. Provided college attendance has been continuous, students are permitted to follow the degree requirements specified in the ASU catalog in effect at the time they began community college work. See "Guidelines for Determination of Catalog Year," page 81.

Arizona General Education Curriculum (AGEC)

The Arizona public community colleges and universities have agreed upon a common structure for a general education core. This curriculum provides students attending any Arizona public community college with the opportunity to build a general education program that is transferable to any other state institution without loss of credit. This common agreement is called the Arizona General Education Curriculum (AGEC).

The AGEC is composed of 35 semester hours of lower-division general education course work in which a student may prepare for transfer.

The AGEC has three forms: AGEC-A, AGEC-B, and AGEC-S. Refer to www.az.transfer.org/cas/atass/student/agec.html for a detailed description of each AGEC.

Community colleges are responsible for certifying completion of the AGEC on the official institutional transcripts.

Completion of the appropriate AGEC will fulfill university lower-division general education requirements of the baccalaureate degree with which the AGEC articulates but may not apply to degrees articulated with the Transfer Guide Pathway TG-XR. Students completing the AGEC will still be required to fulfill lower-division program requirements and prerequisites within their college and major/minor area of study. To complete a degree program most efficiently, students should select courses that concurrently satisfy AGEC and major requirements.

Completion of any AGEC guarantees admission to the university provided that a GPA of 2.00 (for Arizona residents) or 2.50 (for nonresidents) has been achieved. AGEC completion, however, does not guarantee admission to any specific university program. Majors in the professional fields (e.g., architecture, engineering, business, fine/creative arts, or health professions) and sciences have significant prerequisites and/or program requirements that must be completed before a student may be admitted to upper-division course work. Community college students who are undecided about which of the universities they plan to attend or what program of study they intend to pursue are advised to explore educational options while they complete the AGEC. In all cases, students have the responsibility for selecting general education course work that is relevant to the requirements of their intended major and degree.

Students who complete both the AGEC and an approved associate's degree will be assigned junior-class standing by the state universities. Junior-class standing is based on the number of semester credits a student has earned and does not necessarily indicate the remaining number of semester credits needed to complete degree requirements. Course prerequisites, major requirements, and upper-division requirements continue to be specified by each university. Appropriate sequencing of courses and timely completion

of course prerequisites are essential to ensure efficient progress toward a baccalaureate degree. Students who have identified the university they plan to attend and/or a major area of study are advised to fulfill requirements and prerequisites identified by these programs through transfer guides and/or curriculum check sheets provided by the state universities. The AGEC does not replace articulation agreements developed to enhance the transfer process between specific institutions, e.g., Associate Transfer Partnership Degrees (ATP). Nor does the AGEC eliminate the possibility that students who have identified the university they plan to attend and/or a major area of study will follow transfer guides provided by the state universities.

Appeal Procedure. Transfer students who feel they have been unjustly denied credit for courses they have taken may appeal to the standards committee of the colleges in which they have enrolled. This procedure does not apply to community college transfer of credit greater than the 64-hour maximum. The decision of this committee is final.

An applicant for transfer admission whose academic record fails to meet ASU admission standards is denied admission. Such an applicant, however, may write a letter of appeal accompanied by three letters of recommendation to the Undergraduate Admissions Board for reconsideration of his or her application:

UNDERGRADUATE ADMISSIONS BOARD
ARIZONA STATE UNIVERSITY
PO BOX 870112
TEMPE AZ 85287-0112

To be considered, appeals must be received at least ten days in advance of the board's meeting date. The decision of this board is final and any conditions set by the board for future admissions supersede all other admission criteria or exceptions.

International Student Admissions

To comply with Immigration and Naturalization Services regulations, any student who plans to attend ASU on an F-1 or J-1 visa must

1. have a minimum GPA of 3.00 (4.00 = A) from secondary school course work if a freshman applicant, or have a minimum GPA of 2.50 (4.00 = A) from college or university course work if a transfer applicant;
2. meet basic competency requirements if he or she attended four years of high school in the United States;
3. submit a financial statement not more than six months old from a financial institution assuring adequate resources to support himself or herself while in residence at the university;
4. have all required admissions materials and credentials reach Undergraduate Admissions by May 1 if applying for the fall semester or October 1 if applying for the spring semester (an English translation of all foreign language documents is required);
5. pay a nonrefundable application fee of $50 in U.S. funds; and
6. meet all appropriate immigration standards and requirements.



ASU students head to class on the first day of fall semester.

Tim Trumble photo

Credit from a Foreign Institution. Transfer credits or advanced standing is granted for academic course work completed at foreign tertiary institutions that are either recognized by the home government/Ministry of Education as a degree-awarding institution or attached to a regionally accredited U.S. college or university as a Study Abroad Program. No credit is awarded for English composition courses completed at foreign institutions (credit may be awarded at the discretion of ASU when the credit was completed in a country whose native language is English). There are no advanced credits for the international affiliation programs overseas unless they comply with this general policy. For more information, call Undergraduate Admissions at 480/965-2688.

Nondegree International Applicants. All students with F-1 and J-1 visas must maintain full-time status while studying in the United States. Undergraduate full-time status is defined as a minimum of 12 semester hours. However, students with F-1 and J-1 visas may be permitted to take a maximum of eight semester hours at ASU as a nondegree student while maintaining full-time status at other higher education institutions or in the American English and Culture Program (AECP) at ASU. Approval by the responsible office at the other institution and/or AECP is required to ensure that the student maintains full-time status in compliance with applicable U.S. laws and regulations.

TOEFL. Applicants whose native language is not English (identified by the U.S. Department of State Bureau of Public Affairs) must provide evidence of English language proficiency as indicated by acceptable scores on the Test of English as a Foreign Language (TOEFL) as follows:

The TOEFL requirement for general admission (preprofessional) to the university is 500 (paper-based) or 173 (computer-based). The TOEFL requirement for admission to the professional programs in the College of Engineering and Applied Sciences and the College of Nursing is 550 (paper-based) or 213 (computer-based).

The following exceptions apply to the TOEFL requirement:

1. Applicants who have earned a bachelor's degree from a regionally accredited college or university in the United States are exempt from the TOEFL.
2. Applicants who have completed 48 transferable semester hours at a U.S. college or university—including two semesters (six semester hours) of freshman composition that satisfy the ASU First-Year Composition requirement—with a cumulative GPA of 2.50 or higher are exempt from the TOEFL requirement.
3. Applicants who have completed four years of high school in a U.S. high school may be admitted to ASU without a TOEFL score but are subject to competency and aptitude requirements.
4. Applicants who have completed their junior and senior years of high school in a U.S. high school may be admitted with a minimum SAT verbal score of 550 or an ACT English score of 23 in lieu of a TOEFL score.
5. Applicants who have completed Advanced 2 Level of the American English and Culture Program are exempt from the TOEFL requirement.

American English and Culture Program

The American English and Culture Program (AECP) features an intensive course of study designed for adult international students who desire to become proficient in English as a second language for academic, professional, or personal reasons. Inquiries about the curriculum, fee schedule, and other topics should be addressed to

AMERICAN ENGLISH AND CULTURE PROGRAM
ARIZONA STATE UNIVERSITY
PO BOX 873504
TEMPE AZ 85287-3504

Acceptance into the AECP is separate from admission to the university. For more information, see "American English and Culture Program," page 677.

Applicants with Disabilities

Some classroom accommodations, such as Braille, audio tapes, interpreting services, enlarged print, and lab material conversions, may require an extended preparation time (i.e., one semester). For this reason, applicants with disabilities are encouraged to contact Disability Resources for Students (DRS) upon application to the university to request information regarding disability documentation/eligibility requirements and deadlines to ensure accommodations for the beginning of the semester. (If students miss DRS deadlines, DRS attempts to provide, but cannot guarantee, requested accommodations. Effective alternatives may be necessary.) *Disability identification to DRS is confidential and cannot affect eligibility for admission.*

Call 480/965-1234 (voice) or 480/965-9000 (TTY). Access the Web site at www.asu.edu/drs, or write

DISABILITY RESOURCES FOR STUDENTS
ARIZONA STATE UNIVERSITY
PO BOX 873202
TEMPE AZ 85287-3202

Admission of Undergraduate Nondegree Applicants

Any high school graduate is invited to enroll for eight or fewer semester hours per semester of undergraduate course work as a nondegree student. Students currently enrolled in high school and persons under the age of 18 may be admitted as nondegree students by submitting official ACT or SAT scores that meet the general aptitude requirements of the university. Persons admitted as nondegree students for a specific year and term must remain nondegree until the next semester.

Anyone interested in admission as a nondegree undergraduate student at ASU must submit to Undergraduate Admissions: (1) a Nondegree Undergraduate Application for Admission (including residency information) and (2) a $50 nonrefundable application fee for applicants classified as nonresidents. Applicants who are not high school graduates or who are younger than 18 must also submit ACT or SAT scores.

No more than 15 hours of completed nondegree work may be applied to a degree program. A nondegree student who decides to work toward a bachelor's degree must *apply for admission to a degree program* with Undergraduate Admissions and meet normal admission requirements.

Once registered in a regular degree program, a student is not permitted to register again in a nondegree status. Nondegree students are not eligible to receive most types of financial aid, nor are they eligible to receive certain benefits, such as veteran benefits.

Steps from Admission to Registration

Certificate of Admission. After being admitted, students receive a Certificate of Admission, an Immunization Verification form, and publications that contain information about orientation programs. International students additionally receive a Certificate of Eligibility (Form I-20 or IAP-66), which enables them to apply for the appropriate visa.

Upon receipt, students should check their admission information for accuracy and report any errors or changes to Undergraduate Admissions at 480/965-7788.

Orientation. University orientation programs for new students and their parents are provided at numerous times during the year, including the beginning of each semester. Most orientation programs include academic advising, campus tours, special events, and an introduction to university resources and procedures. Parent programs are also included. Newly admitted students are sent information preceding each orientation program. Students are strongly encouraged to attend orientation activities.

Immunization Requirements. Every newly admitted student born after December 31, 1956, must provide proof of measles/rubella immunity to the Student Health and Wellness Center. *Students are not permitted to register until proof of immunity to measles/rubella is on file with the Student Health and Wellness Center.*

The following proof of measles/rubella immunity is considered adequate: (1) two vaccinations of MMR (measles, mumps, rubella), at least one of which must have been given after December 31, 1979; or (2) a copy of laboratory test results that show immunity to both measles and rubella.

Measles/rubella immunity proof can be faxed to the Student Health and Wellness Center at 480/965-8914. Verification that the Student Health and Wellness Center received a student's proof of measles/rubella immunity can be confirmed by going to www.asu.edu/interactive on the Web two working days after the information has been faxed to the Student Health and Wellness Center.

In addition, it is recommended that students also be immunized against mumps, tetanus, hepatitis-B, diphtheria, and meningitis. Special populations may need other vaccines. For more information on measles requirements, visit the Student Health and Wellness Center's Web site at www.asu.edu/health.

International Student Enrollment. International students must complete these additional steps.

Student Health Insurance. All F-1 or J-1 visa students must have health and accident insurance through ASU, and the cost for insurance is automatically added to their registration bill. *No privately acquired insurance is accepted in place of the ASU insurance.* However, students who have health insurance through their government or sponsoring agency may qualify for an insurance waiver if that coverage has been preapproved by the university. No waivers may be granted after the first two weeks of classes. To find out if their sponsor is on the preapproved list, sponsored students and others who fall into this category are encouraged to contact the Student Health and Wellness Center at 480/965-2411 or visit the Student Health and Wellness Center Web site at www.asu.edu/health.

All international students must report to the International Student Office in Student Life upon arrival on campus.

Special Programs for Advanced Placement and Credit

No more than 60 hours of credit are awarded for any or all programs, including ASU comprehensive and proficiency examinations. Special program credit will not be awarded for any course in which the student has been given admission credit or transfer credit from any educational institution. Special program credit may not be received for a lower-level or prerequisite course when credit has already been received in a higher-level course within the same field. In these categories, only credit earned by comprehensive examination counts toward the resident credit requirement for graduation.

Advanced Placement. Students who have taken an advanced placement (AP) course of the College Entrance Examination Board (CEEB) in their secondary school *and* who have taken an AP Examination of the CEEB may receive university credit. No credit is given for any examination with a score of 2 or 1. There is no limit to the number of AP credits that can be used to meet the General Studies requirement, including the requirements in natural sciences (SQ and SG), and literacy and critical inquiry (L).

When the scores are received by the university directly from the CEEB, credit is awarded as shown in the "Advanced Placement Credit" table, page 67.

College-Level Examination Program (CLEP). Students who have taken a College-Level Examination of the College Entrance Examination Board may receive university credit. The table of CLEP credit applies to all students enrolled in the university for the first time in August 1975 and any student enrolling thereafter; see the "CLEP Credit" table, page 68. CLEP examination credit is *not* given where (1) it duplicates credit previously earned by the student at the university or accepted by the university for work done elsewhere or (2) it is more elementary than a course in which the student has already received credit. All examinations are given monthly by University Testing Services.

There is no limit to the number of CLEP credits that can be used to fulfill the General Studies requirement. The General Studies requirement in natural sciences (SQ and SG) and literacy and critical inquiry (L) are not satisfied by CLEP (see the "General Studies" table, page 88).

General Examinations. To obtain credit or placement, students must receive a standard score of 50 (Computer Based

Advanced Placement Credit

Examination	Score	Semester Hours	Equivalency
Art—History	5 or 4	6	ARS 101, 102
	3	3	ARS 101 or 102
Art—Studio—Drawing	5	6	ART 111, 112
	4	3	ART 111
Art—Studio—General	5	6	ART 111,* 112
	4	3	ART 112
Biology	5 or 4	8	BIO 187, 188
	3	4	BIO 187
Chemistry	5 or 4	9	CHM 113, 115
	3	4	CHM 113
Computer Science A	5 or 4	3	CSE 100
Computer Science AB	5 or 4	6	CSE 100, 200
Economics—Introductory Macroeconomics	5 or 4	3	ECN 111
Economics—Introductory Microeconomics	5 or 4	3	ECN 112
English—Language and Composition	5 or 4	6	ENG 101, 114 eligible for ENG 102
English—Literature and Composition	5 or 4	6	ENG 101, 204 eligible for ENG 102
Environmental Science	5 or 4	3	PLB 322
French—Language	5	14	FRE 201, 202, 311, 312
	4	11	FRE 201, 202, 311
	3	8	FRE 201, 202
French—Literature	5	18	FRE 111, 201, 202, 321, 322
	4	12	FRE 111, 201, 202
	3	8	FRE 201, 202
German—Language	5	14	GER 201, 202, 311, 312
	4	11	GER 201, 202, 311
	3	8	GER 201, 202
History—American or European	5 or 4	6	HST 109 and 110 *or* HST 103 and 104
Latin—Language	5	16	LAT 101, 102, 201, 202
	4	12	LAT 101, 102, 201
	3	8	LAT 101, 102
Mathematics—Calculus AB	5, 4, or 3	4	MAT 270
Mathematics—Calculus BC	5 or 4	8	MAT 270, 271
	3	4	MAT 270
Music	5 or 4	3	MTC 125
Physics B	5 or 4	6	PHY 111, 112
	3	3	PHY 111
Physics C—Electricity and Magnetism	5 or 4	3	PHY 112
Physics C—Mechanics	5 or 4	3	PHY 111
Political Science—American Government and Politics	5 or 4	3	POS 110
Political Science—Comparative Government and Politics	5 or 4	3	POS 150
Psychology	5 or 4	3	PGS 101
Spanish—Language	5	14	SPA 201, 202, 311, 312
	4	11	SPA 201, 202, 311
	3	8	SPA 201, 202
Spanish—Literature	5	15	SPA 111, 201, 202, 325
	4	12	SPA 111, 201, 202
	3	8	SPA 201, 202
Statistics	5, 4, or 3	3	STP 226

* ART 115 credit may be awarded in place of ART 111 based on the School of Art's evaluation of 3D art submitted as part of the AP portfolio.

CLEP Credit

Examinations	Semester Hours	Equivalency
General		
English Composition	0	With essay qualifies for ENG 105
Humanities	6	Elective credit
Mathematics	3	MAT 106
Natural Sciences	8	Elective credit
Social Sciences and History	6	Elective credit
Subject		
American Government	3	POS 110
American History—Early Colonization to 1877	3	HST 109
American History—1865 to the Present	3	HST 110
American Literature	6	ENG 241, 242
Analysis and Interpretation of Literature	3	Elective credit
Calculus with Elementary Functions	4	MAT 270
College Algebra (1993) (replaces College Algebra [1979])	3	MAT 117
College Algebra and Trigonometry	3	MAT 170
College French	4	FRE 101 (Students must score 39–48.)
College French	8	FRE 101, 102 (Students must score 49–53.)
College French	12	FRE 101, 102, 201 (Students must score 54–62.)
College French	16	FRE 101, 102, 201, 202 (Students must score 63 or higher.)
College German	4	GER 101 (Students must score 39–45.)
College German	8	GER 101, 102 (Students must score 46–50.)
College German	12	GER 101, 102, 201 (Students must score 51–59.)
College German	16	GER 101, 102, 201, 202 (Students must score 60 or higher.)
College Spanish	4	SPA 101 (Students must score 40–49.)
College Spanish	8	SPA 101, 102 (Students must score 50–54.)
College Spanish	12	SPA 101, 102, 201 (Students must score 55–61.)
College Spanish	16	SPA 101, 102, 201, 202 (Students must score 62 or higher.)
English Literature	3	Elective credit
Freshman College Composition (replaces College Composition and Freshman English)	0	With satisfactory essay qualifies for ENG 105
General Biology	8	BIO 187, 188
General Chemistry	9	CHM 113, 115
Human Growth and Development	0	No credit
Information Systems and Computer Applications	3	Elective credit
Introduction to Educational Psychology	0	No credit
Introductory Accounting	6	Elective credit
Introductory Business Law	3	Elective credit
Introductory Psychology	3	PGS 101
Introductory Sociology	3	SOC 101
Principles of Macroeconomics (replaces Introductory Macroeconomics)	3	ECN 111
Principles of Management	0	No credit
Principles of Marketing	0	No credit
Principles of Microeconomics (replaces Introductory Microeconomics)	3	ECN 112
Trigonometry	0	No credit
Western Civilization—Ancient Near East to 1648	6	HST 102, 103
Western Civilization—1648 to the Present	3	HST 104

Training [CBT] scale) or higher for the General Examinations, except for English Composition with Essay, on which students must receive a standard score of 610 (1978 scale), 500 (1986 scale), or 50 (CBT scale). *Students who have completed 60 semester hours of credit are not eligible to receive any credit for the CLEP General Examinations.*

Subject Examinations. A standard score of 50 (except Spanish, French, or German) or higher must be received to obtain credit for any subject examination. The completion of 60 semester hours does not preclude eligibility for additional credit for subject examinations.

All equivalency is subject to future review and possible catalog change. For more information, call University Testing Services at 480/965-7146 or stop by EDB 301.

DSST. Students who have taken a DSST (DANTES [Defense Activity for Nontraditional Education Support] Subject Standardized Test) may receive university credit. Credit is awarded for score results at or above the American Council on Education's recommended score if the subject examination is applicable to a program of study at ASU or may be assigned elective credit. To receive credit, a transcript showing the DSST results must be received by ASU directly from the Educational Testing Service.

International Baccalaureate (IB) Diploma/Certificate. Students who present an International Baccalaureate Diploma/Certificate may qualify for university credit, depending on the level of the examination and the grade received. Arizona State University grants credit for higher-level courses only. A grade of 5 qualifies the student to receive credit for up to two introductory courses while a grade of 4 qualifies a student to receive credit for one introductory course. No credit is awarded for English as a Second Language (English B). Credit is awarded according to the "International Baccalaureate Diploma/Certificate Credit" table, page 70.

Comprehensive Examinations. A comprehensive examination is intended to permit a student to establish academic credit in a field in which the student has gained experience or competence equivalent to an established university course. Applications are given only for courses listed in the current catalog and only for courses in which a comprehensive examination can serve as a satisfactory measure of accomplishment.

A number of restrictions apply. The student must be enrolled at ASU with *no more than 100 semester hours of credit earned.* The examinations must be taken during the first two semesters in residence in a degree program at the university. *No more than 60 semester hours of credit may be established by comprehensive examinations* (including AP, IB, and CLEP credit) and independent learning courses.

The decision on the suitability of course material for a comprehensive examination, the development of a comprehensive examination, and the administration of an examination are strictly departmental functions. An application is for one course only. The student should complete an application form with the number, title, and number of semester hours for the course. When completed, the application must be approved by the student's advisor and the chair of the department responsible for offering the course.

The student must then pay the stated fee for such examinations at Cashiering Services. The receipt must be taken to the departmental office.

The examination is prepared by the instructor who normally conducts the course, and it is comprehensive in nature and scope. The instructor and other experts designated by the chair grade the examination, using letter grades "A," "B," "C," "D," or "E." If the grade is "C" or higher, a mark of "Y" is entered on the student's permanent record; otherwise, no entry is made. Credit by examination is indicated as such on the record. The student is notified by mail of the result of the examination. In cases of failure ("D" or "E"), the student is not given an opportunity to repeat the examination.

A student pursuing a second baccalaureate degree may not receive credit by comprehensive examination, but, with prior approval of the college, the student may use the examination to waive a course requirement if a grade of "C" or higher is earned.

Proficiency Examinations. Proficiency examinations and auditions are given

1. to waive a course requirement;
2. to validate certain transfer credits in professional programs; and
3. to determine a student's ability in a field where competence is an important consideration.

Detailed information may be obtained from the dean's office of the college in which the student is registered.

UNIVERSITY TESTING REQUIREMENTS

All new, transfer, or readmitted undergraduate students who plan to enroll for seven or more semester hours must meet one of the following testing requirements. *Students who fail to meet at least one of these requirements will not be allowed to register for any course the following semester.*

1. Take the ACT English or SAT verbal examination and have scores submitted to ASU.
2. Receive a score of 4 or 5 for the advanced placement examination in English offered by the College Entrance Examination Board and have scores submitted to ASU.
3. Take the CLEP general examination in English, earning a score that qualifies for placement in ENG 105, and have scores submitted to ASU.
4. Have previously taken ENG 101, 102, 105, 107, or 108 at ASU and received a grade of "D" or higher. If the course was taken before 1980, contact the Recording Section, in SSV 142, before registering for classes.
5. Transfer a course equivalent to ENG 101, 102, 105, 107, or 108 with a grade of "C" or higher. An official transcript showing the grade must be received at ASU at least six weeks before registration. If a student transfers an equivalent composition course from a public community college or university in Arizona, the equivalency is automatically posted, and the student need not take further action. A student transferring a composition course from any

International Baccalaureate Diploma/Certificate Credit

Examination	Score	Semester Hours	Equivalency
Art/Design	7, 6, or 5	6	ART 111, 112
	4	3	ART 112
Biology	7, 6, or 5	8	BIO 187, 188
	4	4	BIO 187
Chemistry	7, 6, or 5	9	CHM 113, 115
	4	4	CHM 113
Computer Science	7, 6, 5, or 4	3	CSE 100
Economics	7, 6, or 5	6	ECN 111, 112
	4	3	ECN 111
English A	7, 6, or 5	6	ENG 101, 114
	4	3	ENG 114
English B	No credit	0	None
Foreign Language A or B*	7, 6, or 5	8	Foreign language 101, 102
	4	4	Foreign language 101
Geography	7, 6, 5, or 4	3	GCU 102
History—American	7, 6, or 5	6	HST 109, 110
	4	3	HST 109
History—European	7, 6, or 5	6	HST 103, 104
	4	3	HST 103
Mathematics	7, 6, 5, or 4	4	MAT 270
Physics	7, 6, or 5	8	PHY 111, 112, 113, 114
	4	4	PHY 111, 113
Social and Cultural Anthropology	7, 6, 5, or 4	3	ASB 102
Theatre—Introduction	7, 6, 5, or 4	3	THE 100

* No credit is awarded if the language is the student's native language.

other college or university must have the course evaluated for equivalency. See "First-Year Composition Requirement," page 81, for more information.

6. International students whose native language is not English must take ENG 107 (or WAC 107, followed by ENG 107 the next semester) in the first semester at ASU, unless they have taken and transferred an equivalent composition course from a college or university in the U.S. Such a course must be evaluated for equivalency by the Composition Office.

Placement Examinations

English. Students who have not taken any composition courses are placed in First-Year Composition courses according to their scores on the ACT English or SAT verbal tests.

Note: The ACT and SAT scoring systems have been modified. Shown in parentheses are equivalent ACT scores for tests taken before October 1989 and equivalent SAT scores for tests taken before April 1995.

Students who score 18 (16) or below on the ACT English test or 460 (380) or below on the SAT verbal test must enroll in WAC 101, a basic writing course (see "Writing Across the Curriculum," page 352). Students who score between 19 (17) and 28 (24) on the ACT English test or between 470 (390) and 650 (580) on the SAT verbal test are eligible to enroll in ENG 101. Students who score 29 (25) or higher on the ACT English test or 660 (590) or higher on the SAT verbal test may take ENG 105 in place of ENG 101 and 102. Students may qualify for ENG 105 by achieving appropriate scores on the CLEP General Examination in English Composition with Essay or the CLEP Subject Examination in College Composition with Essay. For more information, go to University Testing Services, in EDB 301, access the Web site at www.asu.edu/uts, or call 480/965-7146.

Foreign Language. For information regarding foreign language placement testing, see "Foreign Language Requirement," and "Foreign Language Placement," page 380, and "Special Programs for Advanced Placement and Credit," page 66.

Mathematics. Placement examinations are not required before registering in mathematics courses at ASU. However, mathematics placement exams should be taken before the start of the semester for MAT 106, 117, 170, and 270. For more information, visit the Department of Mathematics and Statistics undergraduate office, in PS A211, or access the Web site at fym.la.asu.edu/placement.

Academic Advising

Effective academic advising of students is an essential aspect of the educational experience at ASU. The university is committed to providing quality advising to continuing, first-time, and transfer students. To achieve the highest-

Academic Advising at ASU Main

College	Location	Telephone	Days	Hours[1]	Web Address
Academic Advising Services	UASB 129	480/965-4464	Mon., Wed. Tues., Thurs., Fri.	9 A.M.–6:30 P.M. 9 A.M.–5 P.M.	www.asu.edu/duas/cas
Barrett Honors College	MB C100L1	480/965-9155	Mon.–Fri.	8 A.M.–5 P.M.[2]	www.asu.edu/honors
College of Architecture and Environmental Design	ARCH 141	480/965-3584	Mon.–Fri.	8:30 A.M.–4 P.M.[3]	www.asu.edu/caed
College of Education	EDB L1-13	480/965-5555	Mon.–Fri.	8 A.M.–5 P.M.	coe.asu.edu/oss
College of Engineering and Applied Sciences	ECG 105	480/965-3421	Mon.–Fri.	8:30 A.M.–4:30 P.M.[2, 3]	www.eas.asu.edu
College of Law	LAW 120	480/965-1474	Mon.–Fri.	8 A.M.–5 P.M.[4]	www.law.asu.edu
College of Liberal Arts and Sciences	SS 111	480/965-6506	Mon.–Fri.	8 A.M.–5 P.M.	clasdean.la.asu.edu/student/resources
College of Nursing	NUR 108	480/965-2987	Mon.–Fri.	8 A.M.–5 P.M.	nursing.asu.edu
College of Public Programs	WILSN 203	480/965-1034	Mon.–Fri.	8:30 A.M.–5 P.M.[3]	asu.edu/copp/students/advisors.html
Herberger College of Fine Arts	GHALL 127	480/965-4495	Mon.–Fri.	8 A.M.–5 P.M.[3]	herbergercollege.asu.edu
W. P. Carey School of Business	BA 109	480/965-4227	Tues. Other weekdays	8 A.M.–6:30 P.M. 8 A.M.–5 P.M.	www.wpcarey.asu.edu/up

[1] Arizona is on mountain standard time all year and does not observe daylight saving time.

[2] Walk-ins are welcome; appointments are recommended.

[3] The office is closed from noon to 1 p.m.

[4] Call for additional hours.

quality advising, students, faculty, and staff must work to form a partnership.

Academic advising plays a critical role in the retention and graduation of students. Advisors mediate between the institution's broad regulations and procedures and the individual student's needs, which are many and varied. In a major, urban, multicampus, largely commuter research institution such as ASU, advisors play many roles and must keep abreast of both changing institutional features and the multiplexity of students' academic and nonacademic lives.

ASU academic advisors serve as facilitators and mediators for students as they

1. develop a suitable educational plan;
2. select appropriate courses;
3. interpret institutional requirements;
4. develop problem-solving and decision-making skills;
5. become independent learners; and
6. clarify career and life goals.

In their role as facilitators and mediators, advisors

1. enhance student awareness of opportunities and services on campus;
2. assist students in evaluating their progress toward their educational goals;
3. refer students to institutional and community resources, including opportunities for research and internships;
4. promote and enhance the university's recruiting and retention efforts;
5. engage in activities to keep themselves informed on issues that impact student success; and
6. support cultural diversity at the university.

Each college has advisors to assist students in developing programs of study, assessing educational goals, and understanding rules, procedures, and curriculum requirements. In some colleges, these advisors are faculty members. In others, they are full-time, professional advisors. Students often may seek academic and career advice from both faculty members and full-time advisors. Students are encouraged to take advantage of the skill and knowledge of the advising professionals available to them. Most new students and many continuing students must meet with an advisor as a condition of registration.

An additional unit, Academic Advising Services, is a central advising, referral, and information facility whose staff is available to assist students in their academic careers at ASU. Emphasis is placed on advising services to first-time, prospective, transfer, and visiting students and students in transition, such as those changing majors and those without majors. Bachelor of Interdisciplinary Studies students (B.I.S. or pre-B.I.S.) also receive academic advising in Academic Advising Services. In addition to guidance in the exploration or selection of a major, Academic Advising Services provides general academic information and referrals to all areas of student academic support. For more information, visit Academic Advising Services in UASB 129, or call 480/965-4464.

Students are strongly encouraged to seek academic advising at the earliest possible time and to do so regularly throughout their academic careers, whether or not advising is mandatory in their particular programs. Advisors may be

contacted at the locations and times shown in the "Academic Advising at ASU Main" table, page 71. For academic advising at ASU East, see the "Academic Advising at ASU East" table, page 589. (See "Building Abbreviations," page 717, for a list of building abbreviations and names.)

Readmission to the University

Undergraduate students who have previously attended ASU but have not been enrolled at ASU for one semester or more are required to apply for readmission for the semester in which reenrollment is intended. Nonresident applicants must submit a nonrefundable $50 application fee. If, meanwhile, the student has attended another accredited college or university, it is necessary for the student to have on file an official transcript of all academic work taken. Failure to report such attendance is considered misrepresentation and falsification of university records. In addition, it is considered cause for Records Hold action and withholding of further registration privileges. An applicant for readmission must meet the requirements for good standing. See "Retention and Academic Standards," page 78, and the requirements of the college to which the application is being made. An applicant who has been denied readmission may appeal to the University Undergraduate Admissions Board. Nondegree applicants for readmission must have a minimum GPA of 2.00. If not, the applicant must apply to ASU through Undergraduate Admissions.

Conditional Readmission. A student completing academic work in progress at another institution may be granted conditional readmission. This conditional status remains effective until a final official transcript is received. The student is subject to Records Hold action, and additional registration privileges are withheld if this condition for readmission is not cleared by midsemester.

Academic Renewal

Academic renewal is a university policy administered for the purpose of recalculating the ASU cumulative GPA of undergraduate students who have been readmitted to a degree program after an absence of at least five continuous calendar years including summer sessions and who have completed in good standing a minimum of 12 college-approved additional hours in residence within three semesters after reentry. Students may have the former academic record before the five-year absence (including transfer credits) accepted in the same manner as if the credits were transfer credits. That is, earned hours are carried forward for up to 60 hours of credit in which a grade of "C" or higher was earned. The cumulative GPA is based only on credits earned subsequent to the student's reentry. All graduation residency, academic recognition residency, and GPA requirements must be fulfilled after academic renewal.

A request for academic renewal follows this procedure:

1. Students interested in academic renewal must request the Application for Academic Renewal from the Readmission Section of the Office of the Registrar or the dean of the college offering the major.
2. The Application for Academic Renewal may be submitted immediately upon readmission but not later than the start of the third semester after readmission.
3. The Application for Academic Renewal is submitted by the student to the dean of the college offering the major.
4. The dean specifies in advance a minimum of 12 semester hours.
5. When the approved credits are completed with a cumulative GPA of 2.50 or higher, and no grade lower than "C" in each course, the dean forwards the Application for Academic Renewal to the Office of the Registrar for processing.

Only students working toward their first undergraduate degree are eligible to apply for academic renewal, which may be effected only once during a student's academic career. Academic renewal is transferable among colleges. All students with ASU GPAs below 2.00 are eligible to petition for academic renewal. Individual colleges may elect to entertain petitions for academic renewal from students with ASU GPAs above 2.00. College standards committees have final authorization on academic renewal petitions. Eligibility for graduation is based on the ASU cumulative GPA after academic renewal. However, a student's complete record—before and after academic renewal—remains on the transcript and may be taken into consideration when a student applies for undergraduate professional or graduate programs.

Registration

All persons attending a class at ASU must be registered for that class. A student is considered to be registered when all registration fees have been paid in full.

Eligibility. Only eligible students may register for courses at ASU. An eligible student is either continuing from the previous semester or has been admitted or readmitted to the university. See "Undergraduate Admission," page 59, and "Readmission to the University," page 72.

Proof of Identification. To receive university services, photo identification must be presented. Each admitted or readmitted student who completes the registration process for a regular semester needs to obtain a student identification card. This photo identification card is valid for the duration of the student's enrollment at ASU.

Photo IDs are issued throughout the semester at the Sun Card office located in the Memorial Union on Main Campus, at the OASIS in the Center Building on East Campus, and in the University Center Building at ASU West. See the *Schedule of Classes* or refer to "Parking Decals," page 49.

Registration Fees. Registration fees are due and must be paid in full at the time specified for each semester in the *Schedule of Classes*. If any payment tendered is unauthorized, incomplete, or received after the due date, registration fees are considered unpaid.

Enrollment Verification Guidelines

Term	Student	Full Time	Half Time	Less Than Half Time
Regular semester	Undergraduate	12 or more hours	6–11 hours	5 or fewer hours
	Graduate	9 or more hours	5–8 hours	4 or fewer hours
	Research/teaching assistant	6 or more hours	—	—
Five-week summer session	Undergraduate	4 or more hours	2 hours	1 hour
	Graduate	3 or more hours	2 hours	1 hour
	Research/teaching assistant	2 or more hours	1 hour	—
Eight-week summer session	Undergraduate	6 or more hours	3–5 hours	2 or fewer hours
	Graduate	5 or more hours	3–4 hours	2 or fewer hours

Schedule of Classes. The *Schedule of Classes,* published for the fall and spring semesters, and the *Summer Sessions Bulletin* are distributed without charge. These publications are available online at www.asu.edu/registrar/schedule. They list course offerings, dates, times, places, and procedures for registration, along with other important information about the term.

Course Loads. A minimum full-time course load for an undergraduate student is 12 semester hours. The maximum course load for which a student may register is 18 semester hours (with the exception of a 19-hour maximum for students enrolled in the Colleges of Engineering and Applied Sciences or Architecture and Environmental Design). A student wishing to register for more than the maximum must petition the standards committee of the college in which the student is enrolled and must obtain an approved override before registration. See "Summer Session Semester Hour Load," on this page, for summer course load information.

Reserving of Course Credit by Undergraduates. Seniors at ASU within 12 semester hours of graduation may enroll in a 400-level or graduate course and reserve the credit for possible use in a future graduate program. The course cannot be used to meet a baccalaureate graduation requirement. Before registration in the course, the student must submit a Graduate College Petition form requesting credit reservation. The form must be signed by the student's advisor, the head of the academic unit offering the class, and the dean of the Graduate College.

Permission to reserve a course does not guarantee admission to a graduate degree program or that the course may be used toward graduate degree requirements. A maximum of nine semester hours may be reserved, and only courses in which the student earned an "A" or "B" grade are applicable. Reserved credit earned before admission to a graduate degree program is classified as nondegree credit. The maximum course load for a student enrolled in a reserved course is 15 semester hours during a regular semester and six hours during a summer session.

Summer Session Semester Hour Load. The summer session semester hour load limit is seven semester hours for each five-week session and nine semester hours for the eight-week session. The student may not exceed a total of 14 semester hours for any combination of sessions.

Concurrent Enrollment. Provided that the other institution's regulations concerning enrollment, graduation requirements, and transfer of credits are not violated, a student may enroll in classes at other institutions or in independent learning courses while enrolled at ASU. However, the student is urged to seek advising before concurrent enrollment to assure orderly progress toward a degree. If total credits exceed the maximum course load, prior permission must be granted by the college standards committee. See "Course Loads," on this page.

Attendance. The instructor has full authority to decide whether class attendance is required.

Enrollment Verification Guidelines. The registrar is responsible for verifying enrollment according to the general guidelines in the "Enrollment Verification Guidelines" table, on this page. Independent learning courses are not considered for enrollment verification purposes.

Cooperative Programs

Cooperative Education. Cooperative education at ASU is any educational program that requires *alternating classroom and work experience* in government or industry. The work experience exists for its educational value.

Full-Time Status of Co-op Students. A co-op student, during a work semester, is identified as both co-op and full time by the university. To qualify, the student must have met prescribed hours and GPA requirements.

Rights and Privileges of Co-op Students. During their work semesters, co-op students have the rights, privileges, and protections—with regard to university matters—accorded to full-time students, except financial aid. They maintain catalog continuity and have student access to university facilities and events.

Financial Aid for Co-op Students. Co-op students are not identified to lenders (including ASU) as being in loan repayment status. They have an "in school" full-time enrollment status. Co-op students do not receive any financial aid disbursement during their co-op semesters, *nor are such awards transferred to another semester.* The student is responsible for notifying Student Financial Assistance as soon as plans for a co-op term are made but no later than 10 days before the co-op term begins. The department or school is responsible for notifying Student Financial Assistance of students approved for co-op terms.

Traveling Scholar Program. The Traveling Scholar Program is a cooperative program among the state universities

designed to enable students to take advantage of programs or special resources that are not available at their own institutions. Any undergraduate student with a GPA of at least 2.50 or any graduate student with a GPA of at least 3.00 enrolled at ASU, Northern Arizona University, or University of Arizona may be designated a Traveling Scholar by prior mutual agreement of the appropriate academic authorities at both the sponsoring and hosting institutions. For more information and the application form, call the Registrar's Records Information section, or access the Web at www.asu.edu/registrar/forms.

Grading System

DEFINITIONS

Unit of Credit

The Arizona Board of Regents has defined (May 26, 1979) a unit of credit for the institutions under its jurisdiction. A minimum of 45 hours of work by each student is required for each unit of credit. An hour of work represents a minimum of 50 minutes of class time—often called a "contact hour"—or 60 minutes of independent study work. For lecture-discussion courses, this requirement equates to at least 15 contact hours and a minimum of 30 hours of work outside the classroom for each unit of credit. Even though the values of 15 and 30 may vary for different modes of instruction, the minimum total of 45 hours of work for each unit of credit is a constant. Since the unit of credit as defined by the Arizona Board of Regents is the cornerstone of academic degree programs at ASU, degrees granted by other institutions that are recognized by ASU should be based on a similar unit of credit.

Grades and Marks

All grades and marks appear on the permanent record and/or unofficial transcript.They are indicated by the letters shown in the "Grades" table, on this page.

Grades

Grade	Definition	Value
A	Excellent	4.00
B	Good	3.00
C	Average	2.00
D	Passing	1.00
E	Failure	0.00
I	Incomplete	—
NR	No report	—
P	Pass	—
RC*	Remedial credit	—
RN*	Remedial no credit	—
W	Withdrawal	—
X	Audit	—
Y	Satisfactory	—

* This grade appears on only unofficial copies of ASU transcripts.

Grading Options

Ordinarily a grade of "A," "B," "C," "D," or "E" is given upon completion of a course, unless a grading option of "audit" or "pass/fail" is indicated at the time of registration. *Grading options cannot be changed after the close of the drop/add period.*

Incomplete

A mark of "I" (incomplete) is given by the instructor only when a student who is otherwise doing acceptable work is unable to complete a course because of illness or other conditions beyond the student's control. The mark of "I" should be granted only when the student can complete the unfinished work with the same instructor. However, an incomplete ("I") may be completed with an instructor designated by the department chair if the original instructor later becomes incapacitated or is otherwise not on campus. The student is required to arrange with the instructor for the completion of the course requirements. The arrangement is recorded on the Request for Grade of Incomplete form. The student has one calendar year from the date the mark of "I" is recorded to complete the course. If the student completes the course within the calendar year, the instructor must submit a Request for Grade of Incomplete/Authorization for Change of Grade form to the Office of the Registrar, whether the student passed or failed the course. Marks of "I" are changed to a grade of "E" for purposes of evaluating graduation requirements for undergraduate students. Marks of "I" received in the fall 1983 semester or thereafter for undergraduate courses that have been on a student's record for more than one calendar year are automatically changed to a grade of "E." An undergraduate student does not reregister or pay fees for a course for which an incomplete "I" has been received in order to complete the course.

Students who receive a mark of "I" in courses at the 500 level or above have one calendar year to complete the course for a grade. After one calendar year, the mark of "I" becomes a permanent part of the transcript. To repeat the course for credit, a student must reregister and pay fees. The grade for the repeated course appears on the transcript but does not replace the permanent "I."

Satisfactory

A mark of "Y" (satisfactory) may be used at the option of individual colleges and schools within the university and is appropriate for internships, projects, readings and conferences, research, seminars, theses, and workshops. The "Y" is included in earned hours but is not computed in the GPA.

Credit Enrollment

The semester hour is the unit on which credit is computed. It represents one 50-minute class exercise per week per semester. To obtain credit, a student must be properly registered and must pay fees for the course.

Audit Enrollment

A student may choose to audit a course, in which case the student attends regularly scheduled class sessions, but no credit is earned. The student should obtain the instructor's approval before registering and paying the fees for the course. Selected courses may not be audited. Veteran students using education benefits should see "Veterans Services," page 40.

The mark of "X" is recorded for completion of an audited course, unless the instructor determines that the student's participation or attendance has been inadequate, in which

case the mark of "W" (unrestricted withdrawal) may be recorded. This grading option may not be changed after the close of drop/add. The "X" is not included in earned hours and is not computed in the GPA.

Pass/Fail Enrollment

A mark of "P" (pass) or "E" (fail) may be assigned for this grading option. This grading method may be used at the option of individual colleges and schools within the university. Consult the academic advisor for detailed information and restrictions. Approval of both the class instructor and the college of the major are required before registration. "P" is included in earned hours but is not computed in the GPA.

Remedial Enrollment

A mark of "RC" (remedial credit) or "RN" (remedial no credit) may be assigned for this grading option. The course appears on an unofficial ASU transcript but does not appear on the grade report or official ASU transcript and is not included in earned hours. Remedial hours are included in verification of enrollment for purposes of loan deferment and eligibility.

WITHDRAWALS

Instructor-Initiated Drop

An instructor may drop a student for nonattendance during the second week of classes in fall or spring semesters or the first four days of each summer session. Instructor-initiated drops for nonattendance are signed by the dean or dean's designee. The college notifies students by mail. The student must contact the instructor before the end of the first week of classes if absences during that period cannot be avoided.

Drop/Add

Students registering for courses for a semester or summer session may drop or add courses through the first week of classes in a semester or the first two days of a summer session. See the *Schedule of Classes* or the *Summer Sessions Bulletin* for dates of drop/add periods. During this period, a student may drop one or more but not all scheduled courses without penalty. Courses that are dropped do not appear on the student's transcript and fees paid are fully refunded, depending on the student's remaining hours. A student who wishes to withdraw from all courses during the drop/add period must process an unrestricted withdrawal.

Unrestricted Course Withdrawal

During the first four weeks of a semester or the first six days of a summer session, a student may withdraw from any course with a mark of "W." See the *Schedule of Classes* or the *Summer Sessions Bulletin* for dates of the unrestricted withdrawal period.

Restricted Withdrawal

From the fifth week to the end of the 10th week of a semester and from the seventh day to the end of the third week of a summer session, students may withdraw with a mark of "W" from only courses in which the instructor certifies that they are passing at the time of the withdrawal. See the *Schedule of Classes* or the *Summer Sessions Bulletin* for dates of the restricted withdrawal period.

The number of restricted withdrawals with the mark of "W" is limited. One restricted withdrawal is assessed for each course withdrawn from, unless the student is withdrawing from all courses. A complete withdrawal results in the assessment of one restricted withdrawal against a student's limit. The number of withdrawals is a total of two for students during freshman, sophomore, junior, or senior standing; and a total of two for students during second undergraduate degree standing. Non-degree-seeking graduate students are permitted to process an unlimited number of restricted withdrawals. Students must obtain a Restricted Withdrawal Request and obtain the signature of the instructor. The instructor has the option of assigning either a "W" or a failing grade of "E."

Students who have reached their restricted withdrawal limit are not allowed to process any additional restricted course withdrawals. However, students are allowed to process a restricted complete withdrawal even when they have reached the restricted withdrawal limit. The preceding limits do not prevent students from processing a complete withdrawal from the university with marks of "W" or "E." Complete withdrawal counts as one withdrawal for purposes of applying the above limits. The preceding does not apply to audit enrollment or zero-hour labs and recitations.

Procedure for Restricted Withdrawal. A student seeking a restricted withdrawal needs to

1. obtain a withdrawal form from any registrar site or print one via the Web at www.asu.edu/registrar/forms;
2. obtain a signature and verification of grade from instructor(s); and
3. have the form processed at any registrar site.

Instructor-Initiated Withdrawal

An instructor may withdraw a student from a course with a mark of "W" or a grade of "E" only if the student's continued presence in the course is disruptive to the instructor's ability to conduct the course. A student may appeal an instructor-initiated withdrawal within 10 days of being withdrawn to the standards committee of the college in which the course is offered. The decision of the committee is final. Restricted withdrawal limits do not apply to withdrawals initiated by an instructor.

Withdrawal from the University

To withdraw from *all* classes after having paid registration fees, a student must submit a request in person, withdraw using SunDial, or submit a signed request to the Office of the Registrar. The SunDial complete withdrawal option is only available through the first week of classes for a semester. During the unrestricted complete withdrawal period, a student may withdraw from all courses with marks of "W." During the restricted complete withdrawal period, a student may withdraw with marks of "W" only from courses that the instructors certify the student was passing at the time of withdrawal. See the *Schedule of Classes* or the *Summer Sessions Bulletin* for dates of the complete withdrawal periods. No one is permitted to withdraw from the university or to conduct any registration transaction in the last two weeks of the semester. The date of the complete withdrawal is always

the date the withdrawal form or letter is received in the Office of the Registrar.

Medical/Compassionate Withdrawal

A medical/compassionate withdrawal request may be made in extraordinary cases where serious illness or injury (*medical*) or another significant personal situation (compassionate) prevents a student from continuing in his or her classes, and where incompletes or other arrangements with the instructor are not possible. Usually, consideration is for complete withdrawal. All applications for withdrawal require thorough and credible documentation. Application for less than a complete withdrawal must be especially well documented to justify the selective nature of the medical/compassionate withdrawal request.

A student may request and be considered for a *medical* withdrawal when extraordinary circumstances, such as a serious illness or injury, prevent the student from continuing in classes. This policy covers both physical-health and mental-health difficulties.

A student may request and be considered for a *compassionate* withdrawal when extraordinary personal reasons, not related to the student's physical or mental health (for example, care of a seriously ill child or spouse, or a death in the student's immediate family), prevent the student from continuing in classes.

Each college has a dean's representative (medical/compassionate withdrawal designee) to review medical/compassionate withdrawal requests, according to that college's procedures. A student requesting a medical/compassionate withdrawal is referred to the dean's designee of the college of the major. A nondegree student is referred to the dean's designee of the college with which he or she is primarily affiliated. The dean's designee determines the appropriateness of the medical/compassionate withdrawal request and whether an administrative hold is indicated. Removal of the hold must be authorized by the designee before the student can register for a future semester or be readmitted to the university.

The medical/compassionate withdrawal procedure results in a special note line on the unofficial transcript. Refunds are not given beyond six months past the close of the semester. Only one Request for Documented Medical/Compassionate Withdrawal form needs to be filed with the college of the major, even if classes in more than one college are involved. Medical/compassionate withdrawal applications and supporting documents are retained and filed separately from the student's other records.

GRADE POINTS

For the purpose of computing the grade point average (GPA), grade points are assigned to each of the grades for each semester hour as follows: "A," four points; "B," three points; "C," two points; "D," one point; "E," zero points. GPAs are rounded to the nearest 100th of a grade point.

Grade Point Average

Grade points earned for a course are multiplied by the number of semester hours to produce honor points. For example, receiving an "A," which is assigned four grade points, in a three-semester-hour course would produce 12 honor points. The grade point average (GPA) is obtained by dividing the total number of honor points earned by the total number of semester hours graded "A," "B," "C," "D," or "E." Other grades do not carry grade points. *Semester* GPA is based on *semester* net hours. *Cumulative* GPA is based on *total* net hours.

Change of Grade

Ordinarily the instructor of a course has the sole and final responsibility for any grade reported. Once the grade has been reported to the registrar, it may be changed upon the signed authorization of the faculty member who issued the original grade. Approval for the change is also required by the department chair and the dean of the college concerned. This policy also applies to the grade of "I" (incomplete).

University Policy for Student Appeal Procedures on Grades

Informal. The steps outlined on this page, beginning with step A, must be followed by any student seeking to appeal a grade. Student grade appeals must be processed in the regular semester immediately following the issuance of the grade in dispute (by commencement for fall or spring), regardless of whether the student is enrolled at the university. It is university policy that students filing grievances and those who are witnesses are protected from retaliation. Students who believe they are victims of retaliation should immediately contact the dean of the college in which the course is offered.

A. The aggrieved student must first undergo the informal procedure of conferring with the instructor, stating the evidence, if any, and reasons for questioning that the grade received was not given in good faith. The instructor is obliged to review the matter, explain the grading procedure used, and show how the grade in question was determined. If the instructor is a graduate assistant and this interview does not resolve the difficulty, the student may then go to the faculty member in charge of the course (regular faculty member or director of the course sequence) with the problem.

B. If the grading dispute is not resolved in step A, the student may appeal to the department chair or other appropriate chair of the area within the department (if any). The department chair may confer with the instructor to handle the problem. Step B applies only in departmentalized colleges.

C. If these discussions are not adequate to settle the matter to the complainant's satisfaction, the student may then confer with the dean of the college concerned (or the dean-designate), who will review the case. If unresolved, the dean or designate may refer the case to the college academic grievance hearing committee to review the case formally. In most instances, however, the grievance procedure does not go beyond this level.

Formal. The following procedure takes place after steps A, B, and C (or A and C) have been completed.

D. Each college has on file in the office of the dean (and in each department of the college) the procedures and composition of the undergraduate or graduate academic

grievance hearing committee for student grievances. Each college committee shall operate under grievance procedures as stated which satisfy due process requirements. The committee shall always meet with the student and the instructor in an attempt to resolve the differences. At the conclusion of the hearing, the committee shall send its recommendations to the dean.

E. Final action in each case will be taken by the dean after full consideration of the committee's recommendation. Grade changes, if any are recommended, may be made by the dean. The dean shall inform the student, instructor, department chair (if any), the registrar, and the grievance committee of any action taken.

Repeating Courses

An undergraduate course taken at ASU may be repeated for credit if the grade of "D," "E," or "W" or a mark of "X" is received. An undergraduate student may not repeat for credit an undergraduate course in which a grade of "C" or better is earned. Undergraduate courses in which grades of "D" or "E" are received may be repeated only once. After an undergraduate student repeats 100- and 200-level courses, the student's transcript shows both grades, but the student's cumulative GPA reflects only the higher grade. After an undergraduate student repeats 300- or 400-level courses, the student's cumulative GPA and the transcript reflect both grades.

To be eligible for the deletion of "D" or "E" grades, the course must be repeated at ASU. Independent Learning courses may not be used to repeat "D" or "E" grades. Students who have graduated are not eligible to delete the grade for a course taken before the award of the ASU bachelor's degree.

Students wishing to repeat a class for the third time with grades of "D" or "E" must petition the standards committee of the college in which they are enrolled. This policy does not apply to seminar and independent study courses with different content each semester. This policy affects only undergraduate students and undergraduate courses.

Demonstration of Mastery

An undergraduate student who receives a "D" in a course in which a "C" or higher is required may use the grade from an equivalent course taken elsewhere to demonstrate mastery at the "C" or higher level. However, the course may neither be transferred to ASU (since credit has already been given for the course) nor computed in the student's GPA.

Midterm Report

Instructors are strongly encouraged to evaluate students at midterm for academic progress. A student who has been evaluated for a "D" or "E" at midsemester receives a midterm report. The midterm "D" and "E" grades are not recorded on the student's permanent record. Midterm reports are mailed to the student's local address of record.

Final Grades

Grades may be viewed online at www.asu.edu/registrar or accessed through SunDial at 480/350-1500.

Records Hold

The Office of the Registrar enforces a financial records hold or administrative hold on the records of a student when an outstanding financial obligation or disciplinary action has been reported.

When a financial hold is placed on the record, the following results may occur:

1. No official transcript is issued.
2. Registration privileges are suspended.
3. Other student services may be revoked.

When an *administrative* hold is placed on the record, the following results may occur:

1. Registration privileges are suspended.
2. Other students services may be revoked.

The hold remains effective until removed by the initiating office. It is the student's responsibility to clear the conditions causing the hold.

Transcripts

The Office of the Registrar releases official transcripts *only upon the written request of the student.* The request must include the following information about the student:

1. name;
2. former name(s);
3. date of birth;
4. first and last dates of attendance;
5. return address;
6. phone number;
7. specific mailing address for each transcript ordered;
8. ASU ID number; and
9. Social Security Number (SSN).

Students (except those who attended ASU before 1980) must also select one of the following options to be displayed on the transcript:

1. ASU ID only;
2. SSN only;
3. both ASU ID and SSN displayed; or
4. neither ASU ID or SSN displayed.

The request for official transcript form is available online at www.asu.edu/registrar/forms.

The Office of the Registrar does not issue a transcript if the student has a financial records hold. The student must supply a specific address if the transcript is to be mailed. The fee for an official transcript is $6 per copy. "Rush" transcripts (requested to be printed and picked up on the same day) cost $5 in addition to the total cost of the transcripts ordered. Special delivery requests via Federal Express or U.S. Express Mail, instead of regular mail, will cost $17.50 per delivery address, in the 48 contiguous U.S. states, in addition to the cost of the transcript(s). The additional cost of special express deliveries to addresses outside the contiguous states (e.g., Hawaii, Alaska, and other countries) varies. Students are billed the initial $17.50 as part of this credit card transaction and sent a bill for the remainder. Fees are subject to change without notice.

Unofficial transcripts may be requested in person at the Office of the Registrar or any registrar site, or by mail or fax (480/965-2295) if a signed release is enclosed. There is no

Basic Competencies

Area	ASU Courses That May Be Used to Meet Basic Competencies
American history	Any one course: HST 109, 110
English	Any one course: ENG 101, 105, 107; WAC 101, 107
Fine arts	Any one course: ADE 120; DSC 120, 121, 122; any undergraduate three-semester-hour course offered in the Herberger College of Fine Arts; ASU West courses: ARS 101, 300; IAP 101, 300, 302, 331; MUS 354, 355; THE 100, 320, 321, 400
Foreign language	Student must complete through the 102, 107, or 111 course level of any foreign language course.
Laboratory science*	
Chemistry	Any one course: CHM 101, 107, 113, 114, 117
Earth sciences	Any numbered selection: 1. GLG 101 and 103 2. GLG 110 and 111 3. GLG 105 4. GPH 111 5. ERS 130
Life sciences	Any one course: BIO 100, 120, 187, 188, 201; PLB 108
Physics	Any numbered selection: 1. AST 111 and 113 2. AST 112 and 114 3. PHS 110 4. PHY 101 5. PHY 111 and 113 6. PHY 112 and 114 7. PHY 121 and 122 8. PHY 131 and 132
Mathematics	Any one course: MAT 114, 117, 119, 170, 210, 260, 270, 290
Social science	Any one course: ASB 102; ECN 111, 112; GCU 102, 121, 141; HST 102, 103, 104; PGS 101; POS 101, 110, 150, 160; SOC 101

* The laboratory science requirement is designed to demonstrate competency in at least two laboratory science areas. For example, if one lab science competency has been met in life sciences through high school course work, the ATP biology achievement test, or college course work, the second or third lab science course must be selected from chemistry, earth sciences, or physics.

charge for an unofficial transcript. Also, students may view and print their own unofficial transcripts via the Web using ASU Interactive at www.asu.edu/registrar.

Note: Pre-1980 records are not available via the Web option.

All in-person transcript requests require presentation of photo identification. Requests are not accepted from third parties without a written release from the student. For information on parental access to records, see "Access to Records," page 80.

Retention and Academic Standards

Class Standing. A student's class standing is determined by the number of hours earned, as shown in the "Class Standing" table, on this page.

Academic Good Standing. For the purpose of retention, academic good standing for degree-seeking students is defined as shown in the "Academic Good Standing" table, on this page.

A student who does not maintain the minimum GPA standard is placed on academic probation or is disqualified. A student on academic probation is in conditional good standing and is permitted to enroll. A student who has been disqualified is not in academic good standing and is not permitted to enroll for fall or spring semesters.

To transfer from one college to another within the university or to be eligible for readmission, a student must have a GPA of 2.00 or higher. The GPA determining good standing is computed on courses taken only at ASU.

Class Standing

Student	Hours Earned
Freshman	24 or fewer semester hours earned
Sophomore	25 to 55 semester hours earned
Junior	56 to 86 semester hours earned
Senior	87 or more semester hours earned
Graduate	Bachelor's degree from accredited institution

Academic Good Standing

Total Earned Hours	Minimum Cumulative GPA
24 or fewer	1.60
25 to 55	1.75
56 or more	2.00

For purposes of retention or transfer, an individual college may set higher GPA standards; otherwise, the university standards prevail. See the college sections of this catalog or contact the college deans' offices for statements regarding college retention standards.

Meeting Basic Competencies. New students are required to have completed a specific number of courses in the areas of American history, English, laboratory science, mathematics, social science, fine arts and foreign language. Students who are exempt from these requirements include students who have completed an Arizona General Education Curriculum (AGEC) or an associate degree, students admitted by GED, and students who are 22 years of age or older by the first day of the semester of admission. An admitted student who needs to meet competencies in one or more of these areas must satisfy the requirement within two years of the beginning of the student's first semester at ASU. Subject competencies in each area may be met by earning a grade of "D" or higher at ASU in an appropriate course(s) as listed in the "Basic Competency Requirements" table, page 61.

Appealing Basic Competencies. A student who has not met all basic competencies at the end of two calendar years after the student's initial date of enrollment is not permitted to continue at ASU. Each student is notified that he or she may not register or, if already registered, that their registration has been canceled.

A student wishing to appeal the dismissal should submit a petition through his or her college. The colleges have three options in reviewing these appeals:

1. extending the student's end semester to allow one additional semester to complete the required course work;
2. allowing the student to substitute a course not currently approved to fulfill a competency area when an error has been made in advising or for other just causes; or
3. denying the petition.

College actions are forwarded to the Office of the Registrar for processing.

Dean's List. Undergraduate students who earn 12 or more graded semester hours ("A," "B," "C," "D," or "E") during a semester in residence at ASU with a GPA of 3.50 or higher are eligible for the Dean's List. A notation regarding Dean's List achievement appears *only* on the final grade report available online at www.asu.edu/registrar.

Satisfactory Academic Progress. The university is required to publish and enforce standards of satisfactory academic progress for certain students (e.g., student athletes, students receiving financial aid, and students receiving veterans benefits).

Certification of satisfactory progress for student athletes is verified by the academic advisor and the dean's designee for certifying satisfactory progress. Certification of satisfactory progress for students receiving financial aid or veterans benefits is verified by Student Financial Assistance or the Veterans Services Section, respectively. Students should contact their advisors or the appropriate office for additional information on satisfactory progress requirements.

Probation. A student's college assumes responsibility for enforcing academic standards and may place any student on probation who has failed to maintain good standing as previously defined. For purposes of probation and retention, an individual college may set higher GPA standards. A student on academic probation is required to observe any rules or limitations the college may impose as a condition for retention.

Disqualification. A student who is placed on probation at the end of a semester is subject to disqualification by the college at the end of the following semester if the conditions imposed for retention are not met.

Disqualification is exercised at the discretion of the college and becomes effective on the first day of the semester following college action. *A disqualified student is notified by the dean of the college and is not allowed to register in a fall or spring semester at the university until reinstated.* A student who has been disqualified may appeal to the college standards committee. A student who is disqualified may not attend as a nondegree student.

Reinstatement. Students who have been disqualified may apply for reinstatement and readmission, if needed, through the Registrar's Recording/Readmission Section (SSV 142). The staff in Recording/Readmission will coordinate with the college and the University Admissions Board, as appropriate.

Reinstatement Appeals. A student wishing to appeal the decision of the standards committee of a college may submit an appeal to the University Undergraduate Admissions Board. The decision of the board is final.

Academic Integrity. The highest standards of academic integrity are expected of all students. The failure of any student to meet these standards may result in suspension or expulsion from the university or other sanctions as specified in the University Student Academic Integrity Policy. Violations of academic integrity include, but are not limited to, cheating, fabrication, tampering, plagiarism, or facilitating such activities. The University Student Academic Integrity Policy is available from the Office of the Senior Vice President and Provost and from the deans of the individual colleges.

Suspension or Expulsion for Academic Dishonesty. All decisions relating to expulsion or suspension that are concerned with academic dishonesty are the sole prerogative of the dean of the school or college in which the student has been admitted. These decisions of suspension or expulsion can be appealed in accordance with established university procedures. Application for reinstatement may be made to any of the academic units within the university after the specified period of suspension. Merely having remained in a suspended status for a period of time does not, in itself, constitute a basis for reinstatement.

Student Records

Family Educational Rights and Privacy Act of 1974

The federal Family Educational Rights and Privacy Act of 1974, also known as the Buckley Amendment or FERPA, sets forth the requirements governing the protection of the privacy of education records of students who are or have been in attendance at ASU.

Definitions

Eligible Student. For the purpose of this act, an *eligible student* is defined as any individual formally admitted to and enrolled at ASU.

Record. The term *record* includes any information or data recorded in any medium, including, but not limited to, handwriting, print, tapes, film, microfilm, microfiche, and electronic means.

Types of Information

Education Record. The term *education record* refers to those records directly related to a student and maintained by an educational institution. Two types of education records are subject to the provisions of this act: (1) directory information and (2) personally identifiable information. The term does not include those records specifically excluded by Section 99.3 of the privacy act.

Directory Information. The term *directory information* includes the following student information: name, local, permanent and ASU e-mail addresses (including directory number), local telephone number, date of birth, academic level, major field of study, college of enrollment, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student.

Personally Identifiable Information. The term *personally identifiable information* includes all information not defined as directory information. This includes, but is not limited to, the name of a student's parent or other family member(s), a personal identifier such as the student's ASU ID number or Social Security number, a list of personal characteristics, or other information that would make the student's identity easily traceable and any information, including directory information, that the student has indicated should not be released.

Access to Records

An eligible student may inspect and review his or her own education records. Some form of photo identification must be displayed before access to education records is allowed.

Directory information may be released to anyone without consent of the student unless the student has indicated otherwise. Students may request that this information not be released by completing a form in the Office of the Registrar. A request to withhold this information excludes the student from being listed in the annual directory only if the request is submitted to the Office of the Registrar before the end of the third week of the fall semester.

All other education records that contain personally identifiable information may not be released without the written consent of the student. A parent of a dependent student may challenge denial of such access by producing the most current copy of Internal Revenue Form 1040. If that form lists the student in question as a dependent, the parent is required to sign an affidavit that affirms that the student is his or her dependent. The affidavit is retained by the Office of the Registrar. Upon receipt of the affidavit, the university may make student records available to the parent for the rest of that calendar year as specified under the Buckley Amendment.

Students may grant access to individuals or agencies by completing a form in the Office of the Registrar.

Location of Policy and Records

The custodian of education records at ASU is the Office of the Registrar. Copies of this policy are available in the following offices: Reserve sections of Hayden Library and the Noble Science and Engineering Library, the Office of the Registrar, Undergraduate and Graduate Admissions, and Student Life. The Office of the Registrar also maintains a directory that lists all education records maintained on students by ASU.

University Graduation Requirements

UNIVERSITY REQUIREMENTS

All students enrolled in a baccalaureate degree program must fulfill the following university requirements to graduate.

Credit Requirements

A minimum of 120 semester hours is required for graduation with a baccalaureate degree. A minimum of 45 semester hours in upper-division courses is required for graduation. Some programs may require more than 45 upper-division semester hours for graduation; refer to college graduation requirements for the specific number required.

Not more than 60 semester hours in independent learning courses and/or earned by comprehensive examination (including Advanced Placement, College-Level Examination Program, DANTES Subject Standardized Test, and International Baccalaureate Diploma/Certificate exams) are accepted for credit toward the baccalaureate degree.

Grade Point Requirement

A minimum cumulative grade point average of 2.00 for all courses taken at ASU is required to graduate with a baccalaureate degree.

General Studies Requirement

All students enrolled in a baccalaureate degree program must satisfy a university requirement of a minimum of 35 semester hours of approved course work. (See "General Studies," page 85.) For General Studies courses, see the "General Studies Courses" table, page 88, the course descriptions, the *Schedule of Classes,* and the *Summer Sessions Bulletin.*

Students transferring from Arizona community colleges with a certified completion of the appropriate Arizona General Education Curriculum (AGEC) will have satisfied all lower-division General Studies requirements of the baccalaureate degree with which the AGEC articulates. For more details regarding the different versions of AGEC, refer to az.transfer.org/cas/atass/student/agec.html.

Mathematics Requirement

All undergraduate degree-seeking students are expected to fulfill the university's mathematics requirement by the time they have accumulated 30 hours of credit in residence at ASU. Any student who has more than 30 hours of credit and has not fulfilled the mathematics requirement must enroll in a mathematics course or an appropriate prerequisite course and continue to do so every semester until the mathematics requirement is met. A waiver may be granted for continuous enrollment if there are scheduling conflicts detrimental to the student's academic progress.

First-Year Composition Requirement

Completion of both ENG 101 and 102 or ENG 105 with a grade of "C" or higher is required for graduation from ASU in any baccalaureate program. International students from non-English-speaking countries may meet the First-Year Composition requirement by completing ENG 107 and 108 with a grade of "C" or higher.

New or Transfer Students. Before new students or transfer students can register for the first time at ASU, they must determine what courses to take to complete the university First-Year Composition requirement; the students must then enroll immediately in composition courses and continue to do so every term until composition requirements are met. *Colleges may grant waivers to the immediate and continual enrollment requirement when there are scheduling conflicts detrimental to the student's academic progress.* Transfer students from other Arizona colleges or universities can determine the acceptability of their composition courses by referring to the *Course Applicability System* in consultation with an academic advisor. Composition courses transferred from out-of-state institutions must be evaluated and approved by the Composition Office.

The transfer student must file an application in the student's college for Equivalency of First-Year Composition Requirements, along with a transcript and catalog descriptions of the composition courses to be transferred. The application, available in each college, should be filed immediately upon transfer of course work to ASU so that the student is able to enroll in an additional composition course, if required to do so.

For more information, the student should go to the Composition Office in LL 314.

Resident Credit Requirement

Resident credit refers to a course that is offered in a regular semester, winter session, intersession, or summer session. Credit earned through comprehensive examinations is also included when calculating ASU resident hours. Credit earned through independent learning, advanced placement, the College-Level Examination Program, or an International Baccalaureate Diploma/Certificate are excluded when calculating ASU resident hours.

Campus Resident Credit Requirement. Every candidate for the baccalaureate degree is required to earn a minimum of 30 semester hours in resident credit courses at the ASU campus from which the student will graduate.

Guidelines for Determination of Catalog Year

The *General Catalog* is published annually. Department, school, division, college, and university requirements may change and are upgraded often. In determining graduation requirements, an undergraduate student may use only one edition of the *General Catalog* but may elect to follow any subsequent catalog. Students maintaining continuous enrollment at any public Arizona community college or university may graduate according to the requirements of the catalog in effect at the time of initial enrollment or according to the requirements of any single catalog in effect during

Continuous Enrollment

Student's Activity	Semester/Year	Status
Example A		
Admitted and earned course credit at an Arizona community college	Fall 2000	Active
Continued at an Arizona community college	Spring 2001	Active
	Fall 2001	
Transferred to an Arizona university	Spring 2002	Student enrolled under 2000–01 or any subsequent catalog
Example B		
Admitted and earned course credit at an Arizona community college	Fall 1997	Active
Enrolled but earned all "Ws" or "Es"	Spring 1998	Inactive
Enrolled in audit courses only	Fall 1998	Inactive
Nonattendance	Spring 1999	Inactive
Transferred to an Arizona university	Fall 1999	Student enrolled under 1999–2000 or any subsequent catalog
Example C		
Admitted and earned course credit at an Arizona community college	Fall 1999	Active
Nonattendance	Spring 2000	Inactive
	Fall 2000	
	Spring 2001	
Readmitted and earned course credit at an Arizona community college	Fall 2001	Active
Transferred to an Arizona university	Spring 2002	Student enrolled under 2001–2002 or any subsequent catalog
Example D		
Admitted and earned course credit at an Arizona community college	Fall 1996	Active
Nonattendance	Spring 1997	Inactive
Readmitted and earned course credit at an Arizona community college	Summer 1997	Active
Nonattendance	Fall 1997	Inactive
	Spring 1998	
Transferred to an Arizona university	Fall 1998	Student enrolled under 1996–98 or any subsequent catalog
Example E		
Admitted and earned course credit at an Arizona community college	Summer 1998	Active
Continued at an Arizona community college	Fall 1998	Active
	Spring 1999	
Nonattendance	Fall 1999	Inactive
Readmitted and earned course credit at an Arizona community college	Spring 2000	Active
Transferred to an Arizona university	Summer 2000	Student enrolled under 1998–99 or any subsequent catalog

subsequent terms of continuous enrollment. Students may maintain continuous enrollment whether attending a single public community college or university in Arizona or transferring among public institutions in Arizona while pursuing their degrees.

Students transferring among Arizona public higher education institutions must meet the admission, residency, and all curricular and academic requirements of the degree-granting institution.

1. A semester in which a student earns course credit is counted toward *continuous* enrollment. Noncredit courses, audited courses, failed courses, or courses from which the student withdraws do not count toward the determination of *continuous* enrollment for catalog purposes. See examples A and B in the "Continuous Enrollment" table, on this page.
2. Students who do not meet the minimum enrollment standard stipulated in number 1 during three consecutive semesters (fall/spring/fall or spring/fall/spring) and the intervening summer term at any public Arizona community college or university are no longer considered continuously enrolled. (Note that students are not obligated to enroll and earn course credit during summer terms, but summer enrollment may be used to maintain continuous enrollment status.) These students must meet requirements of the public Arizona community college or university catalog in effect at the time they are readmitted or of any single catalog in effect during subsequent terms of *continuous* enrollment after readmission. See examples C and D in the "Continuous Enrollment" table, on this page.
3. Students admitted or readmitted to a public Arizona community college or university during a summer

term must follow the requirements of the catalog in effect the following fall semester or of any single catalog in effect during subsequent terms of *continuous* enrollment. See example E in the "Continuous Enrollment" table, page 82.

4. In areas of study in which the subject matter changes rapidly, material in courses taken long before graduation may become obsolete or irrelevant. Course work that is more than eight years old is applicable to completion of degree requirements at the discretion of the student's major department. Departments may accept such course work, reject it, or request that the student revalidate its substance. The eight-year limit on course work applies except when program accreditation agencies limit the life of course work to fewer than eight years. Departments may also require students to satisfy current major requirements rather than major requirements in earlier catalogs when completing earlier requirements is no longer possible or educationally sound.
5. Enrollment by Arizona community college students in nontransferable courses still constitutes enrollment for purposes of determining whether the student has been continuously enrolled. For example, if a student takes two semesters of cooperative education classes, which are not transferable to the university but constitute *continuous* enrollment at the community college, the university should consider it *continuous* enrollment.
6. Exceptions made by an institution apply only to the institution that made the exception. For example, if the community college departments accepted credit that was more than eight years old, the university department to which the student transfers has the right and the obligation to reevaluate any credit more than eight years old.

Inquiries about these guidelines may be directed to the student's academic advisor.

Declaration of Graduation

Students must file a Declaration of Graduation (DOG) using the Degree Audit Reporting System (DARS). DARS is an automated process that matches courses a student has completed with the requirements of a particular academic degree program, resulting in a report that shows the student which requirements are satisfied and which requirements remain to be fulfilled, thus providing a guide for efficient selection of courses toward graduation. For example, a student majoring in Biology would request a Degree Audit Report that would show how his or her completed ASU and transfer course work would apply to the Biology degree program.

Each student must submit a DOG form no later than the semester in which he or she earns the 87th semester hour. The DOG process confirms the degree requirements under which the student is enrolled, as indicated on the degree audit report for that academic program and catalog year. The student should review his or her degree audit with an academic advisor to assure an accurate interpretation. Some departments may require the DOG earlier than the 87th hour. Students failing to submit the DOG are prevented from further registration.

Application for Graduation Requirements

The following steps are required to complete the graduation process:

1. Register for the final semester.
2. Pay the graduation fee at Cashiering Services. Note the deadline dates listed in the "University Calendar," page 16.
3. Submit the fee receipt to the Graduation Section, SSV 140, and apply for graduation. The Degree Audit Report or Program of Study is reviewed at this time and the graduation date and eligibility to graduate are verified.
4. Complete all course work listed on the Degree Audit Report or Program of Study by the graduation date.

For more information about application for graduation requirements at ASU West, contact ASU West Admissions and Records, UCB 120.

Students must comply with the above requirements to graduate.

The Application for Graduation along with the Degree Audit Report or Program of Study is reviewed to verify graduation eligibility.

Petition for Variance from Degree

Any student wishing to have a college or university degree requirement variance must petition the standards committee of the college in which the student is enrolled.

All petitions must originate with the student's advisor. Refer to the college sections of this catalog for college and division, school, or department requirements.

Main Campus Standards Committee. This committee advises the Office of the Senior Vice President and Provost regarding undergraduate student petitions that concern university-wide academic requirements. These requirements include but are not limited to requirements on the amount of transfer credit, graduation requirements, limits on credit by examination, and requirements for a second baccalaureate degree (see "Overview of Graduation Requirements," page 84, and "Second Baccalaureate Degree," page 84). To petition for a variance from such university requirements, the normal department, division, school, and college forms and procedures are used. Only petitions that have been denied at the college level are forwarded to the Main Campus Standards Committee.

OTHER REQUIREMENTS

The separate units of the university, such as colleges, divisions, schools, and departments, have specific requirements for graduation that must be satisfied for a baccalaureate degree. For those requirements, see the appropriate *General Catalog* section. Students are encouraged to consult with an academic advisor in planning a program to ensure that it meets the various requirements. A well-planned program may enable a student to concurrently satisfy a portion of the General Studies requirement together with a portion of a college or major requirement.

OVERVIEW OF GRADUATION REQUIREMENTS

At ASU, students take classes that fulfill four types of requirements. As illustrated in the "Graduation Requirements" diagram, on this page, some courses can fulfill two or more types of requirements, but other courses fulfill only one requirement. The total semester hours needed to graduate are represented by the largest circle. The university minimum is 120 semester hours. Some majors, however, require more than 120 semester hours.

Although the three shaded circles are equal in size and the white circle is larger than all three, the total number of semester hours for each type of requirement may vary.

University Requirements. The light gray circle represents university requirements. The General Studies requirement and the First-Year Composition requirement are among the university requirements. For General Studies, a minimum of 35 semester hours in five core and three awareness areas is required. For more information, see "General Studies," page 85.

College Requirements. The medium gray circle represents college requirements. Some colleges and schools have additional requirements, especially the College of Liberal Arts and Sciences. It is important to understand the appropriate college's requirements.

Major. The dark gray circle represents the requirements of the major. The semester hours required for a major may be as low as 30 hours or as high as 63 hours.

Electives/Minor. The white circle represents electives and the requirements of a minor. A minor typically adds an additional 18 to 25 semester hours. Though every student must eventually declare a major, a minor is not required. For more information on minors, see "Minors, Certificates, and Interdisciplinary Studies," page 110. Some courses, while providing semester hours toward graduation, fall outside the shaded circles and are not required in a program for graduation. These courses are electives. Some majors leave no room for electives within the minimum 120 semester hours required to graduate.

GENERAL GRADUATION INFORMATION

Graduation with Academic Recognition. An undergraduate student must have completed at least 60 semester hours of resident credit at ASU to qualify for graduation with academic recognition for a baccalaureate degree.

The cumulative GPA determines the designation, as shown in the "Academic Recognition" table below.

Academic Recognition

Cumulative GPA	Designation
3.40–3.59	*cum laude*
3.60–3.79	*magna cum laude*
3.80–4.00	*summa cum laude*

The cumulative GPA for these designations is based on only ASU resident course work. For example, ASU independent learning course grades are not calculated in the honors GPA. All designations of graduation with academic recognition are indicated on the diploma and the ASU transcript. Graduation with academic recognition applies only to undergraduate degrees.

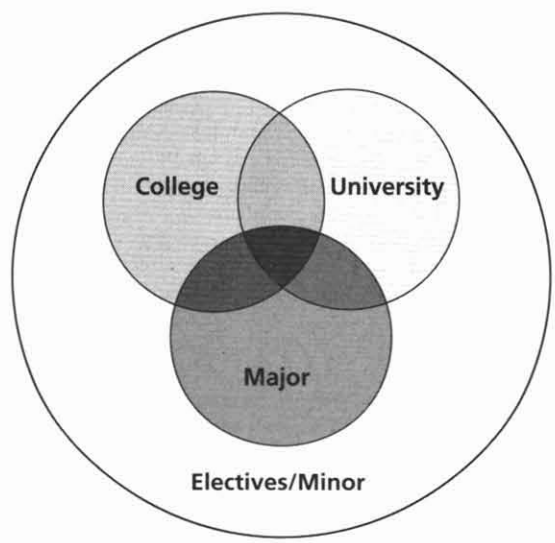
A student who has a baccalaureate degree from ASU and is pursuing a second baccalaureate degree at ASU (with a minimum of 30 hours of resident credit) is granted academic recognition on the second degree based on the semester hours earned subsequent to the posting of the first degree. If fewer than 60 semester hours are completed at ASU subsequent to completion of the first ASU degree, the level of academic recognition can be no higher than that obtained on the first degree. If 60 or more semester hours are completed at ASU after completion of the first ASU degree, the level of academic recognition is based on the GPA earned for the second ASU degree. Inquiries about graduation with academic recognition may be directed to the Graduation Section, 480/965-3256.

Second Baccalaureate Degree. The student seeking a second baccalaureate degree must meet admission criteria for that degree. After conferral of the first degree, a minimum of 30 semester hours in resident credit must be successfully completed at the ASU campus from which the second baccalaureate degree will be awarded. The student must meet all degree and university requirements of the second degree.

Concurrent Degrees. More than one baccalaureate degree may be pursued concurrently if prior approval is given by the standards committee(s) of the college(s) offering the degrees. Students may receive concurrent degrees if they meet the minimum requirements for both degrees.

Graduate Degrees. See "Graduate College," page 481, and "College of Law," page 301, for graduate degrees offered and statements of requirements for graduate degrees. A *Graduate Catalog* may be obtained from the Graduate College or the ASU Bookstore.

Graduation Requirements



General Studies

A baccalaureate education should not only prepare students for a particular profession or advanced study, but for constructive and satisfying personal, social, and civic lives as well. In addition to depth of knowledge in a particular academic or professional discipline, students should also be broadly educated and develop the general intellectual skills they need to continue learning throughout their lives. Thus, the General Studies requirement complements the undergraduate major by helping students gain mastery of critical learning skills, investigate the traditional branches of knowledge, and develop the broad perspective that frees one to appreciate diversity and change across time, culture, and national boundaries.

Critical learning skills include proficiency in the use of language, mathematics, and quantitative methods as tools for acquiring, renewing, creating, and communicating knowledge. A broad education includes an understanding of the methods and concerns of traditional branches of knowledge—the arts and humanities, the social sciences, and the natural sciences. Developing perspective requires historical, global, and cross-cultural examination of knowledge of all kinds.

To help students achieve these educational goals, the General Studies Program includes five *core areas* and three *awareness areas.* The five *core areas* help students acquire critical lifelong learning skills and guide their exploration of the traditional branches of knowledge:

1. literacy and critical inquiry;
2. mathematics studies;
3. humanities and fine arts;
4. social and behavioral sciences; and
5. natural sciences.

The three *awareness areas* promote appreciation of cultural diversity within the contemporary United States, develop an international perspective, and foster an understanding of current human events through study of the past:

1. cultural diversity in the United States;
2. global awareness; and
3. historical awareness.

The courses approved by the ASU Main General Studies Council (for ASU Main and ASU East) for meeting the General Studies requirement are noted in the "General Studies Courses" table, page 88; in the course descriptions; and in the *Schedule of Classes* each academic term. The courses approved by the ASU West General Studies Council can be found in the *ASU West Catalog* and in the *Schedule of Classes.*

Meeting the General Studies Requirement

All students enrolled in a baccalaureate degree program must successfully complete a minimum of 35 semester hours of approved General Studies courses. Many General Studies courses are approved as satisfying more than one requirement. The following conditions govern the application of courses toward the General Studies requirement.

1. A single course may be used to satisfy one core area and a maximum of two awareness area requirements.
2. A single course may be used to satisfy a maximum of two awareness area requirements.
3. A single course cannot be used to satisfy two core area requirements, even if it is approved for more than one core area.

There is no limit to the number of advanced placement (AP) or College-Level Examination Program (CLEP) credits that can be used to meet the General Studies requirement; see "Special Programs for Advanced Placement and Credit," page 66. However, the natural sciences (SQ and SG) and literacy and critical inquiry (L) portions of the General Studies requirement are not satisfied by CLEP.

FIVE CORE AREAS

Literacy and Critical Inquiry (L)

Literacy is competence in written and oral discourse; critical inquiry is the gathering, interpretation, and evaluation of evidence. The literacy and critical inquiry requirement helps students sustain and extend their ability to reason critically and communicate clearly through language.

L Requirement (Six Semester Hours). Students must complete six semester hours from courses designated as L, at least three semester hours of which must be chosen from approved upper-division courses, preferably in their major. Students must have completed ENG 101, 105, or 107 to take an L course.

Mathematical Studies (MA and CS)

This core area has two categories: (1) Mathematics (MA) is the acquisition of essential skill in basic mathematics and requires the student to complete a course in college mathematics or college algebra or to demonstrate a higher level of skill by completing a course for which college algebra is a prerequisite; and (2) computer/statistics/quantitative applications (CS) applies mathematical reasoning and requires students to complete a course in either the use of statistics/quantitative analyses or the use of the computer to assist in serious math analytical work.

MA and CS Requirement (Six Semester Hours). This requirement has two parts: (1) at least three semester hours must be selected from courses designated MA, and at least three semester hours must be selected from courses designated CS; and (2) all students are expected to fulfill the MA requirement by the time they accumulate 30 hours of credit in residence at ASU. Any student who has more than 30 hours of resident ASU credit and has not fulfilled the mathematics (MA) requirement must enroll in an MA course or an appropriate prerequisite and continue to do so every semester until the mathematics requirement is met. College officers may grant waivers to the immediate and continual enrollment requirement only when there are scheduling conflicts detrimental to the student's academic progress.

Humanities and Fine Arts (HU)

The humanities and fine arts explore, through critical and creative activities, questions of human experience and expression as these articulate the human condition and reflect basic human values. Although differing in method, both probe the universality of human experience and promote a broader and deeper understanding of an individual's relationship to self, culture, and nature.

HU Requirement. The requirements for humanities and fine arts (HU) are combined with the requirements for social and behavioral sciences (SB). See "Combined HU and SB Requirement," on this page.

Social and Behavioral Sciences (SB)

The social and behavioral sciences provide scientific methods of inquiry and empirical knowledge about human behavior, both within society and individually. The forms of study may be cultural, economic, geographic, historical, linguistic, political, psychological, or social. The courses in this area address the challenge of understanding the diverse natures of individuals and cultural groups who live together in a world of diminishing economic, linguistic, military, political, and social distance.

Combined HU and SB Requirement (15 Semester Hours). A total of 15 semester hours must be completed in the following two core areas: (1) humanities and fine arts (HU) and (2) social and behavioral sciences (SB). Two conditions must be satisfied: (1) six semester hours must be taken in one of these two core areas and nine hours in the other core area; and (2) three of the 15 semester hours must be at the upper-division level.

Natural Sciences (SQ and SG)

The natural sciences help students appreciate the scope and limitations of science and its contributions to society. Natural science areas of study include anthropology, astronomy, biology, biochemistry, chemistry, experimental psychology, geology, microbiology, physical geography, physics, and plant biology. Knowledge of methods of scientific inquiry and mastery of basic scientific principles and concepts are stressed, specifically those that relate to matter and energy in living and nonliving systems. Firsthand exposure to scientific phenomena in the laboratory is important in developing and understanding the concepts, principles, and vocabulary of science.

General Studies courses that satisfy the natural science requirement are given one of two classifications: quantitative and general.



Graduates acknowledge each other's accomplishments and celebrate after receiving their diplomas. Tim Trumble photo

Natural Science-Quantitative (SQ). These laboratory courses include a substantial introduction to the fundamental behavior of matter and energy in physical and biological systems.

Natural Science-General (SG). These laboratory courses cover aspects of scientific inquiry that lend themselves to more qualitative or descriptive discussions of science.

SQ and SG Requirement (Eight Semester Hours). Eight semester hours of courses designated SQ or SG must be selected. Of these, at least four semester hours must be taken from the SQ category.

THREE AWARENESS AREAS

Students must complete courses that satisfy each of the three awareness areas. Courses that are listed for a core area and one or more awareness area may satisfy each of these requirements concurrently.

Cultural Diversity in the United States (C)

The objective of the cultural diversity requirement is to promote awareness and appreciation of cultural diversity within the contemporary United States. The objective is accomplished through the study of the cultural, social, or scientific contributions of women and minority groups, examination of their experiences in the United States, or exploration of successful or unsuccessful interactions between and among cultural groups. Awareness of cultural diversity and its multiple sources can illuminate the collective past, present, and future and also help students to achieve greater mutual understanding and respect.

Global Awareness (G)

The objective of the global awareness requirement is to help students recognize the need for an understanding of the values, elements, and social processes of cultures other than that of the United States. The global awareness area includes courses that recognize the nature of other contemporary cultures and the relationship of the American cultural system to generic human goals and welfare.

Historical Awareness (H)

The objective of the historical awareness requirement is to help students develop knowledge of the past that can be useful in shaping the present and future. History is present in the languages, art, music, literature, philosophy, religion, and the natural sciences, as well as in the social science traditionally called history.

Transfer Credit

The Arizona General Education Curriculum (AGEC), offered by Arizona community colleges, is composed of 35 semester hours of lower-division general education course work. Students who complete the AGEC have fulfilled the ASU First-Year Composition requirement and all lower-division portions of the General Studies requirement. Students must still take six upper-division semester hours (three for L and three for SB or HU) to complete the ASU General Studies requirement. If students transfer from Arizona community colleges without completing AGEC or from other accredited postsecondary institutions, they receive credit for General Studies based on course-by-course equivalency. See "Arizona General Education Curriculum (AGEC)," page 63.

College or School, and Major Requirements

In addition to General Studies requirements, students must also complete college or school, and major requirements. Students are encouraged to work with their academic advisors to develop a program of study that efficiently meets all graduation requirements. A well-planned program should enable a student to concurrently satisfy requirements at the university, college, or school levels, and within their major.

GENERAL STUDIES COURSES

The ASU Main and ASU East courses in the "General Studies Courses" table, page 88, satisfy the requirements of the five core areas and three awareness areas. General Studies courses are regularly reviewed. Since courses are occasionally added to and deleted from the list, students should always consult the *Schedule of Classes* each semester to see which courses currently meet the General Studies requirement.

A student receives the General Studies credit a course carries in the semester in which the course is taken.

The "Key to General Studies Credit Abbreviations" table, on this page, defines the abbreviations used. General Studies courses are also identified following course descriptions.

The campus codes "M" (for ASU Main) and "W" (for ASU West) identify the campus that maintains academic control over the course (i.e., course content, registration restrictions, General Studies designations, and other curricular matters). The campus code is not used in the catalogs but appears in the *Schedule of Classes*, on transcripts, and other enrollment and registration records.

Key to General Studies Credit Abbreviations

Code	Description
L	Literacy and critical inquiry core courses
MA	Mathematics core courses
CS	Computer/statistics/quantitative applications core courses
HU	Humanities and fine arts core courses
SB	Social and behavioral sciences core courses
SQ	Natural science—quantitative core courses
SG	Natural science—general core courses
C	Cultural diversity in the United States courses
G	Global awareness courses
H	Historical awareness courses
/	Or
,	And

General Studies Courses

			L	MA	CS	HU	SB	SQ	SG	C	G	H
– – –	493	Honors Thesis (See "Honors Courses," page 57. Only three semester hours may fulfill L requirement.)	L									
ABS	130	Introduction to Environmental Science						SQ				
	201	Human Anatomy and Physiology I							SG			
	260	Fundamentals of Urban Horticulture							SG			
	350	Applied Statistics			CS							
	452	Plant Pathology	L									
	480	Ecosystem Management and Planning	L									
ACC	430	Taxes and Business Decisions	L									
AES	301	Air Force Leadership Studies I	L									
	303	Air Force Leadership Studies II	L									
	401	National Security Affairs	L									
AFH	202	Art of Africa, Oceania, and the Americas (Cross-listed as ARS 202)				HU					G	H
	225	African American Religion (Cross-listed as REL 225)				HU				C		
	322	Malcolm and Martin (Cross-listed as REL 322)				HU				C		
	323	Black Religion: A Biographical Approach (Cross-listed as REL 323)				HU				C		
	333	American Ethnic Literature (Cross-listed as ENG 333)	L			HU				C		
	347	Jazz in America (Cross-listed as MUS 347)				HU						
	353	African American Literature: Beginnings Through the Harlem Renaissance (Cross-listed as ENG 353)	L			HU				C		
	354	African American Literature: Harlem Renaissance to the Present (Cross-listed as ENG 354)	L			HU				C		
AFR	210	Introduction to African American Studies								C		
	263	Elements of Intercultural Communication (Cross-listed as COM 263)					SB			C	G	
	317	Genes, Race, and Society					SB			C		H
	321	Wealth Distribution and Poverty (Cross-listed as JUS 321)					SB			C		
	371	Language, Culture, and Communication (Cross-listed as COM 371)					SB			C	G	
	375	Race, Gender, and Sport					SB			C		
	460	Race, Gender, and Media (Cross-listed as MCO 460)								C		
	463	Intercultural Communication Theory and Research (Cross-listed as COM 463)					SB				G	
	493	Honors Thesis	L									
AFS	202	Ethnic Relations in the United States (Cross-listed as ASB 202)								C		H
	210	Introduction to Ethnic Studies in the U.S. (Cross-listed as APA 210/CCS 210)								C		
	363	African American History to 1865 (Cross-listed as HST 333)					SB			C		H
	364	African American History Since 1865 (Cross-listed as HST 334)					SB			C		H
	366	African Archaeology: Precolonial Urban Culture (Cross-listed as ASB 366)					SB				G	H
	370	Family, Ethnic, and Cultural Diversity (Cross-listed as FAS 370)					SB			C		
	466	Peoples and Cultures of Africa (Cross-listed as ASB 466)					SB				G	H
AGB	161	Computer Applications for Agribusiness Industries			CS							
	258	International Agribusiness									G	
	351	Management Science			CS							
	360	Agribusiness Statistics			CS							
	414	Agribusiness Analysis	L									
	450	International Agricultural Development									G	
	455	Resource Management					SB					
AIS	180	Introduction to American Indian Studies								C		
	280	Indigenous Law and Society								C		
AMT	308	Air Transportation									G	
ANP	236	Introduction to Computer Modeling			CS							
APA	200	Introduction to Asian Pacific American Studies				HU	SB			C		
	210	Introduction to Ethnic Studies in the U.S. (Cross-listed as AFS 210/CCS 210)								C		
	310	Asian Pacific American Arts and Cultures				HU				C		
	315	Asian Pacific American Literature				HU				C		
	330	Asian Pacific American Genders and Sexualities					SB			C		
	340	Asian Pacific Americans and Media				HU				C		
	360	Asian Pacific American Experience				HU	SB			C		
	450	Asian Pacific American Contemporary Issues					SB			C		

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
APH	100	Introduction to Environmental Design (Cross-listed as DSC 100/PUP 100)				HU					G	H
	200	Introduction to Architecture				HU					G	
	300	World Architecture I/Western Cultures				HU					G	H
	304	American Architecture				HU						
	305	Contemporary Architecture				HU						
	313	History of Architecture I	L			HU					G	
	314	History of Architecture II	L			HU					G	
	411	History of Landscape Architecture (Cross-listed as PLA 310)										H
	414	History of the City (Cross-listed as PUP 412)										H
	441	Ancient Architecture				HU						
	444	Baroque Architecture				HU						
	446	20th-Century Architecture I				HU						
	447	20th-Century Architecture II				HU						
APM	301	Introductory Statistics			CS							
ARA	311	Art Appreciation and Human Development				HU						
	488	Understanding Art	L			HU						
ARB	201	Intermediate Arabic									G	
	202	Intermediate Arabic									G	
ARS	100	Introduction to Art				HU						
	101	Art from Prehistory Through Middle Ages				HU						H
	102	Art from Renaissance to Present				HU						H
	201	Art of Asia				HU					G	H
	202	Art of Africa, Oceania, and the Americas (Cross-listed as AFH 202)				HU					G	H
	250	History of Photography				HU						
	300	Introduction to Art				HU						
	302	Art of Africa, Oceania, and the Americas				HU					G	H
	340	Art in America				HU						H
	400	History of Printmaking				HU						H
	402	Art of Ancient Egypt				HU						H
	404	Greek Art				HU						H
	406	Roman Art				HU						H
	410	Early Christian and Byzantine Art				HU						
	412	Early Medieval Art				HU						H
	414	Romanesque Art				HU						H
	416	Gothic Art				HU						
	418	Renaissance Art in Northern Europe				HU						
	420	Early Renaissance Art in Italy				HU						H
	422	Italian High Renaissance Art and Mannerism				HU						
	424	Italian Baroque Art				HU						H
	426	Art of the 17th Century in Northern Europe				HU						H
	428	Art of the 18th Century				HU						H
	430	Art of Spain and Its Colonies				HU						H
	432	19th-Century French Art and Culture				HU						H
	434	Art and Visual Culture of 19th Century				HU						
	436	The Artist, War, and Revolution (Versailles to Vietnam)				HU						
	438	Art of the 20th Century I				HU						H
	439	Art of the 20th Century II				HU						H
	442	Critical Issues in American Painting I				HU						
	443	Critical Issues in American Painting II				HU						
	444	Modern American Art, 1900–1945				HU						H
	458	Critical Theories in the Visual Arts				HU						
	462	Pre-Columbian Art				HU						H
	465	Native North American Art				HU						H
	466	Native American Art of the Southwest				HU				C		H
	468	Art of the Arctic and Northwest Coast				HU						
	469	Mexican Art				HU						H
	472	Art of China				HU						

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	473	Art of Japan				HU						
	475	Chinese Painting				HU						
	480	Research Methods	L									
	485	Women in the Visual Arts	L									
ART	346	3D Computer Imaging and Animation			CS							
	470	Computer Animation Portfolio			CS							
ASB	102	Introduction to Cultural and Social Anthropology					SB				G	
	202	Ethnic Relations in the United States (Cross-listed as AFS 202)								C		H
	211	Women in Other Cultures				HU	SB				G	
	222	Buried Cities and Lost Tribes: Our Human Heritage				HU	SB				G	H
	223	Buried Civilizations of the Americas				HU	SB				G	H
	231	Archaeological Field Methods							SG			
	240	Introduction to Southeast Asia (Cross-listed as GCU 240/HST 240/POS 240/REL 240)									G	
	242	Asian American Experiences: An Anthropological Perspective	L							C		
	250	Anthropology Topics	L									
	302	Ethnographic Field Study in Mexico	L				SB				G	
	311	Principles of Social Anthropology					SB					
	321	Indians of the Southwest	L				SB			C		H
	322	Peoples of Mesoamerica					SB				G	
	323	Indians of Latin America					SB				G	
	324	Peoples of the Pacific									G	
	325	Peoples of Southeast Asia									G	
	326	Human Impacts on Ancient Environments					SB					H
	330	Principles of Archaeology					SB					
	333	New World Prehistory	L				SB					
	335	Prehistory of the Southwest					SB			C		H
	337	Pre-Hispanic Civilization of Middle America				HU	SB				G	H
	338	Archaeology of North America					SB					H
	351	Psychological Anthropology					SB					
	353	Death and Dying in Cross-Cultural Perspective				HU	SB				G	
	355	Shamanism, Healing, and Consciousness				HU	SB					
	361	Old World Prehistory I										H
	362	Old World Prehistory II										H
	366	African Archaeology: Precolonial Urban Culture (Cross-listed as AFS 366)					SB				G	H
	400	Cultural Factors in International Business									G	
	412	History of Anthropology	L				SB					
	416	Economic Anthropology	L				SB					
	462	Medical Anthropology: Culture and Health								C		
	466	Peoples and Cultures of Africa (Cross-listed as AFS 466)					SB				G	H
	471	Introduction to Museums	L									
	480	Introduction to Linguistics					SB					
	481	Language and Culture					SB					
	483	Sociolinguistics and the Ethnography of Communication					SB					
ASM	104	Bones, Stones, and Human Evolution					SB		SG			
	301	Peopling of the World					SB					
	342	Human Biological Variation							SG			
	344	Fossil Hominids										H
	348	Social Issues in Human Genetics					SB					
	452	Dental Anthropology							SG			
	455	Primate Behavior Laboratory	L									
AST	111	Introduction to Solar Systems Astronomy (if credit also earned in AST 113)						SQ				
	112	Introduction to Stars, Galaxies, and Cosmology (if credit also earned in AST 114)						SQ				
	113	Astronomy Laboratory I (if credit also earned in AST 111 or 321)						SQ				
	114	Astronomy Laboratory II (if credit also earned in AST 112 or 322)						SQ				
	321	Introduction to Planetary and Stellar Astrophysics (if credit also earned in AST 113)						SQ				

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	322	Introduction to Galactic and Extragalactic Astrophysics (if credit also earned in AST 114)						SQ				
BCH	467	Analytical Biochemistry Laboratory	L									
BIO	100	The Living World						SQ				
	120	Human Physiology							SG			
	187	General Biology I							SG			
	188	General Biology II						SQ				
	193	The Nature of Biological Science						SQ				
	201	Human Anatomy and Physiology I							SG			
	241	Human Genetics							SG			
	302	Cancer and Heart Disease	L									
	303	Radiation and Life	L									
	304	Radiation Medicine and Biology	L									
	314	Research Colloquium in Biology and Society I (if credit also earned in BIO 414)	L									
	316	History of Biology: Conflicts and Controversies (Cross-listed as HPS 330)										H
	318	History of Medicine (Cross-listed as HPS 331)										H
	319	Environmental Science (Nonmajor) (Cross-listed as PLB 320)									G	
	321	Introductory Ecology Laboratory	L									
	343	Genetic Engineering and Society	L									
	406	Computer Applications in Biology (Cross-listed as PLB 432)			CS							
	410	Techniques in Wildlife Conservation Biology	L									
	414	Research Colloquium in Biology and Society II (if credit also earned in BIO 314)	L									
	415	Biometry			CS							
	416	Professional Values in Science (Cross-listed as HPS 410)	L									
	426	Limnology	L									
	428	Biogeography	L									
	435	Research Techniques in Animal Behavior	L									
	446	Principles of Human Genetics	L									
	470	Systematic Zoology	L									
	493	Honors Thesis	L									
BIS	301	Foundations of Interdisciplinary Studies	L									
	402	Senior Seminar	L									
BME	201	Introduction to Bioengineering	L									
	202	Global Awareness Within Biomedical Engineering Design	L			HU						
	413	Biomedical Instrumentation (if credit also earned in BME 423)	L									
	423	Biomedical Instrumentation Laboratory (if credit also earned in BME 413)	L									
BUS	301	Fundamentals of Management Communication	L									
	451	Business Research Methods	L									
CCS	101	Introduction to Chicana and Chicano Studies								C		
	111	Introduction to Chicana and Chicano Culture								C		
	210	Introduction to Ethnic Studies in the U.S. (Cross-listed as AFS 210/APA 210)								C		
	300	Chicana and Chicano Culture and Society								C		
CDE	232	Human Development					SB					
	430	Infant/Toddler Development in the Family					SB					
	437	Observational and Naturalistic Methods of Studying Children	L				SB					
CED	111	Exploration of Education					SB					
	250	Career Development	L									
CEE	486	Integrated Civil Engineering Design	L									
CET	150	Digital Systems I			CS							
CHE	461	Process Control			CS							
	462	Process Design	L									
CHI	201	Second-Year Chinese I									G	
	202	Second-Year Chinese II									G	
	313	Third-Year Chinese I									G	
	314	Third-Year Chinese II									G	
	321	Chinese Literature	L			HU						
	322	Chinese Literature	L			HU					G	

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	413	Introduction to Classical Chinese				HU						
	414	Introduction to Classical Chinese				HU						
CHM	101	Introductory Chemistry						SQ				
	107	Chemistry and Society						SQ				
	113	General Chemistry						SQ				
	114	General Chemistry for Engineers						SQ				
	115	General Chemistry with Qualitative Analysis						SQ				
	116	General Chemistry						SQ				
	117	General Chemistry for Majors I						SQ				
	118	General Chemistry for Majors II						SQ				
	231	Elementary Organic Chemistry (if credit also earned in CHM 235)						SQ				
	235	Elementary Organic Chemistry Laboratory (if credit also earned in CHM 231)						SQ				
	240	Introduction to Physical Chemistry			CS							
	348	Physical Chemistry Laboratory I (if credit also earned in CHM 349 and 452)	L									
	349	Physical Chemistry Laboratory II (if credit also earned in CHM 348 and 452)	L									
	452	Inorganic Chemistry Laboratory (if credit also earned in CHM 348 and 349)	L									
CIS	200	Computer Applications and Information Technology			CS							
	440	Systems Design and Electronic Commerce	L									
CLS	450	Principles of Clinical Laboratory Administration (if credit also earned in CLS 460)	L									
	460	Principles of Clinical Laboratory Education (if credit also earned in CLS 450)	L									
COM	100	Introduction to Human Communication					SB					
	110	Elements of Interpersonal Communication					SB					
	222	Argumentation	L									
	225	Public Speaking	L									
	230	Small Group Communication					SB					
	241	Introduction to Oral Interpretation	L			HU						
	250	Introduction to Organizational Communication					SB					
	263	Elements of Intercultural Communication (Cross-listed as AFR 263)					SB			C	G	
	308	Advanced Research Methods in Communication	L									
	316	Gender and Communication					SB			C		
	319	Persuasion and Social Influence					SB					
	320	Communication and Consumerism					SB					
	321	Rhetorical Theory and Research	L			HU						H
	323	Communication Approaches to Popular Culture								C		
	325	Advanced Public Speaking	L									
	344	Performance of Oral Traditions				HU				C		
	357	Communication Technology and Information Diffusion					SB					
	371	Language, Culture, and Communication (Cross-listed as AFR 371)					SB			C	G	
	400	CIP: Communication in Professions				HU				C		
	410	Interpersonal Communication Theory and Research					SB					
	411	Communication in the Family					SB					
	421	Rhetoric of Social Issues				HU						
	426	Political Communication					SB					
	441	Performance Studies				HU						
	445	Narrative Performance				HU						
	446	Performance of Literature Written by Women				HU				C		
	450	Theory and Research in Organizational Communication					SB					
	463	Intercultural Communication Theory and Research (Cross-listed as AFR 463)					SB				G	
CON	101	Construction and Culture: A Built Environment				HU					G	H
	389	Construction Cost Accounting and Control			CS							
	472	Development Feasibility Reports	L									
	495	Construction Planning and Scheduling			CS							
	496	Construction Contract Administration	L									
CSE	100	Principles of Programming with C++			CS							
	110	Principles of Programming with Java			CS							
	180	Computer Literacy			CS							
	181	Applied Problem Solving with Visual BASIC			CS							

General Studies Courses (continued)

			L	MA CS	HU	SB	SQ SG	C	G	H
	200	Concepts of Computer Science		CS						
	210	Object-Oriented Design and Data Structures		CS						
	423	Microcomputer System Hardware	L							
	438	Systems Programming	L							
CSH	310	Chicana and Chicano Folklore			HU			C		
	350	Mexican and Mexican American Artistic Production			HU			C	G	
	351	Contemporary Chicana and Chicano Art			HU			C		
	363	Chicana and Chicano Literature (Cross-listed as ENG 363)	L		HU			C		
	485	Chicana Writers	L		HU			C		
CSS	330	Chicana and Chicano Politics and Policy						C		
	331	Policy Issues in the Chicana and Chicano Urban Settings						C		
	336	Issues in Immigration and Migration						C		H
	432	Issues in Chicana and Chicano Gender						C		
DAH	100	Dance in World Cultures			HU				G	
	300	Focus on Dance			HU					
	301	Philosophy and Criticism of Dance	L		HU					
	302	Cross-Cultural Dance Studies	L		HU				G	
	401	Dance History			HU					
DAN	423	Dance, Computers, and Multimedia		CS						
DSC	100	Introduction to Environmental Design (Cross-listed as APH 100/PUP 100)			HU				G	H
	101	Design Awareness			HU				G	
	236	Introduction to Computer Modeling		CS						
ECE	100	Introduction to Engineering Design		CS						
	200	Elements of Engineering Design		CS						
	300	Intermediate Engineering Design	L							
	380	Probability and Statistics for Engineering Problem Solving		CS						
	400	Engineering Communications	L							
ECN	111	Macroeconomic Principles				SB				
	112	Microeconomic Principles				SB				
	306	Survey of International Economics (Cross-listed as IBS 306)				SB			G	
	313	Intermediate Macroeconomic Theory				SB				
	314	Intermediate Microeconomic Theory				SB				
	331	Alternative Economic Systems				SB			G	
	360	Economic Development				SB			G	
	365	Economics of Russia and Eastern Europe				SB			G	
	384	Economics of Social Behavior				SB				
	404	History of Economic Thought				SB				
	421	Earnings and Employment				SB				
	425	Introduction to Econometrics		CS						
	436	International Trade Theory				SB			G	
	438	International Monetary Economics				SB			G	
	441	Public Finance				SB				
	450	Law and Economics	L							
	475	Capstone in Economics	L							
	493	Honors Thesis	L							
EDC	340	Schooling and Social Context	L							
EDP	303	Human Development	L							
	310	Educational Psychology				SB				
	454	Statistical Data Analysis in Education		CS						
EDT	321	Computer Literacy		CS						
	323	Computer Applications		CS						
EED	498	PS: Language and Learning	L							
EEE	488	Senior Design Laboratory I (if credit also earned in EEE 489)	L							
	489	Senior Design Laboratory II (if credit also earned in EEE 488)	L							
ENG	200	Critical Reading and Writing About Literature	L		HU					
	201	World Literature			HU					H
	202	World Literature			HU					H

General Studies Courses (continued)

		L	MA CS	HU	SB	SQ SG	C	G	H
204	Introduction to Contemporary Literature			HU					
212	English Prose Style	L							
215	Strategies of Academic Writing	L							
216	Persuasive Writing on Public Issues	L							
217	Writing Reflective Essays	L							
218	Writing About Literature	L							
221	Survey of English Literature			HU					H
222	Survey of English Literature			HU					H
241	Literatures of the United States to 1860			HU					
242	Literatures of the United States, 1860–Present			HU					
245	Popular Culture Issues	L							
301	Writing for the Professions	L							
303	Classical Backgrounds of English Literature			HU					
312	English in Its Social Setting	L		HU	SB				
313	Phonology and Morphology	L							
321	Introduction to Shakespeare	L		HU					
326	English Drama 1660–1800			HU					
328	The Novel to Jane Austen			HU					H
329	19th-Century British Fiction			HU					
331	American Drama	L		HU					
332	Major American Novels	L							
333	American Ethnic Literature (Cross-listed as AFH 333)	L		HU			C		
342	20th-Century British and Irish Literature			HU					
352	Short Story			HU					
353	African American Literature: Beginnings Through the Harlem Renaissance (Cross-listed as AFH 353)	L		HU			C		
354	African American Literature: Harlem Renaissance to the Present (Cross-listed as AFH 354)	L		HU			C		
355	European Dramatic Traditions	L		HU					
356	The Bible as Literature			HU					
357	Introduction to Folklore			HU					
359	American Indian Literatures	L		HU			C		
360	Western American Literature	L		HU					
361	Silent Film			HU					
362	Sound Film Genres			HU					
363	Chicana and Chicano Literature (Cross-listed as CSH 363)	L		HU			C		
364	Women and Literature			HU					
372	Document Production	L							
385	Career Development for English Majors	L							
400	History of Literary Criticism	L		HU					H
413	History of the English Language			HU					
415	Topics in Medieval Literature and Culture			HU					
416	Chaucer in Middle English			HU					
418	Renaissance Literature	L		HU					
419	English Literature in the Early 17th Century	L		HU					
421	Shakespeare			HU					
422	Studies in Shakespeare			HU					
423	Renaissance Drama	L		HU					
424	Milton			HU					
425	Studies in Romanticism			HU					
427	Studies in 18th-Century Literature and Culture			HU					
430	Studies in Victorian Literature and Culture	L		HU					
434	Studies in the Literature and Culture of the Americas			HU			C		
440	Studies in American Literature and Culture			HU					
444	Studies in American Romanticism			HU					
445	Studies in American Realism	L		HU					
446	Studies in Modernism			HU					

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	448	Studies in Irish Literature and Culture				HU						
	452	Studies in the Novel				HU						
	453	Studies in the American Novel				HU						
	457	Studies in American Poetry				HU						
	461	Studies in Women and Literature				HU						
	464	Studies in Drama				HU						
	470	Symbols and Archetypes in Children's Literature	L			HU						
	471	Literature for Adolescents				HU						
	472	Rhetorical Studies	L									
	480	Methods of Teaching English: Composition	L									
	482	Methods of Teaching English: Language	L									
	493	Honors Thesis	L									
ETC	100	Languages of Technology			CS							
ETM	428	International Environmental Management									G	
EXW	100	Introduction to Health and Wellness (Cross-listed as HES 100/KIN 100)					SB					
	280	Global Issues in Exercise and Wellness									G	
	300	Foundations of Exercise and Wellness	L				SB					
	310	Computer Skills and Technology for Exercise and Wellness			CS							
	442	Physical Activity in Health and Disease	L									
	450	Cultural and Social Issues in Exercise and Wellness					SB			C		
FAS	330	Personal Growth in Human Relationships					SB					
	331	Marriage and Family Relationships					SB					
	332	Human Sexuality					SB					
	361	Introduction to Family/Child Research Methods	L									
	370	Family, Ethnic, and Cultural Diversity (Cross-listed as AFS 370)					SB			C		
	431	Parent-Adolescent Relationships					SB					
	435	Advanced Marriage and Family Relationships	L				SB					
FIN	456	International Financial Management									G	
	461	Financial Cases and Modeling	L									
FLA	150	Introduction to East Asian Culture				HU					G	
	323	Survey of Literature of the Soviet Era in Translation	L			HU					G	
	400	Linguistics					SB					
	420	Foreign Literature in Translation				HU					G	
	421	Japanese Literature in Translation	L			HU					G	
FRE	201	Intermediate French I									G	
	202	Intermediate French II									G	
	205	Readings in French Literature									G	
	207	French for International Professions II									G	
	311	French Conversation									G	
	312	French Composition									G	
	319	Business French									G	
	321	French Literature	L			HU						H
	322	French Literature	L			HU						
	411	Advanced Spoken French									G	
	412	Advanced Written French									G	
	415	French Civilization I				HU						
	416	French Civilization II				HU					G	
	441	French Literature of the 17th Century				HU						
	442	French Literature of the 17th Century				HU						H
	445	French Literature of the 18th Century	L			HU						
	452	French Novel of the 19th Century				HU						
	453	Theater of the 19th Century	L			HU						
	461	Modern Narrative				HU						
	462	Modern Poetry				HU						
	471	The Literature of Francophone Africa and the Caribbean	L			HU						
GCU	102	Introduction to Human Geography					SB					
	121	World Geography					SB				G	

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	141	Introduction to Economic Geography					SB				G	
	240	Introduction to Southeast Asia (Cross-listed as ASB 240/HST 240/POS 240/REL 240)									G	
	253	Introduction to Cultural and Historical Geography					SB				G	
	322	Geography of U.S. and Canada					SB			C		
	323	Geography of Latin America					SB				G	
	325	Geography of Europe					SB				G	
	326	Geography of Asia					SB				G	
	327	Geography of Africa					SB				G	
	328	Geography of Middle East and North Africa					SB				G	
	332	Geography of Australia and Oceania					SB				G	
	344	Geography of Hispanic Americans					SB			C		
	350	The Geography of World Crises					SB				G	
	351	Population Geography					SB				G	
	352	Political Geography					SB				G	
	357	Social Geography					SB					
	359	Cities of the World I					SB				G	H
	360	Cities of the World II					SB				G	
	361	Urban Geography					SB					
	364	Energy in the Global Arena					SB				G	
	421	Geography of Arizona and Southwestern United States					SB			C		
	423	Geography of South America					SB				G	
	424	Geography of Mexico and Middle America					SB				G	
	425	Geography of the Mexican-American Borderland	L				SB				G	
	426	Geography of Russia and Surroundings					SB				G	
	432	Geography of China					SB				G	
	441	Economic Geography					SB					
	442	Geographical Analysis of Transportation					SB					
	444	Geographic Studies in Urban Transportation					SB					
	455	Historical Geography of U.S. and Canada					SB					H
	474	Public Land Policy					SB					
	495	Quantitative Methods in Geography			CS							
	496	Geographic Research Methods	L									
GER	201	Intermediate German									G	
	202	Intermediate German									G	
	311	German Conversation									G	
	312	German Conversation									G	
	313	German Composition									G	
	319	Business Correspondence and Communication									G	
	411	Advanced Grammar and Conversation									G	
	412	Advanced Grammar and Composition									G	
	415	German Civilization				HU						H
	416	German Civilization				HU						H
	421	German Literature				HU						
	422	German Literature	L			HU						
	453	German Literary Masterpieces on Film				HU					G	H
GIT	212	Computer-Aided Design and Drafting (CADD)			CS							
	312	3D Computer Graphics Modeling and Representation			CS							
GLG	101	Introduction to Geology I (Physical) (for SQ credit, if credit also earned in GLG 103)						SQ			G	
	102	Introduction to Geology II (Historical) (for SG credit, if credit also earned in GLG 104)							SG			H
	103	Introduction to Geology I—Laboratory (if credit also earned in GLG 101)						SQ				
	104	Introduction to Geology II—Laboratory (if credit also earned in GLG 102)							SG			
	105	Introduction to Planetary Science							SG			
	110	Geologic Disasters and the Environment (for SG, if credit also earned in GLG 111)							SG		G	
	111	Geologic Disasters Laboratory (if credit also earned in GLG 110)							SG			
	410	Computers in Geology			CS							

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	451	Field Geology I	L									
	452	Field Geology II	L									
GPH	111	Introduction to Physical Geography						SQ				
	210	Society and Environment									G	
	211	Landform Processes	L									
	212	Introduction to Meteorology (if credit also earned in GPH 214)							SG			
	214	Introduction to Meteorology Laboratory (if credit also earned in GPH 212)							SG			
	314	Global Change				HU					G	
	370	Geographic Information Technologies			CS							
	371	Introduction to Cartography and Georepresentation			CS							
	373	Geographic Information Science I			CS							
	381	Geography of Natural Resources									G	
	414	Climate Change									G	
	418	Landforms of the Western United States	L									
	433	Alpine and Arctic Environments									G	
	471	Geographics: Interactive and Animated Cartography and Geovisualization			CS							
	473	Geographic Information Science II			CS							
GRA	318	History of Graphic Design				HU						
	345	Design Rhetoric	L									
GRK	301	Ancient Greek Literature I				HU						
	302	Ancient Greek Literature II				HU						
GRN	430	Multidisciplinary Approaches to Gerontology					SB					
HCR	210	Clinical Health Care Ethics				HU						
	220	Health Care Organizations (Cross-listed as HSA 220)										H
	230	Culture and Health								C	G	
HEB	201	Intermediate Modern Hebrew									G	
	202	Intermediate Modern Hebrew									G	
	375	Contemporary Culture of Israel				HU					G	
HES	100	Introduction to Health and Wellness (Cross-listed as EXW 100/KIN 100)					SB					
HON	171	The Human Event	L			HU						H
	172	The Human Event	L			HU						H
	371	Freedom and Authority	L			HU						
	372	French Cultural Influences	L			HU					G	
	373	Heroes, Heroines, and Villains	L			HU						
	374	Black and White Atlantic				HU					G	
	375	Science and the Modern Self	L			HU						
	376	Law, Literature, and Life	L			HU						
	377	Nature in Context (Cross-listed as HPS 377)	L			HU						
	493	Honors Thesis	L									
HPS	322	History of Science				HU						H
	323	History of Science				HU						H
	325	Chinese Science and Medicine (Cross-listed as HST 385)				HU					G	H
	330	History of Biology: Conflicts and Controversies (Cross-listed as BIO 316)										H
	331	History of Medicine (Cross-listed as BIO 318)										H
	377	Nature in Context (Cross-listed as HON 377)	L			HU						
	410	Professional Values in Science (Cross-listed as BIO 416)	L									
HSA	220	Health Care Organizations (Cross-listed as HCR 220)										H
HST	101	Global History Since 1500									G	H
	102	Western Civilization					SB					H
	103	Western Civilization					SB					H
	104	Western Civilization					SB				G	H
	105	Slavic Civilization					SB					H
	106	Asian Civilizations					SB				G	H
	107	Asian Civilizations					SB				G	H
	108	Introduction to Japan					SB				G	H
	109	The United States to 1865					SB					H
	110	The United States Since 1865					SB					H

General Studies Courses (continued)

		L	MA CS	HU	SB	SQ SG	C	G	H
200	Historical Themes				SB				H
201	Historical Themes in Asia				SB				H
202	Historical Themes in Europe				SB				H
203	Historical Themes in Latin America				SB				H
204	Historical Themes in the United States				SB				H
210	American Social History	L			SB				H
211	American Jewish History				SB				H
212	American Military History				SB				H
240	Introduction to Southeast Asia (Cross-listed as ASB 240/GCU 240/POS 240/REL 240)							G	
300	Historical Inquiry	L			SB				H
302	Studies in History				SB				H
303	Studies in Asian History				SB				H
304	Studies in European History				SB				H
305	Studies in Latin American History				SB				H
306	Studies in United States History				SB				H
309	Exploration and Empire	L							H
310	Film as History			HU					
313	American Cultural History to 1865				SB				H
314	American Cultural History Since 1865				SB				H
315	Political History of the United States				SB				H
316	20th-Century U.S. Foreign Relations				SB			G	H
318	United States Labor History				SB				H
319	U.S. Urban History to 1850				SB				H
320	U.S. Urban History Since 1850				SB				H
321	Constitutional History of the United States to 1865				SB				H
322	Constitutional History of the United States Since 1865				SB				H
325	Immigration and Ethnicity in the United States				SB		C		H
327	Women in U.S. History, 1600–1880				SB		C		H
328	Women in U.S. History, 1880–1980				SB		C		H
329	Women in 20th-Century U.S. West						C		H
330	Mexican Women in the United States: Conquests and Migrations	L			SB		C		H
331	Mexican American History to 1900				SB		C		H
332	Mexican American History Since 1900				SB		C		H
333	African American History to 1865 (Cross-listed as AFS 363)				SB		C		H
334	African American History Since 1865 (Cross-listed as AFS 364)				SB		C		H
337	American Indian History to 1900				SB		C		H
338	American Indian History Since 1900				SB		C		H
341	The U.S. West in the 19th Century				SB				H
342	The U.S. West in the 20th Century				SB				H
343	The American Southwest	L			SB				H
344	Arizona				SB				H
347	Ancient Greece				SB				H
348	Rome				SB				H
349	The Early Middle Ages				SB				H
350	The Later Middle Ages				SB				H
351	Renaissance Europe	L			SB				H
352	Europe's Reformations	L			SB				H
353	The Old Regime in Europe				SB				H
354	Revolutionary Europe				SB				H
355	Total War and the Crisis of Modernity				SB			G	H
356	Europe Since 1945				SB			G	H
358	Jewish History from the Bible to 1492				SB				H
359	Jewish History from 1492 to 1948				SB			G	H
361	Witchcraft and Heresy in Europe (Cross-listed as REL 374)	L							H
362	Sex and Society in Classical and Medieval Europe				SB				H

General Studies Courses (continued)

		L	MA	CS	HU	SB	SQ	SG	C	G	H
363	Sex and Society in Early Modern Europe					SB					H
364	Sex and Society in Modern Europe	L				SB					H
365	Women in Europe	L			HU	SB					H
366	England to 1689					SB					H
367	Modern Britain					SB					H
368	Culture and Imagination in European History				HU						H
370	Eastern Europe in Transition					SB				G	H
372	The Modern Middle East					SB				G	H
375	Colonial Latin America					SB					H
376	Modern Latin America					SB					H
377	Women in Colonial Latin America										H
378	Latin American Women: The National Period					SB				G	H
380	Cultural History of Latin America					SB					H
383	China					SB					H
384	China					SB				G	H
385	Chinese Science and Medicine (Cross-listed as HPS 325)				HU					G	H
386	Interpreting China's Classics (Cross-listed as HUM 312)	L			HU						H
387	Japan	L				SB					H
388	Japan					SB				G	H
391	Modern Southeast Asia					SB				G	H
405	Colonial American History to 1763					SB					H
406	The American Revolution, 1763–1789					SB					H
407	The Early U.S. Republic, 1789–1850	L				SB					H
408	Civil War and Reconstruction	L				SB					H
409	The Emergence of the Modern United States, 1877 to 1918					SB					H
410	The Modern United States, 1918 to 1945					SB					H
411	The Postwar United States, 1945 to 1973					SB					H
412	The Contemporary United States, 1973 to the Present					SB					H
414	The Modern U.S. Economy					SB					H
415	Unequal Sisters: Women and Political and Cultural Change	L				SB			C		H
416	Indian History of the Southwest					SB			C		H
417	Topics in Mexican American History					SB			C		H
423	The Tudor Monarchy					SB					H
424	The Stuart Transformation of England					SB					H
426	The British Empire					SB					H
427	The French Revolution and the Napoleonic Era					SB					H
428	Modern France					SB				G	H
429	Modern Germany					SB				G	H
430	Hitler: Man and Legend					SB					H
431	Eastern Europe and the Balkans Before 1914					SB					H
432	Eastern Europe and the Balkans in the 20th Century					SB				G	H
435	The Russian Empire					SB					H
436	The Soviet Experiment					SB				G	H
437	Spain Through the Golden Age				HU	SB					H
438	Modern Spain				HU	SB				G	H
441	Spanish South America					SB					H
442	Spanish South America					SB					H
443	The United States and Latin America					SB				G	H
445	20th-Century Cuba					SB				G	H
446	Colonial Mexico					SB					H
447	Modern Mexico					SB					H
451	Chinese Cultural History					SB					H
452	Chinese Cultural History					SB				G	H
453	The People's Republic of China					SB				G	H
455	The United States and Japan					SB				G	H
456	The Vietnam War					SB				G	H
460	History of Fire	L									H

General Studies Courses (continued)

			L	MA CS	HU	SB	SQ SG	C	G	H
	493	Honors Thesis	L							
	498	PS: History Pro-Seminar	L							
HUM	110	Contemporary Issues in Humanities			HU					
	200	Encountering the Humanities			HU					
	260	Introduction to Islam (Cross-listed as REL 260)			HU				G	
	301	Humanities in the Western World	L		HU					H
	302	Humanities in the Western World	L		HU					H
	310	Japanese Cities and Cultures to 1800 (Cross-listed as REL 355)	L		HU					H
	312	Interpreting China's Classics (Cross-listed as HST 386)	L		HU					H
	340	Contemporary American Film and Popular Culture			HU					
	401	The Culture and Legacy of the European Enlightenment			HU					H
	420	Interpreting Latin America			HU				G	H
	440	Los Angeles and Cultural Theory	L		HU			C		
	450	Technology and Culture	L		HU					
	460	Postmodern Culture and Interpretation	L							
	462	Psychoanalysis and Culture	L		HU	SB				
	465	Narrative in the Human Sciences	L		HU					
	498	Pro-Seminar in the Humanities: Theory and Culture	L		HU					
IBS	300	Principles of International Business							G	
	306	Survey of International Economics (Cross-listed as ECN 306)				SB			G	
	400	Cultural Factors in International Business						C	G	
	493	International Honors Thesis	L							
IDN	201	Intermediate Indonesian I							G	
	202	Intermediate Indonesian II							G	
IED	410	History of American Indian Education				SB		C		H
	430	Issues in Language and Literacy of Indigenous Peoples			HU	SB		C		
	444	The Role of Governments in Native Education Policy and Administration				SB				
	460	Yaqui History and Culture			HU	SB		C		H
IEE	305	Information Systems Engineering		CS						
	374	Quality Control		CS						
	463	Computer-Aided Manufacturing and Control		CS						
	475	Simulating Stochastic Systems		CS						
	476	Operations Research Techniques/Applications		CS						
	485	Engineering Statistics		CS						
	490	Project in Design and Development	L							
IND	316	20th-Century Design I			HU					H
	317	20th-Century Design II			HU					H
	470	Professional Practice for Industrial Design	L							
INT	223	Interior Design Issues and Theories			HU					
	310	History of Interior Design I			HU					H
	311	History of Interior Design II			HU					H
	412	History of Decorative Arts in Interiors			HU					
	442	Specifications and Documents for Interiors	L							
ITA	201	Intermediate Italian							G	
	202	Intermediate Italian							G	
	311	Italian Composition and Conversation							G	
	312	Italian Composition and Conversation							G	
	314	Advanced Italian							G	
	325	Introduction to Italian Literature			HU					
	415	Italian Civilization	L		HU				G	
	425	Italian American Culture	L							
	430	Italian Literature of the Middle Ages			HU					
	441	Dante: *Divina Commedia*	L		HU					
	443	Italian Literature of the Renaissance			HU					H
	446	Italian Literature of the 18th and 19th Centuries			HU					
	449	20th-Century Italian Literature			HU				G	
ITM	440	Introduction to International Business							G	

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
JMC	201	Journalism Newswriting	L									
	202	Radio-Television Writing	L									
	301	Reporting	L									
	315	Broadcast News Reporting	L									
JPN	201	Second-Year Japanese I									G	
	202	Second-Year Japanese II									G	
	311	Japanese Conversation and Composition									G	
	312	Japanese Conversation and Composition									G	
	313	Third-Year Japanese I									G	
	314	Third-Year Japanese II									G	
	321	Japanese Literature	L			HU					G	
JUS	100	The Justice System					SB					
	200	Topics in Concepts and Issues of Justice					SB					
	302	Basic Statistical Analysis in Justice Studies			CS							
	320	Community and Social Justice					SB			C		
	321	Wealth Distribution and Poverty (Cross-listed as AFR 321)					SB			C		
	329	Domestic Violence					SB					
	350	Immigration and Justice					SB			C		
	360	Law and Social Control					SB					
	375	Crime and the Mass Media					SB					
	385	Justice and Everyday Life					SB					
	404	Imperatives of Proof	L									
	405	Economic Justice					SB				G	
	415	Gender and International Development	L								G	
	420	Woman, Work, and Justice					SB			C		
	425	Race, Gender, and Crime	L				SB			C		
	430	Social Protest, Conflict, and Change	L				SB			C		
	440	Administration and Justice	L									
	444	Environment and Justice	L							C		
	450	Alternatives to Incarceration	L									
	463	Discretionary Justice					SB					
	465	Death Penalty in the United States	L									
	469	Political Deviance and the Law	L				SB			C		
	470	Alternative Dispute Resolution	L				SB			C		
	474	Legislation of Morality	L				SB			C		
	477	Youth and Justice	L				SB					
	479	Law and Disputing	L				SB					
KIN	100	Introduction to Health and Wellness (Cross-listed as EXW 100/HES 100)					SB					
	348	Psychological Skills for Optimal Performance					SB					
	352	Psychosocial Aspects of Physical Activity					SB			C		
	400	Teaching Physical Activity Concepts	L									
	414	Electromyographic Kinesiology	L									
	441	Physiology of Women in Sport	L									
	443	Exercise Endocrinology	L									
	448	Applied Sport Psychology	L									
	452	Exercise Psychology					SB					
	460	Theory of Strength Training	L									
KOR	201	Second-Year Korean I									G	
	202	Second-Year Korean II									G	
	250	Korean Culture and Society				HU					G	
	347	Korean Film and Literature				HU						
	350	Women of Korea										H
LAT	201	Intermediate Latin I				HU						
	202	Intermediate Latin II				HU						
	421	Roman Literature				HU						
	422	Roman Literature				HU						
MAE	468	Aerospace Systems Design	L									

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	490	Projects in Design and Development	L									
MAT	114	College Mathematics		MA								
	117	College Algebra		MA								
	119	Finite Mathematics		MA								
	170	Precalculus		MA								
	210	Brief Calculus		MA								
	251	Calculus for Life Sciences		MA								
	260	Technical Calculus I		MA								
	261	Technical Calculus II		MA								
	262	Technical Calculus III		MA								
	270	Calculus with Analytic Geometry I		MA								
	271	Calculus with Analytic Geometry II		MA								
	272	Calculus with Analytic Geometry III		MA								
	274	Elementary Differential Equations		MA								
	275	Modern Differential Equations		MA								
	290	Calculus I		MA								
	300	Mathematical Structures	L									
	351	Mathematical Methods for Genetic Analysis			CS							
	419	Introduction to Linear Programming			CS							
	421	Applied Computational Methods			CS							
	423	Numerical Analysis I			CS							
	425	Numerical Analysis II			CS							
	427	Computer Arithmetic			CS							
	451	Mathematical Modeling			CS							
MBB	245	Cellular and Molecular Biology (if credit also earned in MBB 246)						SQ				
	246	Cellular and Molecular Biology Laboratory (if credit also earned in MBB 245)						SQ				
	343	Genetic Engineering and Society	L									
	490	Capstone: Issues in Biotechnology	L									
MCE	446	Understanding the Culturally Diverse Child								C		
MCO	110	Introduction to Mass Communication					SB					
	120	Media and Society					SB					
	402	Mass Communication Law	L									
	418	History of Mass Communication					SB					H
	430	International Mass Communication									G	
	450	Visual Communication				HU						
	456	Political Communication					SB					
	460	Race, Gender, and Media (Cross-listed as AFR 460)								C		
MET	416	Applied Computer-Integrated Manufacturing			CS							
MHL	201	MacLiteracy for Musicians			CS							
	344	Music in World Cultures				HU					G	
	352	The Evolution of Jazz										H
	363	Survey of Russian Music				HU						
	438	Music in the Classic Era										H
	439	Music in the 19th Century	L									H
	441	Music of the Baroque Era	L									
	447	Music Since 1900	L									
	466	North American Indian Music	L			HU				C		
MIC	205	Microbiology (if credit also earned in MIC 206)							SG			
	206	Microbiology Laboratory (if credit also earned in MIC 205)							SG			
	302	Advanced Bacteriology Laboratory (if credit also earned in MIC 401)	L									
	401	Research Paper (if credit also earned in MIC 302)	L									
MIS	410	American Defense Policy I					SB					
	412	American Defense Policy II					SB					
	414	Comparative Defense Policy Analysis					SB					
	416	Soviet/C.I.S. Foreign and Defense Policies					SB					
MKT	460	Strategic Marketing	L									
MSE	482	Materials Engineering Design	L									

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
MUE	381	Music Therapy Research	L									
MUS	340	Survey of Music History				HU						H
	347	Jazz in America (Cross-listed as AFH 347)				HU						
	354	Popular Music				HU						
	355	Survey of American Music				HU						H
	356	Survey of the Musical Theatre				HU						
NTR	300	Computer Applications in Nutrition			CS							
	344	Nutrition Services Management	L									
	348	Cultural Aspects of Food								C		
	448	Community Nutrition	L									
	450	Nutrition in the Life Cycle I					SB					
NUR	362	Professional Development II: Nursing Research	L									
	391	Registered Nurse Mobility I: Professional Development	L									
	461	Professional Development III: The Art of Nursing				HU						
OPM	450	Changing Business Processes	L									
PGS	101	Introduction to Psychology					SB					
	222	Human Sexual Behavior					SB					
	270	Psychology of Adjustment					SB					
	304	Effective Thinking	L									
	306	Environmental Psychology					SB					
	315	Personality Theory and Research					SB					
	341	Developmental Psychology					SB					
	350	Social Psychology					SB					
	351	Honors Social Psychology	L				SB					
	365	Community Psychology					SB					
	414	History of Psychology	L				SB					
	427	Psychology of Aging	L				SB					
	441	Cognitive Development	L				SB					
	443	Abnormal Child Psychology	L				SB					
	444	Adolescent Psychology and Psychopathology	L									
	445	Child Language and Drawing					SB					
	446	Social Development	L									
	450	Social Perception and Cognition	L									
	451	Stereotyping, Prejudice, and Discrimination	L									
	452	Applied Social Psychology	L									
	461	Interpersonal Influence					SB					
	463	Advanced Psychology of Adjustment	L									
	465	Psychology of Stress and Coping	L									
	466	Abnormal Psychology					SB					
	467	Psychology of Magical Beliefs	L									
PHI	101	Introduction to Philosophy				HU						
	103	Principles of Sound Reasoning	L			HU						
	105	Introduction to Ethics				HU						
	300	Philosophical Argument and Exposition	L									
	301	History of Ancient Philosophy				HU						H
	302	History of Modern Philosophy				HU						H
	304	Existentialism				HU						
	305	Ethical Theory				HU						
	306	Applied Ethics				HU						
	307	Philosophy of Law				HU						
	308	Philosophy of Art				HU						
	309	Social and Political Philosophy				HU						
	310	Environmental Ethics				HU						
	311	Philosophy in Literature				HU						
	312	Theory of Knowledge				HU						
	314	Philosophy of Science				HU						
	315	Philosophy of Language				HU						

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	316	Metaphysics				HU						
	317	Philosophy of Mind				HU						
	318	Philosophy of Religion				HU						
	319	Philosophy of Computing			CS	HU						
	325	Philosophy of Social Science				HU	SB					
	332	19th-Century Philosophy				HU						
	335	History of Ethics				HU						
	402	Empiricism				HU						
	403	Contemporary Analytic Philosophy				HU						
PHS	110	Fundamentals of Physical Science						SQ				
	208	Patterns in Nature (Cross-listed as STE 208)						SQ				
PHY	101	Introduction to Physics						SQ				
	111	General Physics (if credit also earned in PHY 113)						SQ				
	112	General Physics (if credit also earned in PHY 114)						SQ				
	113	General Physics Laboratory (if credit also earned in PHY 111)						SQ				
	114	General Physics Laboratory (if credit also earned in PHY 112)						SQ				
	121	University Physics I: Mechanics (if credit also earned in PHY 122)						SQ				
	122	University Physics Laboratory I (if credit also earned in PHY 121)						SQ				
	131	University Physics II: Electricity and Magnetism (if credit also earned in PHY 132)						SQ				
	132	University Physics Laboratory II (if credit also earned in PHY 131)						SQ				
	150	Physics I						SQ				
	151	Physics II						SQ				
	201	Mathematical Methods in Physics I			CS							
	252	Physics III						SQ				
	334	Advanced Laboratory I (if credit also earned in PHY 420)	L									
	420	Research Paper (if credit also earned in PHY 334)	L									
PLA	101	Landscape and Society				HU					G	
	222	Computers in Landscape Architecture			CS							
	310	History of Landscape Architecture (Cross-listed as APH 411)										H
	411	Landscape Architecture Theory and Criticism	L									
	420	Theory of Urban Design				HU						
	485	International Field Studies in Planning and Landscape Architecture (Cross-listed as PUP 485) (Three hours must be taken to secure G credit.)									G	
PLB	108	Concepts in Plant Biology						SQ				
	200	Biology of Plants (if credit also earned in PLB 201)						SQ				
	201	Biology of Plants Laboratory (if credit also earned in PLB 200)						SQ				
	260	Plants in Cities: Introduction to Urban Horticulture							SG			
	300	Comparative Plant Diversity	L						SG			
	320	Environmental Science (Nonmajor) (Cross-listed as BIO 319)									G	
	414	Plant Pathology	L									
	430	Statistical Analyses in Environmental Science			CS							
	432	Computer Applications in Biology (Cross-listed as BIO 406)			CS							
POR	201	Intermediate Portuguese									G	
	313	Portuguese Composition and Conversation									G	
	314	Portuguese Composition and Conversation									G	
	321	Luso-Brazilian Literature				HU						
	472	Luso-Brazilian Civilization				HU					G	
POS	101	Political Ideologies					SB					
	110	Government and Politics					SB					
	150	Comparative Government					SB				G	
	160	Global Politics					SB				G	
	220	Political Issues and Public Policy					SB					
	230	Current Issues in National Politics	L				SB					
	240	Introduction to Southeast Asia (Cross-listed as ASB 240/GCU 240/HST 240/REL 240)									G	
	260	Current Issues in International Politics	L				SB				G	
	270	American Legal System					SB					

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	300	Contemporary Controversies in Global Politics					SB				G	
	301	Empirical Political Inquiry					SB					
	305	Politics and Film					SB					
	310	American National Government					SB					
	313	The Congress					SB					
	314	The American Presidency					SB					
	315	The Supreme Court					SB					
	316	State and Local Government					SB					
	320	Public Administration					SB					
	325	Public Policy Development					SB					
	330	Contemporary Controversies in Domestic Politics					SB					
	331	Public Opinion					SB					
	332	American Political Parties					SB					
	333	Interest Groups					SB					
	336	Voters in America					SB					
	340	History of Political Philosophy I				HU						H
	341	History of Political Philosophy II				HU						H
	346	Problems of Democracy				HU						
	350	Comparative Politics					SB				G	
	351	Democratization					SB				G	
	355	Russia and Successor States					SB				G	
	356	European Union					SB				G	
	357	South Asia Politics					SB				G	
	358	Southeast Asia					SB				G	
	359	African Politics and Society					SB				G	
	360	World Politics					SB				G	
	361	American Foreign Policy					SB				G	
	364	National Security, Intelligence, and Terrorism					SB					
	370	Law and Society					SB					
	401	Political Statistics			CS							
	410	Governing American Cities					SB					
	417	The Arizona Political System					SB					
	426	Elements of Public Policy					SB					
	431	Campaigns and Elections					SB					
	433	Money and Politics					SB					
	434	Media and Politics					SB					
	435	Women and Politics					SB			C		
	439	Minority Group Politics in America					SB			C		
	442	American Political Thought				HU						
	443	Topics in Contemporary Political Theory				HU						
	445	Asian Political Thought					SB				G	
	451	China, Japan, and the Koreas					SB				G	
	452	China					SB				G	
	453	South America					SB				G	
	454	Mexico					SB				G	
	455	Central America and the Caribbean					SB				G	
	459	South and Southern Africa					SB				G	
	463	Inter-American Relations					SB				G	
	465	International Organization and Law					SB				G	
	467	International Security					SB				G	
	468	Comparative Asian Foreign Policies					SB				G	
	471	Constitutional Law I					SB					
	472	Constitutional Law II					SB					
	485	Political Economy					SB					
	486	International Political Economy					SB				G	
	498	Pro-Seminar	L									
PSY	230	Introduction to Statistics			CS							

General Studies Courses (continued)

			L	MA CS	HU	SB	SQ SG	C	G	H
	290	Research Methods	L				SG			
	330	Statistical Methods		CS						
	390	Experimental Psychology	L							
	420	Analysis of Behavior	L							
	424	Genetic Psychology	L							
	425	Biological Bases of Behavior	L							
	426	Neuroanatomy	L							
	434	Cognitive Psychology	L							
	437	Human Factors	L							
	498	PS: Behavioral Neuroscience Research	L							
PUP	100	Introduction to Environmental Design (Cross-listed as APH 100/DSC 100)			HU				G	H
	200	The Planned Environment			HU					H
	236	Introduction to Computer Modeling		CS						
	301	Introduction to Urban Planning	L							
	412	History of the City (Cross-listed as APH 414)								H
	420	Theory of Urban Design			HU					
	445	Women and Environments						C		
	452	Ethics and Theory in Planning	L							
	485	International Field Studies in Planning and Landscape Architecture (Cross-listed as PLA 485) (Three hours must be taken to secure G credit.)							G	
QBA	221	Statistical Analysis		CS						
REC	120	Leisure and the Quality of Life				SB				
	160	Leisure and Society				SB				
	305	Introduction to Travel and Tourism							G	
	330	Programming of Recreation Services	L							
	380	Wilderness and Parks in America				SB				H
	458	International Tourism							G	
REL	100	Religions of the World			HU				G	
	200	The Study of Religious Traditions	L		HU				G	
	201	Religion and the Modern World	L		HU					
	202	Religion and Popular Culture			HU			C		
	203	Saints and Sinners: Explorations in Sacred Biography			HU					H
	205	Living and Dying			HU					
	210	Introduction to Judaism	L		HU					H
	225	African American Religion (Cross-listed as AFH 225)			HU			C		
	240	Introduction to Southeast Asia (Cross-listed as ASB 240/GCU 240/HST 240/POS 240)							G	
	260	Introduction to Islam (Cross-listed as HUM 260)			HU				G	
	270	Introduction to Christianity			HU					
	301	Comparative Mysticism			HU					
	305	Ritual, Symbol, and Myth	L		HU					
	310	Western Religious Traditions			HU					H
	315	Hebrew Bible (Old Testament)	L		HU					H
	317	Introduction to Rabbinic Judaism			HU					H
	318	Contemporary American Jewish Identities (Cross-listed as SOC 375)			HU	SB		C		
	320	American Religious Traditions			HU			C		H
	321	Religion in America			HU			C		H
	322	Malcolm and Martin (Cross-listed as AFH 322)			HU			C		
	323	Black Religion: A Biographical Approach (Cross-listed as AFH 323)			HU			C		
	326	U.S. Latino Religion and Culture			HU			C		
	330	Native American Religious Traditions			HU			C		
	331	History of Native American Religious Traditions	L		HU			C		H
	332	South American Indian Religions			HU				G	
	343	Taoism	L		HU				G	H
	344	Religion and Values in Japanese Life			HU				G	
	345	Asian Religious Traditions			HU				G	
	350	Hinduism	L		HU				G	

General Studies Courses (continued)

			L	MA	CS	HU	SB	SQ	SG	C	G	H
	351	Buddhism	L			HU					G	
	355	Japanese Cities and Cultures to 1800 (Cross-listed as HUM 310)	L			HU						H
	365	Islamic Civilization				HU						H
	366	Islam in the Modern World				HU					G	H
	371	New Testament				HU						
	372	Formation of the Christian Tradition				HU						H
	374	Witchcraft and Heresy in Europe (Cross-listed as HST 361)	L									H
	377	Religion in Russia				HU						H
	379	Religion, Nationalism, and Ethnic Conflict				HU					G	
	381	Religion and Moral Issues	L			HU						
	382	Religion, Magic, and Science	L			HU						
	385	Contemporary Western Religious Thought	L			HU						
	386	America and the Holocaust				HU	SB					
	390	Women and Religion				HU					G	
	410	Judaism in Modern Times				HU						H
	415	The Jewish Mystical Tradition				HU						
	420	Religion in American Life and Thought				HU						
	426	American Preachers and Preaching: The Sermon in America				HU						
	427	American Religious Thought				HU						H
	444	Religion in Japan				HU					G	H
	460	Studies in Islamic Religion				HU					G	
	470	Religion in the Middle Ages				HU						H
	471	Reformation and Modern Christianity				HU						H
	480	Religion and Global Politics									G	
RUS	201	Intermediate Russian									G	
	202	Intermediate Russian									G	
	211	Basic Russian Conversation									G	
	212	Basic Russian Conversation									G	
	311	Russian Composition and Conversation									G	
	312	Russian Composition and Conversation									G	
	321	Foundations of Russian Literature				HU						H
	322	Great Russian Writers of the 19th Century	L			HU						
	323	Modern Russian Literature and the Soviet Legacy	L			HU					G	
	411	Advanced Composition and Conversation I									G	
	412	Advanced Composition and Conversation II'									G	
	420	Russian Poetry	L			HU						
	421	Pushkin	L			HU						
	423	Dostoyevsky	L			HU						
	424	Tolstoy	L			HU						
	425	Chekhov	L			HU						
	430	Russian Short Story	L			HU						
	441	Survey of Russian Culture	L			HU					G	H
SCA	250	Introduction to Scandinavian Culture				HU					G	H
	316	Scandinavian Cinema				HU					G	
	450	Masterpieces of Scandinavian Literature	L			HU						
SCM	455	Research and Negotiation	L									
SHS	367	Language Science					SB					
	465	Speech and Language Acquisition					SB					
SLV	426	Contemporary East European and Eurasian Literatures	L			HU					G	
SOC	101	Introductory Sociology					SB					
	220	Sport and Society					SB					
	270	Racial and Ethnic Relations					SB			C		
	301	Principles of Sociology					SB					
	312	Sociology of Adolescence					SB					
	315	Courtship and Marriage					SB					
	318	Overview of Aging					SB					
	321	Sociology of Work					SB					

General Studies Courses (continued)

			L	MA CS	HU	SB	SQ SG	C	G	H
	331	Environmental Sociology				SB			G	
	332	Urban Sociology				SB			G	
	333	Population				SB			G	
	340	The Sociology of Deviance				SB				
	341	Modern Social Problems				SB				
	352	Social Change				SB			G	H
	360	Sociological Psychology				SB				
	361	Variant Sexuality				SB				
	363	Men and Masculinity				SB				
	365	Sociology of Mass Communication				SB				
	375	Contemporary American Jewish Identities (Cross-listed as REL 318)			HU	SB		C		
	390	Social Statistics I		CS						
	391	Sociological Research				SB				
	415	The Family				SB				
	416	Marriage Problems in Contemporary Society	L			SB				
	417	Family Violence				SB				
	418	Aging and the Life Course				SB				
	420	Sociology of Religion	L			SB				
	421	Education and Society				SB				
	422	Sociology of Complex Organizations	L			SB				
	423	Social Class and Stratification	L			SB				
	424	Women and Health	L			SB				
	427	Sociology of Health and Illness	L			SB				
	429	Sociology of Law				SB				
	433	Applied Demography				SB				
	446	Sociology of Crime				SB				
	448	Epidemics and Society				SB			G	
	451	Comparative Sociology				SB			G	
	455	Social Movements				SB				
	456	Political Sociology				SB			G	
	464	Sociology of Women	L			SB		C		
	474	African Americans in Modern Society				SB		C		
	483	History of Social Thought				SB				
	485	Sociology of Knowledge	L			SB				
	486	Contemporary Theory				SB				
SPA	201	Intermediate Spanish							G	
	202	Intermediate Spanish							G	
	203	Intermediate Spanish for Bilinguals							G	
	204	Intermediate Spanish for Bilinguals							G	
	207	Spanish for International Professions II							G	
	313	Spanish Conversation and Composition							G	
	314	Spanish Conversation and Composition							G	
	319	Business Correspondence and Communication							G	
	325	Introduction to Hispanic Literature			HU					
	412	Advanced Conversation and Composition							G	
	413	Advanced Spanish Grammar							G	
	420	Applied Spanish Linguistics	L							
	421	Spanish in the Southwest	L			SB		C		
	425	Spanish Literature			HU					
	426	Spanish Literature			HU					
	427	Spanish American Literature	L							
	428	Spanish American Literature	L						G	
	464	Mexican American Literature			HU					
	471	Civilization of the Spanish Southwest			HU					
	472	Spanish American Civilization			HU				G	H
	473	Spanish Civilization			HU	SB			G	
	485	Mexican American Short Story	L							

General Studies Courses (continued)

			L	MA CS	HU	SB	SQ SG	C	G	H
SPE	311	Orientation to Education of Exceptional Children				SB				
SPF	301	Culture and Schooling	L							
STE	208	Patterns in Nature (Cross-listed as PHS 208)					SQ			
STP	220	Conceptual Statistics		CS						
	226	Elements of Statistics		CS						
	326	Intermediate Probability		CS						
	420	Introductory Applied Statistics		CS						
	429	Experimental Statistics		CS						
SWU	171	Introduction to Social Work				SB				H
	301	Human Behavior in the Social Environment I	L			SB				
	321	Statistics for Social Workers		CS						
	340	Human Behavior in the Social Environment II				SB				
	374	Diversity and Oppression in a Social Work Context						C		
	493	Honors Thesis	L							
THA	201	Intermediate Thai I							G	
	202	Intermediate Thai II							G	
THE	100	Introduction to Theatre			HU					
	220	Principles of Dramatic Analysis	L							
	300	Film: The Creative Process I			HU					
	301	Film: The Creative Process II			HU					
	320	History of the Theatre I			HU					H
	321	History of the Theatre II			HU					H
	403	Independent Film			HU					
	404	Foreign Films and Filmmakers							G	
	405	Film: Great Performers and Directors			HU					
	406	American Multicultural Film			HU			C		
	421	History of the English Theatre	L		HU					
	423	African American Theatre						C		
THP	482	Theatre for Social Change						C		
TWC	200	Impact of Communications Technology on Society	L							
	301	General Principles of Multimedia Writing	L							
	400	Technical Communications	L							
	401	Principles of Technical Communication	L							
	411	Principles of Visual Communication	L							
	421	Principles of Writing with Technology	L							
	431	Principles of Technical Editing	L							
	446	Technical and Scientific Reports	L							
	447	Business Reports	L							
VTN	201	Intermediate Vietnamese I							G	
	202	Intermediate Vietnamese II							G	
WSH	413	Lesbian, Gay, and Gender Studies			HU			C		
	464	Voices and Visions			HU			C		
	470	Women and Popular Culture			HU			C		
WST	100	Women and Society				SB		C		
	300	Women in Contemporary Society				SB		C		
	313	Women and Sexuality				SB				
	360	Women as Healers				SB			G	
	373	Latina/Chicana Issues				SB		C		
	375	Women and Social Change				SB		C		
	377	History of American Feminist Thought	L					C		
	378	Contemporary Feminist Theory	L					C		
	380	Gender, Race, and Class	L			SB		C		
	457	Gender, Culture, and Development	L			SB			G	
	460	Women and the Body				SB		C		
	477	Women and Violence				SB		C		
	498	PS: Theoretical Issues in Women's Studies	L							

Minors, Certificates, and Interdisciplinary Studies

Interdisciplinary studies are available to students through an interdisciplinary degree, such as the Bachelor of Interdisciplinary Studies, or an extensive choice of minors or certificates that may be taken in conjunction with other majors. Since interdisciplinary studies provide skills that support employment in a rapidly changing workplace, students are encouraged to consider these options. Consult the academic advisor in the appropriate major about the impact of enrolling in a minor or certificate program.

MINORS

A minor is an approved, coherent concentration of academic study in a single discipline, involving substantially fewer hours of credit than a corresponding major. Most ASU colleges offer undergraduate minors in addition to majors; see the "ASU Minors" table, page 111.

Students in most majors may pursue one or more minors and, upon successful completion of the prescribed course work, have that accomplishment officially recognized on the ASU transcript at graduation if (1) the college/department of the minor officially certifies, through established verification procedures, that all requirements for the minor have been met and (2) the college (and, in certain colleges, the department) of the student's major allows the official recognition of the minor.

A student wishing to pursue a specific minor should consult an academic advisor in the unit offering that minor to ensure that an appropriate set of courses is taken.

Note: Certain major and minor combinations may be deemed inappropriate either by the college or department of the major or minor. Inappropriate combinations include (but would not be limited to) ones in which an excessive number of courses in the minor are simultaneously being used to fulfill requirements of the student's major.

CERTIFICATES

Students may pursue some certificate programs along with a major and other certificate programs independently. Graduate certificates and postbaccalaureate certificates are available to students who already hold a bachelor's degree. For more information, see the "ASU Undergraduate Certificates" table, page 113; "ASU Postbaccalaureate Certificates" table, page 114; and "ASU Graduate Certificates" table, page 114. Graduate certificates constitute graduate work; postbaccalaureate certificates are distinct from graduate certificates and are an extension of the undergraduate curriculum.

CONCURRENT AND DUAL DEGREES

Graduate students have the opportunity to pursue more than one degree at the same time as part of an organized program. For more information, see the "Dual Degrees" table, page 499, and the *Graduate Catalog*.

INTERDISCIPLINARY STUDIES

Bachelor of Interdisciplinary Studies. For information about the Bachelor of Interdisciplinary Studies at ASU Main or ASU East, see "Bachelor of Interdisciplinary Studies," page 116, or "Interdisciplinary Studies—B.I.S.," page 601.

Energy Studies. An opportunity for instructional and research involvement in energy matters exists through at least two curricular paths: (1) general studies, which emphasize energy as an elective beyond the scope of a chosen major (for more information, call the coordinator of interdisciplinary studies in energy, at 480/965-4548); and (2) specific studies in the College of Architecture and Environmental Design, for those pursuing the Master of Architecture degree and the Master of Science degree in Building Design.

Environmental Studies. The Center for Environmental Studies encourages and coordinates interdisciplinary environment-related activities in the natural and social sciences within the university. The center sponsors special courses, conferences, and workshops on environmental topics. Drawing from faculty and students throughout the university, the center participates in research and community programs relating to environmental problem areas. It does not formally offer courses or a degree program. For more information, see "Center for Environmental Studies," page 39.

Film Studies. The Film Studies Program exists not only to provide information and experience but also to serve as a means of creative expression for the student and as a useful subject and tool in teaching. The program is not designed to produce professional filmmakers, but it may provide practical preparation for students desiring further film study at other institutions.

Inquiries about this program should be directed to the Film Studies coordinator at 480/965-7644.

Gerontology. The Gerontology Program brings together faculty from several disciplines to teach courses related to adult development and aging, to collaborate on gerontological research, and to participate in projects of service to older adults.

A certificate at the postbaccalaureate level and an undergraduate minor are available in Gerontology. The certificate consists of 21 semester hours—nine hours of required course work and 12 hours of electives. The minor consists of 18 semester hours—six hours of required course work and 12 hours of electives. Courses related to aging are

ASU Minors

Minor	Administered By	Campus	Page
African American Studies	African American Studies Program	Main	323
American Indian Studies	American Indian Studies Program	Main	457
American Studies	Department of American Studies	West	657
Anthropology	Department of Anthropology	Main	327
Applied Biological Sciences	East College	East	600
Applied Psychology	East College	East	608
Architectural Studies	School of Architecture	Main	125
Art History	School of Art	Main	263
Asian Languages (Chinese/Japanese)	Department of Languages and Literatures	Main	378
Astronomy	Department of Physics and Astronomy	Main	412
Biology	School of Life Sciences	Main	332
Business*	W. P. Carey School of Business	Main	156
Chemistry	Department of Chemistry and Biochemistry	Main	338
Chicana and Chicano Studies	Department of Chicana and Chicano Studies	Main	342
Communication	Hugh Downs School of Human Communication	Main	461
Communication Studies	Department of Communication Studies	West	659
Computational Mathematical Sciences	Department of Mathematics and Statistics	Main	396
Dance	Department of Dance	Main	279
Design Studies	School of Design	Main	136
Economics for Students Planning a Career in Law	Department of Economics	Main	345
English	Department of American Studies	West	659
English with a Concentration in Linguistics	Department of English	Main	346
English with a Concentration in Literature	Department of English	Main	346
Ethnic Studies	College of Arts and Sciences	West	659
Family and Human Development	Department of Family and Human Development	Main	353
Film and Video Studies	Department of Interdisciplinary Arts and Performance	West	659
Food and Nutrition Management	Department of Nutrition	East	620
French	Department of Languages and Literatures	Main	378
General Economics	Department of Economics	Main	345
Geography	Department of Geography	Main	356
Geological Sciences	Department of Geological Sciences	Main	361
German	Department of Languages and Literatures	Main	378
Gerontology	Gerontology Program	Main	110
		West	659
History	Department of American Studies	West	659
	Department of History	Main	364
Human Nutrition	Department of Nutrition	East	620
Humanities	Interdisciplinary Humanities Program	Main	370
Interdisciplinary Arts and Performance	Department of Interdisciplinary Arts and Performance	West	659
Interior Design History	School of Design	Main	125
Italian	Department of Languages and Literatures	Main	378
Justice Studies	School of Justice Studies	Main	468
Kinesiology	Department of Kinesiology	Main	373
Landscape Studies	School of Planning and Landscape Architecture	Main	146
Life Sciences	Department of Life Sciences	West	659
Mass Communication	Walter Cronkite School of Journalism and Mass Communication	Main	465
Mathematics	Department of Integrative Studies	West	659
	Department of Mathematics and Statistics	Main	396
Microbiology	School of Life Sciences	Main	402
Music	School of Music	Main	290
Philosophy	Department of Integrative Studies	West	659
	Department of Philosophy	Main	409
Physics	Department of Physics and Astronomy	Main	412

* This minor is for nonbusiness majors only.

ASU Minors (continued)

Minor	Administered By	Campus	Page
Plant Biology	School of Life Sciences	Main	419
Political Science	Department of Political Science	Main	424
	Department of Social and Behavioral Sciences	West	659
Prelaw	College of Human Services	West	659
Psychology	Department of Psychology	Main	428
	Department of Social and Behavioral Sciences	West	659
Public Relations and Strategic Communications	Department of Communication Studies	West	659
Recreation Management	Department of Recreation Management and Tourism	Main	473
Religious Studies	College of Arts and Sciences	West	659
	Department of Religious Studies	Main	432
Russian	Department of Languages and Literatures	Main	379
Small Business	East College	East	609
Social and Behavioral Sciences	Department of Social and Behavioral Sciences	West	659
Sociocultural Anthropology	Department of Social and Behavioral Sciences	West	659
Sociology	Department of Social and Behavioral Sciences	West	659
	Department of Sociology	Main	436
Spanish	Department of American Studies	West	659
	Department of Languages and Literatures	Main	379
Special Events Management	Department of Recreation and Tourism Management	West	659
Speech and Hearing Science	Department of Speech and Hearing Science	Main	439
Statistics	Department of Mathematics and Statistics	Main	393
Theatre	Department of Theatre	Main	297
Tourism	Department of Recreation Management and Tourism	Main	473
Tourism Management	Department of Recreation and Tourism Management	West	659
Urban Planning	School of Planning and Landscape Architecture	Main	147
Wellness Foundations	Department of Exercise and Wellness	East	614
Women's Studies	Women's Studies Program	Main	441
		West	659

* This minor is for nonbusiness majors only.

taught throughout the university by faculty who are active contributors to research, theory, and public policy and practice. In addition, gerontology provides students with opportunities to gain practical experience in working with elderly people. A practicum, held at the Veterans Administration Hospital, is available to students who have completed some gerontology course work. Gerontology also helps students find rewarding internships in community programs for older adults. For more information, see "Gerontology Certificate Program," page 675, and "Gerontology," page 483, or refer to the current *Student Handbook in Gerontology.*

B.I.S. Concentration. A concentration in gerontology is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 116.

Islamic Studies. The art, history, geography, and religion of the Islamic world are the subjects of several courses offered by departments in the Herberger College of Fine Arts and the College of Liberal Arts and Sciences. For information, call the Department of Religious Studies at 480/965-7145.

Linguistics. Linguistics concentrations are offered in master's degree programs in the Departments of Anthropology, English, and Languages and Literatures through the Graduate College. Numerous linguistics courses are offered in these and other departments. For information, call the University Committee on Linguistics at 480/965-3168.

MILITARY OFFICER TRAINING

U.S. Air Force and U.S. Army ROTC units are active on the ASU campus. See "Department of Aerospace Studies," page 320, and "Department of Military Science," page 404, for more information.

Defense Activity for Nontraditional Education Support (DANTES). ASU is a participating institution with DANTES and is listed in the DANTES Directory of Independent Study. DANTES is an executive agency of the Department of Defense that provides educational support for the voluntary education programs of all services. The primary missions of DANTES are (1) to provide nationally recognized examination and certification programs as part of the voluntary education programs of military services and

(2) to facilitate the availability of high-quality independent institutions for service men and women.

WESTERN INTERSTATE COMMISSION FOR HIGHER EDUCATION (WICHE)

For Arizona residents who wish to attend professional schools of dentistry, occupational therapy, optometry, osteopathy, and veterinary medicine in one of the other western states, Arizona has joined with other states to create the Western Interstate Commission for Higher Education. Through WICHE, qualified Arizona residents may attend schools in other western states at essentially the same expense to the students as to residents of the state in which the school is located. Students must have maintained at least average grades in their preprofessional work and must have been legal residents of Arizona for at least the previous five years. Recipients are required to return to Arizona to practice or to repay a portion of the funds expended on their behalf.

For applications and more information, call 602/229-2500, or access the Web site at www.wiche.edu.

ASU Undergraduate Certificates

Certificate	Administered By	Campus	Page
Advanced Business English Certificate*	College of Extended Education	Extended	675
African American Studies Certificate	African American Studies Program	Main	323
American Indian Studies Certificate	American Indian Studies Program	Main	458
American Public Policy Certificate	Department of Political Science	Main	422
Asian Pacific American Studies Certificate	Asian Pacific American Studies Program	Main	459
Asian Studies Certificate	Center for Asian Studies	Main	363
Business English Certificate*	College of Extended Education	Extended	674
Civic Education Certificate	Department of Political Science	Main	423
Classical Studies Certificate	Department of Languages and Literatures and Interdisciplinary Humanities Program	Main	315
College of Liberal Arts and Sciences Enriched Certificate	College of Liberal Arts and Sciences	Main	314
Dealership Management, Certificate in	W. P. Carey School of Business	Main	161
East Asian Studies Certificate	Center for Asian Studies	Main	314
English as a Second Language Certificate*	College of Extended Education	Extended	675
Ethics Certificate	Department of Philosophy	Main	409
Ethnic Studies, Certificate in	College of Arts and Sciences	West	660
Film and Video Studies, Certificate in	Department of Interdisciplinary Arts and Performance	West	660
Hazardous Materials and Waste Management Certificate	Department of Information and Management Technology	East	639
Health Physics Certificate	Pre-Health Professions Office	Main	316
History and Philosophy of Science Certificate	Department of Philosophy	Main	409
Human Performance Improvement Certificate*	College of Extended Education and the American Society of Training and Development	Extended	675
International Business Studies Certificate	W. P. Carey School of Business	Main	171
International Studies Certificate	Department of Political Science	Main	423
Islamic Studies Certificate	Department of Religious Studies	Main	432
Jewish Studies Certificate	Jewish Studies Committee	Main	317
KnowledgeNet Certificate*	College of Extended Education	Extended	675
Latin American Studies Certificate	Latin American Studies Center	Main	317
Maintenance Management Certificate*	College of Extended Education	Extended	675
Medieval and Renaissance Studies Certificate	Arizona Center for Medieval and Renaissance Studies	Main	317
Multimedia Writing and Technical Communication Certificate	East College	East	618
Nonprofit Youth and Human Service Leadership and Management: American Humanics Certificate	Department of Recreation Management and Tourism	Main	474
Professional Purchasing Certificate*	College of Extended Education	Extended	675
Public Administration and Public Management Certificate	School of Public Affairs	Main	472
Quality Analysis Certificate	W. P. Carey School of Business	Main	161
Russian and East European Studies Certificate	Russian and East European Studies Consortium	Main	318

* This certificate is not for academic credit.

ASU Undergraduate Certificates

Certificate	Administered By	Campus	Page
Scandinavian Studies Certificate	Department of Languages and Literatures	Main	318
Small Business and Entrepreneurship Certificate	W. P. Carey School of Business	Main	161
Southeast Asian Studies Certificate	Program for Southeast Asian Studies	Main	318
Spanish Language Court Interpreter Certificate*	College of Extended Education	Extended	675
Supervisory and Management Skills Certificate*	College of Extended Education	Extended	675
Symbolic Systems Certificate	Department of Philosophy	Main	319
Translation Certificate	Department of Languages and Literatures	Main	379
Women's Studies, Certificate in	Women's Studies Program	West	660
		Main	319
Writing, Certificate in	Department of American Studies	West	660
	Department of English	Main	347

* This certificate is not for academic credit.

ASU Postbaccalaureate Certificates

Certificate	Administered By	Campus	Page
Accountancy, Postbaccalaureate Certificate in*	Department of Accounting and Information Systems Management	West	660
Communication and Human Relations, Postbaccalaureate Certificate in*	Department of Communication Studies	West	660
Multimedia Writing and Technical Communication, Postbaccalaureate Certificate in	East College	East	618
Professional Accountancy, Postbaccalaureate Certificate in*	Department of Accounting and Information Systems Management	West	660

* For more information, see the *ASU West Catalog.*

ASU Graduate Certificates

Certificate	Administered By	Campus	Page
Atmospheric Science Certificate*	College of Engineering and Applied Sciences and College of Liberal Arts and Sciences	Main	—
Geographic Information Science, Interdisciplinary Certificate in*	Graduate College	Main	—
Gerontology, Certificate in	College of Human Services	West	660
	Graduate College	Main	483
		Extended	675
Indian Law Certificate*	College of Law	Main	—
Law, Science, and Technology, Certificate in*	College of Law	Main	—
Medieval Studies Certificate*	Arizona Center for Medieval and Renaissance Studies (ACMRS)	Main	—
Museum Studies Certificate*	Department of Anthropology	Main	—
Nonprofit Leadership and Management Certificate	College of Public Programs	Main	456
Post-Bachelor's Artist Diploma*	School of Music	Main	—
Post-Master's Nurse Practitioner Certificate*	College of Nursing	Main	—
Renaissance Studies Certificate*	ACMRS	Main	—
Scholarly Publishing Certificate*	Department of History	Main	—
Statistics, Certificate in*	Committee on Statistics and the Graduate College	Main	—
Transportation Systems Certificate	Committee on Transportation Systems and the Graduate College	Main	484
		Extended	675

* For more information, see the *Graduate Catalog.*

Division of Undergraduate Academic Services

www.asu.edu/duas **William S. Johnson, Ph.D., Executive Director**

The Division of Undergraduate Academic Services is a primary source of academic support for students, faculty, and staff. The division coordinates and offers academic programs and services designed to enhance the academic experience of ASU undergraduate students. The goals of the division are to play a major role in student retention, provide students the support necessary for successful completion of their first year and beyond, and offer students learning experiences that complement those provided by other academic units.

The division includes these units:

Academic Community Engagement Services
Academic Success Programs
Advising Services
Bachelor of Interdisciplinary Studies
Degree Audit Reporting System
General Studies

ACADEMIC COMMUNITY ENGAGEMENT SERVICES

Academic Community Engagement Services (ACES) supports community-based learning activities for service learning and work-study eligible students. For more information, call 480/727-6382.

Service Learning Program

Students who enroll in Service Learning Program credit-bearing internships participate in academically based service activities that

1. integrate and enhance academic curriculum and community experiences;
2. meet community-identified needs;
3. foster civic responsibility;
4. support reciprocal learning; and
5. include structured reflection time.

The Service Learning Program and associated departments offer ASU freshmen through graduate students the opportunity to develop a sense of shared mission and community with their classmates as they provide educational support and enrichment to a diverse group of Phoenix-area children through adults in structured, supervised environments. These service internships can be "linked" to many different discipline areas. Most service learning students provide after-school tutoring or lead children in hands-on science and math activities. Footnote 34 denotes service learning sections in the *Schedule of Classes*.

America Reads / America Counts

America Reads. Through the America Reads program, Federal Work-Study students are paid to work one-on-one with academically at-risk children in the community. The term "at-risk" describes children (grades 1–9) who live in low-income acres and are likely to drop out of high school. The goal of the America Reads tutoring program is to increase each child's literacy skills to grade level. In the after-school programs, tutors assist children with homework as well as create fun, hands-on activities to exercise academic skills. Tutors also assist preschool children in developing early literacy skills and their parents in learning English.

America Counts. Through the America Counts program, Federal Work-Study students are paid to work with academically at-risk children (grades 1–3) in the community to increase math scores and comprehension. In these after-school programs, tutors assist children with homework as well as create hands-on activities to teach math concepts in a fun way.

Jumpstart Arizona

Jumpstart Arizona is a Federal Work-Study program that pairs college students with preschool children who are struggling in Head Start classrooms. Jumpstart Arizona Corps Members can earn a salary and an education award as they help children build the skills they need for a successful future in school.

ACADEMIC SUCCESS PROGRAMS

Campus Match

Campus Match is a first-semester fall program that gives freshmen the opportunity to attend classes in small learning communities according to their academic interest. Students choose a "cluster" of classes from a wide variety of offerings. Each cluster is limited to 25 students who enroll in and attend classes together. All students attend a weekly peer-led seminar that facilitates their social and academic adjustment to the university.

Academic Success at the University Courses

The purpose of the UNI courses is to assist first-year, transfer, and reentry students in making a successful transition to the university. Students learn university resources, policies and procedures, study skills, values and goal setting, human diversity, academic and career planning, and other skills.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

ACADEMIC SUCCESS AT THE UNIVERSITY (UNI)

UNI 100 Academic Success at the University. (3)
fall, spring, summer
Orientation to campus resources, study skills, and other academic and social issues for college students. Introduces an understanding of human diversity, values, and perspectives as they relate to student success. Lecture, seminar, discussion. Prerequisite: freshman or sophomore or transfer student.

UNI 101 Student Success Seminar. (1)
fall and summer
Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.

UNI 484 Service Learning Internship. (1–12)
fall, spring, summer
Fee.

UNI 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Science is Magic Internship. (3)
  Presents science demonstrations to K–8 children at their schools. Interns are trained by personnel from the Center for Solid State Science. This internship does not follow the format of the others.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Summer Bridge

Summer Bridge is a program designed to assist first-semester freshmen in making the transition from high school to university life. Summer Bridge is a five-week program that provides a full academic curriculum in conjunction with a rich student development experience. The program assists participants in acclimating to campus, accessing student support programs and services, and enhancing classroom and personal skills.

Writing Across the Curriculum (WAC)

Curriculum Development and Support. WAC Curriculum Development and Support is designed to assist in enhancing the quality of writing and critical thinking skills of university students.

WAC specialists consult with faculty on methods of developing and integrating writing assignments into course content. The specialists also provide customized in-class writing workshops designed to assist students in researching and responding to writing assignments.

Writing Center. The Writing Center provides students with one-on-one and group tutoring in writing skills. Rather than proofreading or editing students' writing, the Writing Center teaches students the skills they need to improve their writing processes and products.

BACHELOR OF INTERDISCIPLINARY STUDIES

The Bachelor of Interdisciplinary Studies (B.I.S.) program is intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. take an active role in creating their educational plans and defining their career goals. The B.I.S. emphasizes written communication, versatility, and critical thinking—skills desired in the 21st century workplace. Self-assessment and appraisal of opportunities to support academic and career goals are key elements in the core courses.

At ASU Main, students must first complete the B.I.S. Cyber Workshop found at www.asu.edu/duas/bis and then meet with an academic advisor before declaring the B.I.S. major. For more information, visit Academic Advising Services in UASB 129 or call 480/965-4464. For information about the B.I.S. at ASU East, see "Interdisciplinary Studies—B.I.S.," page 601.

The combination of areas of concentration gives students flexibility in creating a unique program to accomplish individualized academic goals. These combinations illustrate a range of examples:

1. anthropology and religious studies;
2. communication and small business;
3. communication and sociology;
4. dance and exercise science/physical education;
5. economics and Spanish;
6. environmental resources and geology;
7. environmental resources and political science;
8. justice studies and political science;
9. nonprofit/youth agency administration and theatre; and
10. psychology and women's studies.

Basic Requirements

The B.I.S. requires 120 semester hours. The major is composed of a 12-semester-hour core and a minimum of 36 semester hours in two concentrations of at least 18 semester hours each or in one double concentration. Throughout the core sequence, the student assembles a portfolio including self-assessment of progress toward career goals and an evaluation of key educational and personal activities that may apply. All core courses must be completed with a grade of "C" or higher.

Core Courses

BIS	301	Foundations of Interdisciplinary Studies *L*	3
BIS	302	Interdisciplinary Principles	3
BIS	401	Applied Interdisciplinary Studies	3
BIS	402	Senior Seminar *L*	3
Total			12

Other Requirements

In addition to the basic requirements, students must complete all university requirements, including First-Year Composition and General Studies. Early advising is recommended to facilitate selecting courses that may apply to both the General Studies requirements and the areas of concentration.

Declaring the B.I.S. Major. Completing the B.I.S. Cyber Workshop (located on the Web at www.asu.edu/duas/bis) and then receiving academic advising from Academic Advising Services are required before being approved to declare the B.I.S. In addition, the student must

1. complete at least 45 semester hours of university credit;
2. earn a cumulative G.P.A. of at least 2.00;
3. complete two courses in each concentration with a minimum grade of "C" before enrolling in BIS 301; and

4. complete the university mathematics and First-Year Composition requirements.

All incoming students and continuing students with a minimum GPA of 2.00 who do not meet the above requirements are placed in a pre-B.I.S. major until the requirements have been met.

Approved Concentrations

Each concentration requires a minimum of 18 semester hours, with a grade of "C" or higher. A minimum of 12 of these hours must be in upper-division courses. The concentrations—shown in the "B.I.S. Concentrations" table, page 118—are mostly based on existing minors or certificate programs and should represent academic interests that the student wishes to integrate into a meaningful program. Concentrations based on minors or certificates with fewer than 18 hours have additional semester hours required. Complete information on each concentration is available by visiting Academic Advising Services in UASB 129 or by accessing the B.I.S. Web site at www.asu.edu/duas/bis.

A minimum of three semesters is required to complete the core sequence. BIS 301 is taken first and is the prerequisite to BIS 302. BIS 301 and 302 are prerequisites to 401 and 402, which may be taken concurrently; however, BIS 401 is a corequisite or prerequisite for 402. To enroll in BIS 401, a student must apply for the course during the semester before desired enrollment.

BACHELOR OF INTERDISCIPLINARY STUDIES (BIS)

BIS 301 Foundations of Interdisciplinary Studies. (3)
fall and spring
Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends. Lecture, seminar, discussion. Prerequisites: B.I.S. major; 2.00 GPA.
General Studies: L

BIS 302 Interdisciplinary Principles. (3)
fall and spring
Explores interdisciplinarity and integration as applied to various approaches of human inquiry. Lecture, seminar, discussion. Prerequisite: BIS 301.

BIS 401 Applied Interdisciplinary Studies. (3)
fall and spring
Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations. Prerequisites: BIS 301, 302; prior application.

BIS 402 Senior Seminar. (3)
fall and spring
Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests. Lecture, seminar, discussion. Prerequisites: BIS 301, 302. Pre- or corequisite: BIS 401.
General Studies: L

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and beyond. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges and the Division of Undergraduate Academic Services to meet the instructional and informational needs of a diverse community.

The ASU Extended Campus goes beyond the boundaries of the university's three physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies including television, the Internet, and Independent Learning. The ASU Extended Campus also offers a variety of professional continuing education and community outreach programs.

For more information, see "ASU Extended Campus," page 671, or access the Web site at www.asu.edu/xed.

ADVISING SERVICES

DUAS Academic Advising Services

DUAS Academic Advising Services provides advising for a diverse group of students, including all undeclared or no preference majors, B.I.S. and pre-BIS majors, and students in transition who may be changing majors or transferring to ASU.

Academic advising is a partnership between the student and the advisor. Each has a mutual investment in the advising and its outcome. Good academic advising is the foundation for successfully completing a bachelor's degree.

Academic advisors assist students in selecting a major by suggesting complementary choices among the offerings in the General Studies curriculum. Advisors also encourage students to explore and identify majors consistent with the students' interests, values, and goals. Advisors help students understand university academic requirements, policies and procedures.

DUAS Academic Advising Services is located in UASB 129 and can be reached by phone at 480/965-4464. The Web address is www.asu.edu/duas/cas.

Degree Audit Reporting System (DARS)

DARS is an online tool that provides students with consistent, accurate information regarding their academic requirements. Through this system, a degree audit is produced that matches a student's completed courses against degree program requirements. The audit allows students to assess their progress toward their degree or to determine how their earned credits would apply if they were to pursue another degree program. Undergraduate students may obtain a degree audit on the Student Online Services Web site: www.asu.edu/sos. Degree audits are processed hourly.

GENERAL STUDIES

All students enrolled in a baccalaureate degree program must satisfy the General Studies requirement. For more information, see "University Graduation Requirements," page 81, and "General Studies," page 85.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

B.I.S. Concentrations

Concentration	College	Campus	Page
African American studies	College of Liberal Arts and Sciences	Main	323
American Indian studies	College of Public Programs	Main	458
Anthropology	College of Liberal Arts and Sciences	Main	327
Architectural studies	College of Architecture and Environmental Design	Main	132
Art history	Herberger College of Fine Arts	Main	263
Asian Pacific American studies	College of Public Programs	Main	459
Asian studies	College of Liberal Arts and Sciences	Main	314
Astronomy	College of Liberal Arts and Sciences	Main	413
Biology[1]	College of Liberal Arts and Sciences	Main	332
Business	W. P. Carey School of Business	Main	156
Chemistry	College of Liberal Arts and Sciences	Main	338
Chicana and Chicano studies	College of Liberal Arts and Sciences	Main	342
Chinese	College of Liberal Arts and Sciences	Main	380
Classical studies—Greek	College of Liberal Arts and Sciences	Main	316
Classical studies—Latin	College of Liberal Arts and Sciences	Main	316
Communication	College of Public Programs	Main	461
Computational mathematical sciences	College of Liberal Arts and Sciences	Main	397
Dance	Herberger College of Fine Arts	Main	279
Design studies	College of Architecture and Environmental Design	Main	137
East Asian studies	College of Liberal Arts and Sciences	Main	314
Economics	College of Liberal Arts and Sciences	Main	345
Economics for students planning a career in law	College of Liberal Arts and Sciences	Main	345
Education	College of Education	Main	192
English—creative writing[2]	College of Liberal Arts and Sciences	Main	347
English—linguistics concentration[2]	College of Liberal Arts and Sciences	Main	347
English—literature concentration[2]	College of Liberal Arts and Sciences	Main	347
English—writing certificate[2]	College of Liberal Arts and Sciences	Main	347
Environmental resources	East College	East	605
Environmental science[3, 4]	—	—	—
Ethics	College of Liberal Arts and Sciences	Main	316
Kinesiology	College of Liberal Arts and Sciences	Main	373
Family studies/child development	College of Liberal Arts and Sciences	Main	353
Food and nutrition management	East College	East	620
French	College of Liberal Arts and Sciences	Main	380
Geography[5]	College of Liberal Arts and Sciences	Main	357
Geography—environmental geography[5]	College of Liberal Arts and Sciences	Main	357
Geography—geographical information science[5]	College of Liberal Arts and Sciences	Main	357
Geography—geography for business[5]	College of Liberal Arts and Sciences	Main	357
Geography—international geography[5]	College of Liberal Arts and Sciences	Main	357
Geological sciences	College of Liberal Arts and Sciences	Main	361
German	College of Liberal Arts and Sciences	Main	380
Gerontology	Graduate College	Main	112
Global family[3]	—	—	—
Hazardous materials and waste management	College of Technology and Applied Sciences	East	639
History	College of Liberal Arts and Sciences	Main	364
Human nutrition	East College	East	620
Humanities	College of Liberal Arts and Sciences	Main	370
Interior design history	College of Architecture and Environmental Design	Main	137
International business studies[3]	W. P. Carey School of Business	Main	171
Italian	College of Liberal Arts and Sciences	Main	380
Japanese	College of Liberal Arts and Sciences	Main	380

[1] Students may not use more than one concentration in the life sciences: biology, microbiology, and plant biology.

[2] Students may not use more than one English concentration.

[3] The program may award a certificate upon completion.

[4] This is a double concentration.

[5] Students may not use more than one geography concentration.

B.I.S. Concentrations (continued)

Concentration	College	Campus	Page
Jewish studies	College of Liberal Arts and Sciences	Main	317
Justice studies	College of Public Programs	Main	469
Landscape studies	College of Architecture and Environmental Design	Main	147
Latin American studies	College of Liberal Arts and Sciences	Main	317
Mass communication	College of Public Programs	Main	465
Mathematics	College of Liberal Arts and Sciences	Main	397
Medieval and Renaissance studies	College of Liberal Arts and Sciences	Main	318
Microbiology[1]	College of Liberal Arts and Sciences	Main	402
Multimedia writing and technical communication	East College	East	618
Music	Herberger College of Fine Arts	Main	290
Nonprofit/youth agency administration	College of Public Programs	Main	474
Organizational studies[4]	—	—	—
Philosophy	College of Liberal Arts and Sciences	Main	409
Philosophy—history and philosophy of science	College of Liberal Arts and Sciences	Main	409
Philosophy—symbolic systems	College of Liberal Arts and Sciences	Main	409
Physics	College of Liberal Arts and Sciences	Main	413
Plant biology[1]	College of Liberal Arts and Sciences	Main	419
Plant biology—environmental science and ecology[1]	College of Liberal Arts and Sciences	Main	419
Plant biology—molecular biosciences/ biotechnology[1]	College of Liberal Arts and Sciences	Main	419
Plant biology—urban horticulture[1]	College of Liberal Arts and Sciences	Main	419
Political science	College of Liberal Arts and Sciences	Main	424
Political science—American public policy	College of Liberal Arts and Sciences	Main	424
Political science—civic education	College of Liberal Arts and Sciences	Main	424
Political science—international studies	College of Liberal Arts and Sciences	Main	424
Psychology	College of Liberal Arts and Sciences	Main	429
Public administration	College of Public Programs	Main	472
Quality analysis	W. P. Carey School of Business	Main	161
Recreation management	College of Public Programs	Main	474
Religious studies	College of Liberal Arts and Sciences	Main	432
Russian	College of Liberal Arts and Sciences	Main	380
Russian and East European studies	College of Liberal Arts and Sciences	Main	318
Scandinavian studies	College of Liberal Arts and Sciences	Main	318
Small business	East College	East	610
Sociology	College of Liberal Arts and Sciences	Main	436
Southeast Asian studies—area studies option	College of Liberal Arts and Sciences	Main	319
Southeast Asian studies—language option	College of Liberal Arts and Sciences	Main	319
Spanish	College of Liberal Arts and Sciences	Main	380
Spanish for native speakers	College of Liberal Arts and Sciences	Main	380
Speech and hearing science	College of Liberal Arts and Sciences	Main	439
Statistics	College of Liberal Arts and Sciences	Main	397
Theatre	Herberger College of Fine Arts	Main	297
Tourism	College of Public Programs	Main	474
Translation (Spanish/English)	College of Liberal Arts and Sciences	Main	380
Urban planning	College of Architecture and Environmental Design	Main	147
Wellness foundations	East College	East	614
Women's studies	College of Liberal Arts and Sciences	Main	442

[1] Students may not use more than one concentration in the life sciences: biology, microbiology, and plant biology.

[2] Students may not use more than one English concentration.

[3] The program may award a certificate upon completion.

[4] This is a double concentration.

[5] Students may not use more than one geography concentration.

The Barrett Honors College

www.asu.edu/honors **Ted Humphrey, Ph.D., Dean**

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MISSION

The Barrett Honors College is a community of learners dedicated to superior undergraduate education based on the pursuit of excellence, respect for the individual, commitment to integrity, and service to society.

The college offers talented, motivated students educational opportunities designed to enrich and further their personal academic and career goals. It is a portal through which academically talented students gain unique access to the university's human and physical resources. Transdisciplinary in nature, the college develops curricular and other learning opportunities to meet general and disciplinary undergraduate educational objectives. The college supports undergraduate research, encourages study abroad, guides students to relevant internships, mentors applicants for fellowships and scholarships, and assists students with application to graduate school.

The Barrett Honors College serves students seeking degrees at ASU Main, in Tempe; ASU West, in northwest Phoenix; and ASU East (Williams Campus) in southeast Mesa. Students across the university can take advantage of the university's full resources with the assurance of consistently distinguished teaching and research and with commensurately rigorous expectations for performance.

Students from all disciplinary colleges and academic majors can enroll in the Barrett Honors College.

CURRICULUM

Students seeking to graduate from the Barrett Honors College must also graduate from a disciplinary college. The ASU honors curriculum normally allows students to finish all requirements within the 120 semester hours of credit usually required for graduation.

SPECIAL PROGRAMS

Office of National Scholarship Advisement

The Office of National Scholarship Advisement assists honors and other high-achieving students by identifying nationally competitive programs appropriate to each person's intellectual and career goals, nurturing these prospective applicants, and advancing their candidacy. This office, administered by the college, serves the entire ASU community. ASU students regularly earn distinction in the most rigorous and prestigious scholarship competitions. Many pursue enhanced degree programs and research projects under the auspices of Goldwater or Truman Scholarships. Other students undertake postgraduate study in the United States and abroad as Rhodes, Marshall, Fulbright, Udall, National Science Foundation, or Mellon Scholars. Many others have been recognized by a range of postgraduate awards, fellowships, and assistantships. *This office does not administer any need- or merit-based student financial assistance.* For more information, call 480/965-5894.

The Undergraduate Research Office

The Undergraduate Research Office maintains a database of research opportunities available throughout the university. This office is administered by the Barrett Honors College and serves the entire university.

Study Abroad

Students participating in the Barrett Honors College have exclusive access to specialized study abroad programs and advising in the ASU International Programs Office, which offers more flexible course registration and transfer arrangements. These plans allow students to earn honors credit while overseas.

Internships/Mentorships/Opportunities

Students in the Barrett Honors College may participate in special internship opportunities or mentoring by leaders—in government, industry, and the private sector—throughout metropolitan Phoenix. The college also maintains a database of special opportunities, including community service and international and cultural events. For more information, call 480/965-2354.

Events/Programming

Students enrolled in the Barrett Honors College are given special access when important contributors to contemporary thought visit ASU. Each year the college hosts the university's premier scholar-in-residence program, the Centennial Lecture. Past guests include novelist Carlos Fuentes, paleontologist Steven Jay Gould, psychiatrist Robert Coles, microbiologist Lynn Margulis, essayist Susan Sontag, paleoanthropologist Meave Leakey, and American Indian author N. Scott Momaday.

The college is home to the John J. Rhodes Chair, designed to bring to the college persons who have significantly contributed to civic life and distinguished themselves as public service leaders. Students have unique opportunities to engage intellectually with these outstanding visiting lecturers. In 1998, the college was honored to have Dr. Henry A. Kissinger serve as the inaugural chair. American Indian scholar Donald Lee Fixico was the 2002 Rhodes Lecturer.

ADDITIONAL BENEFITS

The Barrett Honors College and all its facilities and services are fully available to every student, regardless of where he or she lives. The Honors Halls of Residence offer students an integrated living-learning environment; faculty and academic advisors serve the students there. Classrooms, recreational and study lounges, and a state-of-the-art computing lab compose the principal facilities of the college.

Students enrolled in the Barrett Honors College receive priority at preregistration and have extended checkout privileges in the campus libraries. Honors courses in disciplinary departments are typically limited to 25 students. Honors courses (with the prefix HON) are usually limited to 18.

Students can receive transcript recognition for lower-division honors studies. Students who meet all upper-division requirements of both their disciplinary college and the Barrett Honors College receive transcript recognition of that accomplishment, as well as special acknowledgment during graduation ceremonies and collegiate honors convocations.

Participants in the honors college have diverse interests and strong records of success. Many go on to the nation's finest graduate and professional programs, including Chicago, Cornell, Harvard, Michigan, MIT, Northwestern, Stanford, UC-Berkeley, Virginia, Wisconsin, and Yale. Many students have published portions of their honors theses and have presented their work at national and regional meetings of scientific and honors societies.

ADMISSION

Students who have demonstrated high levels of academic achievement at the high school or university level are invited to apply for admission to the Barrett Honors College. All candidates for admission must file a separate application to the college.

Applicants are initially evaluated on the basis of their high school GPA (Arizona Board of Regents GPA based on 16 competency courses), high school class rank, and performance on the SAT or ACT; or a student may possess other talents that contribute to academic leadership and community service. Continuing ASU or transfer students are evaluated on their college GPA.

All students who believe they can better succeed at the university by participating in the Barrett Honors College are encouraged to apply. Application forms and additional information about the college and its activities are available by calling 480/965-2359 or by accessing www.asu.edu/honors on the Web.

RETENTION

Honors students must maintain high standards of academic performance and show progress toward completion of graduation requirements in their disciplinary majors and the Barrett Honors College. Students must complete an average of one honors course each semester. The associate dean of the college must approve any deviation from this standard. Good standing in the college requires students to maintain the following cumulative ASU GPAs (4.00 = A):

1. fewer than 45 semester hours, 3.25;
2. between 45 and 80 semester hours, 3.33; and
3. above 80 semester hours, 3.40.

A student with a lower cumulative ASU GPA is placed on probation and is withdrawn from the college if he or she does not make reasonable progress in raising the cumulative GPA during the following semester. Students who fail to complete at least one honors course in two semesters are placed on inactive status. A student on inactive status within the college is not eligible for honors housing, extended library privileges, early registration, or honors internship placement. Reinstatement to active status requires a formal application and consultation with an honors advisor.

COURSE REQUIREMENTS

Only courses in which a student receives at least a grade of "C" may be used to meet Barrett Honors College requirements.

Students entering the college as freshmen or continuing ASU students must take HON 171 and 172 the Human Event. This cross-disciplinary seminar acquaints them with ideas that form the foundation of a university education and emphasizes critical thinking, discussion, and writing. Barrett Honors College students complete HON 171 and 172 during their first two semesters.

Students transferring into the university after their sophomore year must take a 300-level honors course. Junior-level seminar courses introduce them to critical thinking, discussion, and writing in a topical area chosen by the instructor. It is expected that all students complete this course no later than the first or second semester after transferring.

Departmental courses carrying footnote number 19 in the *Schedule of Classes* are limited to honors students and others who receive special permission from the instructor to enroll. Enrollment in these courses is limited. Compared to their non-honors equivalents, these courses are designed to offer a richer, more complex intellectual experience appropriate to the discipline and the level of the course for all students enrolled. Other disciplinary honors courses group honors students in small cohorts to work on research projects of common interest.

Departmental courses carrying footnote number 18 in the *Schedule of Classes* allow honors students to contract with the instructor of designated non-honors courses to earn honors credit by pursuing enrichment activities, which may

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

include supplemental sessions with the instructor. Footnote 18 contracts must be filed during the first four weeks of class and completed during the semester in which the course is offered. Each contract form offers guidelines to aid students and faculty in developing appropriate contracts.

Course numbers listed in the *Schedule of Classes* as 298, 492 Honors Directed Study, 493 Honors Thesis, 497 Honors Colloquium, and all classes with the HON prefix are reserved for students in the Barrett Honors College and always carry footnote 19. Students may receive credit for more than one of each of these courses in a given department.

Departmental courses with the number 493 are reserved for honors students completing their honors theses. A student may enroll for these courses only with the approval of the sponsoring academic department and of the faculty member who serves as the student's thesis director. Course numbers listed in the *Schedule of Classes* as 493 fulfill the student's literacy and critical inquiry (L) General Studies requirement.

There are certain courses that carry automatic honors credit. These include ENG 105 (any section) and CHM 117 and 118. Certain advanced courses, when taken in the freshman or sophomore year, also carry automatic honors credit, as long as the student receives a grade of A or B. Students in the Barrett Honors College may also enroll in graduate-level courses that automatically earn honors credit.

All courses a student takes for honors credit may be used toward graduation, even if the student does not graduate from the Barrett Honors College.

HONORS TRANSCRIPT RECOGNITION

All courses used to fulfill lower-division or upper-division/graduation requirements for the Barrett Honors College must carry earned letter grades of at least "C." A "Y" grade does not meet college requirements.

Lower Division

To receive transcript recognition for lower-division honors work, students must complete 18 semester hours of honors course work within 60 earned semester hours with a cumulative ASU GPA greater than or equal to 3.40 (4.00 = A). In addition to HON 171 and 172, students must complete advanced courses.

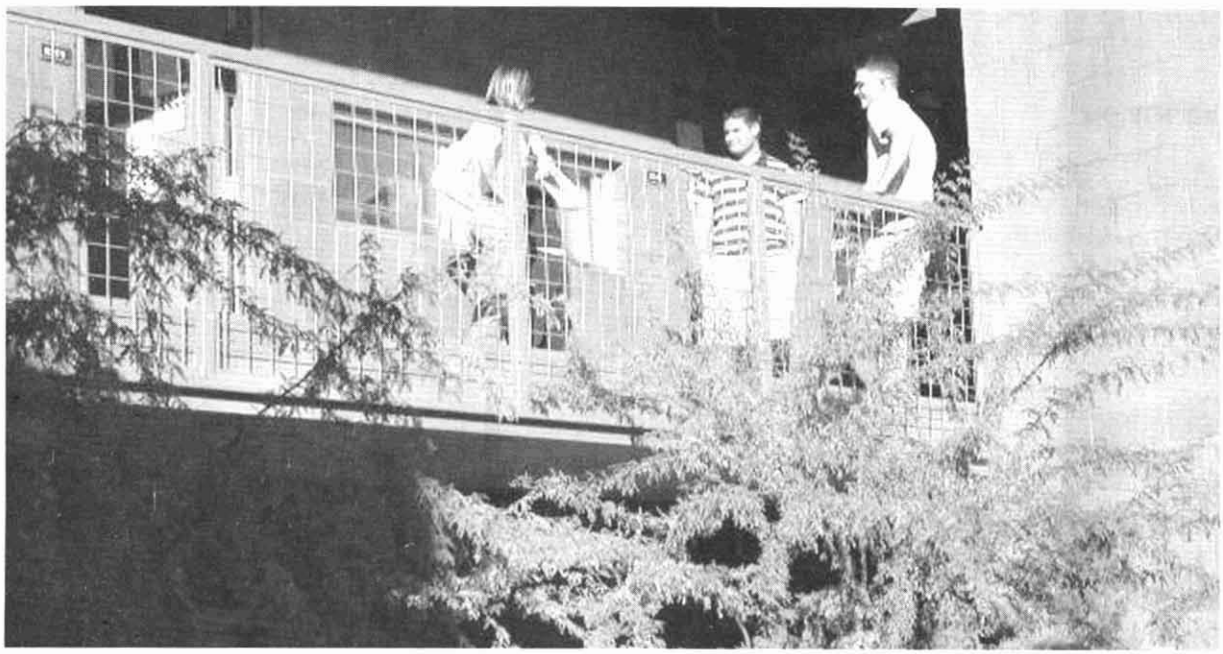
Students may apply upper-division honors course work toward lower-division requirements; however, those classes may not also be used to meet the Barrett Honors College upper-division/graduation requirements.

Intent to Graduate

Students must complete and file with the college an Intent to Graduate form no later than the semester in which they complete 75 earned semester hours (including advanced placement, International Baccalaureate Diploma/Certificate, College-Level Examination Program, and dual enrollment credits). This form is available online at the college's Web site, www.asu.edu/honors, and is located in the section devoted to forms.

The Intent to Graduate form includes sections in which students indicate

1. their intended major(s), minor(s), and certificate program(s);
2. the courses they intend to use to satisfy the requirements for "Lower Division with Honors"; and



Best Hall, a Barrett Honors College residence complex, was renovated in 2002.

John MacIsaac photo

3. the courses they intend to use to satisfy the requirements for graduation through the Barrett Honors College.

Normally, only students who complete the requirements for "Lower Division with Honors" or their equivalent at the institutions from which they transfer are allowed to pursue completion of the requirements for graduation through the Barrett Honors College.

Upper Division/Graduation

To graduate through the Barrett Honors College, students must meet these requirements:

1. They must complete HON 171 and 172 or, if they transfer to the university after their sophomore year, they must take one 300-level honors seminar course.
2. They must complete 18 additional semester hours of upper-division honors course work for an earned letter grade, unless otherwise provided for by the Barrett Honors College and the student's disciplinary college. The additional hours must include three to six semester hours of Honors Thesis and six semester hours outside the academic major (these may include graduate courses).
3. They must complete ASU graduation requirements in an academic major.
4. They must earn a cumulative ASU GPA greater than or equal to 3.40 (4.00 = A).

The Barrett Honors College

www.asu.edu/honors
480/965-2359
IRISH A121

Ted Humphrey, Dean

Professor: Humphrey

Assistant Administrative Professional: Burke

Senior Lecturers: Dalton, Facinelli, Stanford, Susser

Lecturers: Beggs, Bruhn, J. Lynch, J.M. Lynch, McManus, Pickus

HONORS (HON)

HON 171 The Human Event. (3)
fall and spring
Landmarks in the social and intellectual development of the human race, with emphasis on Western civilization. Enrollment restricted to members of the Barrett Honors College. Consult the college for applicability to disciplinary college distribution requirements.
General Studies: L/HU, H

HON 172 The Human Event. (3)
fall and spring
Continuation of HON 171, with emphasis on the Renaissance through the modern period. Prerequisite: HON 171.
General Studies: L/HU, H

HON 371 Freedom and Authority. (3)
fall and spring
Historical overview of concepts of liberty, responsibility, and power in Western societies, emphasizing 18th- to 20th-century developments. Seminar.
General Studies: L/HU

HON 372 French Cultural Influences. (3)
summer session 1
Explores textual and cultural artifacts formative of French culture as a series of contacts and conflicts with other peoples and lifeways. Seminar.
General Studies: L/HU, G

HON 373 Heroes, Heroines, and Villains. (3)
fall and spring
Examines concepts of heroic and villainous characteristics as expressed in the literature and visual arts of various cultures throughout history. Seminar.
General Studies: L/HU

HON 374 Black and White Atlantic. (3)
fall and spring
Examines development (18th- to 20th-century) and cultural manifestations of Black/White race relations within the U.S. and between the U.S. and other nations. Seminar.
General Studies: HU, G

HON 375 Science and the Modern Self. (3)
fall and spring
Concentrates on texts of the 19th and 20th centuries; explores how scientific discourse determines our notions of self. Seminar, lecture, discussion.
General Studies: L/HU

HON 376 Law, Literature, and Life. (3)
fall and spring
Multidisciplinary approach to the subject of law, examining it through literature, history, and legal philosophy. Seminar.
General Studies: L/HU

HON 377 Nature in Context. (3)
fall
Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism. Seminar. Cross-listed as HPS 377. Credit is allowed for only HON 377 or HPS 377.
General Studies: L/HU

HON 394 Special Topics. (3)
fall, spring, summer

HON 484 Internship. (1–6)
selected semesters

HON 485 Biosphere 2—Study Opportunity. (1–18)
fall and spring
For students participating in the ASU-sponsored program at Biosphere 2.

HON 492 Honors Directed Study. (1–12)
selected semesters
Research and preparation for HON 493.

HON 493 Honors Thesis. (1–6)
selected semesters
General Studies: L

HON 498 Pro-Seminar. (1–7)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

College of Architecture and Environmental Design

www.asu.edu/caed **Ronald McCoy, M.Arch., Interim Dean**

School of Architecture **129**
School of Design **135**
School of Planning and Landscape Architecture **146**

PURPOSE

The practice of architecture and environmental design is the culturally responsible shaping of our environment—from the scale of the cities in which we live to the buildings and interiors we inhabit and the artifacts and products we use. What we design must be durable, useful, beautiful, appropriate to its context, and not a waste of resources, energy, or materials. Designing our environment is an art, a technology, and a social science that has a history as long as human culture. The goals of the faculty include offering students an education that becomes the basis for life-long growth and improvement as professionals, advancing the discipline in both theory and practice, and improving the quality of the environment by making the expertise and knowledge of the faculty available to other professionals and to the public.

ORGANIZATION

Academic Organization. The college is composed of three academic units:

School of Architecture
School of Design
School of Planning and Landscape Architecture

Administration of the college is the responsibility of the dean, who in turn is responsible to the president of the university through the senior vice president and provost.

College Facilities. All of the College of Architecture and Environmental Design's programs are housed in a single complex. Facilities include the Architecture and Environmental Design Library; computer laboratories; design studios; the Gallery of Design; lecture and seminar rooms; the Media Center; offices for faculty, the administration, and student organizations; the shop; the slide collection; Materials Resource Center; and technology laboratories. The bridge between the original building and the expansion places the college's review and display space at the heart of the complex.

Architecture and Environmental Design Library. As a branch of the University Libraries, the Architecture and Environmental Design Library provides easy access to more than 30,000 books, periodicals, and reference materials for students, faculty, and the professional community. The library's special collections include archives of Blaine Drake, Victor Olgyay, Calvin Straub, Will Bruder, and others, as well as research materials on Paolo Soleri and Frank Lloyd Wright. The Alternative Energy Collection and the Materials Resource Center provide additional sources for research.

Gallery of Design. The Gallery of Design is one of eight university galleries and museums. It provides space for traveling exhibits and exhibitions of student and faculty work.

Special Facilities. College programs are supplemented by several special laboratories, including the computer-aided design and graphics lab; the high-bay research lab; the lighting lab; the solar research lab; the solar roofdeck work area; an extensive shop equipped to handle wood, plastic, and metal; the Herberger Center for Design Excellence; and the Joint Urban Design Program, which also has a studio at the ASU Downtown Center. The Media Center includes traditional graphics and audiovisual equipment as well as portable gear. The slide collection, with more than 100,000 images, is available for instructional use, and the college maintains an array of materials testing equipment.

ADMISSION

Lower-Division Programs. A new or transfer student who has been admitted to the university and has selected a college major is admitted to the lower-division program of his or her choice. A separate application procedure is required for entry to upper-division programs and graduate programs. Acceptance into lower-division programs does not guarantee acceptance to upper-division programs. Acceptance into lower-division programs requires a TOEFL score of 500 or higher for international students whose native language is not English.

Transfer Credits. While the university accepts credits transferred from other accredited institutions, transfer credits are not applied to specific degree programs until reviewed and accepted by the appropriate academic units. Transfer course work must be equivalent in both content and level of offering. In addition, a review of samples of work (portfolio format) from previous studio classes is required. Students who change majors to transfer into the college or one of its program areas must have a minimum cumulative GPA of 2.50.

College of Architecture and Environmental Design Baccalaureate Degrees and Majors

Major	Degree	Concentration	Administered By
Architectural Studies	B.S.D.	—	School of Architecture
Design Science[1]	B.S.D.	—	School of Design
Graphic Design	B.S.D.	—	School of Design
Housing and Urban Development	B.S.D.	—	School of Planning and Landscape Architecture
Industrial Design	B.S.D.	—	School of Design
Interior Design[2]	B.S.D.	—	School of Design
Landscape Architecture	B.S.L.A.	—	School of Planning and Landscape Architecture
Urban Planning	B.S.P.	—	School of Planning and Landscape Architecture

[1] Applications for this program are not being accepted at this time.

[2] This major requires more than 120 semester hours to complete.

Upper-Division Programs. Admission to upper-division programs is competitive. Consult requirements of each major for details. Students applying to more than one program must make a separate application to each and must submit separate portfolios. Students not enrolled at ASU when they apply to upper-division programs must also make a separate application to the university. Students not admitted to the upper division are not dismissed from the university and may reapply or transfer to other programs. Students who plan to reapply should contact a college academic advisor. Transfers into upper-division programs are considered only if vacancies occur, and such transfers are limited to students with equivalent course work who are competitive with continuing students. Acceptance into some upper-division programs requires a TOEFL score of 500 or higher for international students whose native language is not English.

ADVISING

While the college and its academic units provide academic advising, *it is ultimately the responsibility of each student to fulfill academic and program requirements.* Advising and record keeping for lower-division programs are the responsibility of a college academic advisor (located in ARCH 141). Records for upper-division program students are kept in the appropriate academic units, and advising is provided by the school's academic advisor. General career advising is available from all faculty members. Administration of program requirements is the responsibility of the head of the academic unit and the dean.

Appeals Procedures. Academic appeals and requests for variances are typically made first to the student's advisor and then, if necessary, to the head of the appropriate academic unit, the Governance and Grievance Committee, and, finally, the dean. A student who feels unjustly treated in academic or other matters relating to his or her career as a student may contact a college academic advisor or may take the grievance to the college ombudsperson.

DEGREES

Undergraduate. The college offers curricula for four- or five-year degree programs: the Bachelor of Science in Design (B.S.D.) degree in Architectural Studies, Graphic Design, Housing and Urban Development, Industrial Design, and Interior Design; the Bachelor of Science in Landscape Architecture (B.S.L.A.) degree; and the Bachelor of Science in Planning (B.S.P.) degree in Urban Planning. Applications for the B.S.D. degree in Design Science are not being accepted at this time. For more information, see the "College of Architecture and Environmental Design Baccalaureate Degrees and Majors" table, on this page.

Each undergraduate program is divided into lower-division and upper-division programs. Completion of a lower-division program does not guarantee advancement to an upper-division program.

MINORS

The faculty in the School of Architecture offer a minor in Architectural Studies, see "Architectural Studies Minor," page 132. The faculty in the School of Design offer minors in Design Studies and Interior Design History, see "Minors," page 136. The faculty in the School of Planning and Landscape Architecture offer two minors: Landscape Studies and Urban Planning. See "Minors," page 146, for more information.

Graduate Programs

The faculty in the College of Architecture and Environmental Design offer the National Architectural Accrediting Board-accredited Master of Architecture (M.Arch.) professional degree; Planning Accreditation Board-accredited Master of Environmental Planning (M.E.P.) professional degree; M.S. degree in Building Design; Master of Science in Design (M.S.D.) degree; and Ph.D. degree in Environmental Design and Planning. For more information, see the "College of Architecture and Environmental Design Graduate Degrees and Majors" table, page 126, and the *Graduate Catalog*.

ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and beyond. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges, including the College of Architecture and

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

College of Architecture and Environmental Design Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Architecture	M.Arch.	—	School of Architecture
Building Design	M.S.	Design knowledge and computing, energy performance and climate-responsive architecture, facilities development and management	School of Architecture
Design	M.S.D.	Graphic design, industrial design, interior design	School of Design
Environmental Design and Planning*	Ph.D.	Design; history, theory, and criticism; planning	College of Architecture and Environmental Design
Environmental Planning	M.E.P.	Landscape ecological planning, urban and regional development, urban design	School of Planning and Landscape Architecture

* Doctoral courses for these interdisciplinary programs administered by ASU Main are also offered at ASU East.

Environmental Design, to meet the instructional and informational needs of a diverse community.

The ASU Extended Campus goes beyond the boundaries of the university's three physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies including television, the Internet, and Independent Learning. The Extended Campus also offers a variety of professional continuing education and community outreach programs.

For more information, see "ASU Extended Campus," page 671, or access the Web site at www.asu.edu/xed.

UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students seeking a bachelor's degree must meet all university graduation requirements. See "University Graduation Requirements," page 81.

General Studies Requirement

All students enrolled in a baccalaureate degree program must satisfy a university requirement of a minimum of 35 semester hours of approved course work in General Studies, as described under "General Studies," page 85. Consult an advisor for an approved list of courses. General Studies courses are listed in the "General Studies Courses" table, page 88, in the course descriptions, in the *Schedule of Classes,* and in the *Summer Sessions Bulletin.*

COLLEGE DEGREE REQUIREMENTS

College of Architecture and Environmental Design degree requirements supplement the General Studies requirement. Each curriculum offered by the college includes sufficient approved course work to fulfill the General Studies requirement.

To be eligible for the Bachelor of Science in Design (B.S.D.), Bachelor of Science in Landscape Architecture (B.S.L.A.), or Bachelor of Science in Planning (B.S.P.) degrees in the college of Architecture and Environmental Design, a student must have

1. attained a cumulative GPA of 2.00 or higher for all course work taken at ASU;
2. earned a "C" or higher in each studio course; and
3. met all university degree requirements.

MAJOR REQUIREMENTS

Students seeking the Bachelor of Science in Design degree must satisfactorily complete a curriculum of 120 or 150 semester hours, depending on the major. The Bachelor of Science in Planning degree requires 120 semester hours. The Bachelor of Science in Landscape Architecture degree requires 120 semester hours. Students majoring in Interior Design must take 150 semester hours. All other majors require 120 hours.

Special Honors at Graduation. At the time of graduation, students with academic distinction are awarded the respective designation *cum laude, magna cum laude,* or *summa cum laude.* For more information, see "Graduation with Academic Recognition," page 84.

ACADEMIC STANDARDS

Lower-Division Retention Standards. A student in one of the college's lower-division programs is placed on probation when he or she fails to maintain a cumulative GPA of 2.00. Students on probation must observe rules or limitations the college imposes on their probation as a condition of retention. If, after one semester on probation, the overall GPA is not at least 2.00 and the conditions of probation have not been met, the student is disqualified for a minimum of two full academic semesters. Appeals may be made to the college Standards and Appeals Committee; see a college advisor for the necessary forms. For more information, see "Retention and Academic Standards," page 78.

Upper-Division Retention Standards. Students in upper-division programs are placed on probation when *any* of the following occur:

1. failure, incomplete, or withdrawal from any required course;
2. a semester GPA below 3.00;
3. a grade of "D" or "E" in a design studio, a design laboratory, or a design lecture; or
4. violation of the college *Code of Student Responsibilities* or any admission agreement.

Students on probation must observe rules or limitations that the college or academic unit places on their probation as a condition of continuation. Students may be removed from a program (but not necessarily the university) if

1. the requirements imposed are not met or the probationary semester GPA is below 3.00 after one semester on probation;
2. failures or withdrawals in required courses are not resolved at the next offering of the course;
3. they fail or withdraw from required sequential courses; or
4. incompletes in required sequential courses are not completed before the first day of class of the next semester.

A student removed from a program is not guaranteed reinstatement in the program even if probation requirements or requirements placed on readmission are fulfilled. Appeals may be made first to the appropriate academic unit and, if necessary, to the college Governance and Grievance Committee. For more information, see "Retention and Academic Standards," page 78.

Incompletes. It is the student's responsibility to contact the instructor regarding the process of requesting and fulfilling an incomplete. Tardiness in contacting the instructor may result in a failing grade. Students must obtain an official "Request for Grade of Incomplete" form from their academic units. The completed form must include a justification, a listing of requirements that have not been fulfilled, and a proposed schedule of completion. The instructor reviews the request, proposes modifications if necessary, and submits a copy of the request to the appropriate school office. An incomplete in any course that is a prerequisite for sequential courses automatically denies enrollment in subsequent courses. For more information, see "Incomplete," page 74.

Withdrawals. University withdrawal regulations apply to all courses. In addition, because the college's upper-division curricula are modular and sequential and because space in the programs is limited, a student is expected to progress through the curriculum with his or her class. Withdrawal from a required upper-division course automatically places a student on probation. Withdrawal from a required upper-division course in a required sequence automatically removes the student from the program beginning the subsequent semester. For more information, see "Grading System," page 74.

Pass/Fail or Credit/No Credit. The only courses accepted toward graduation with a grade of pass/fail or credit/no credit are internships and field studies.

Foreign Study. The College of Architecture and Environmental Design maintains active communications with several foreign institutions offering professional course work similar to the programs of the college. This opportunity is available for students who wish to pursue professional studies at a foreign institution in lieu of resident course work for up to one academic year. Any interested student is encouraged to inform the head of his or her academic unit at the earliest possible date of any intentions for foreign study. The student must petition the academic unit regarding course equivalency for any exchange programs.

Exchange programs currently exist with the Stuttgart University, Germany; Wageningen University, the Netherlands; the University of Valladolid, Spain; the University of British Columbia, Canada; and the Autonomous University of Guadalajara, Mexico. Foreign study programs in France, Italy, and Spain and summer off-campus courses are offered by the School of Architecture. The School of Planning and Landscape Architecture offers a summer landscape planning course in Europe.

Students are also encouraged to consider foreign travel for either a semester or an entire academic year. A leave of absence must be requested for foreign study and foreign travel. Each academic unit reserves the right to evaluate the content and the student's competency in each of the courses completed at foreign institutions.

Internship. Upper-division students majoring in Architectural Studies, Graphic Design, Industrial Design, Interior Design, or Urban Planning are required to complete an internship program as part of their curriculum between the third and fourth years of study. Internships are optional for Landscape Architecture and Housing and Urban Development majors.

Attendance. Attendance is expected at all classes, laboratories, and seminars and is a criterion for evaluating performance. Absences and missing work due to absences may result in failure of a course or academic probation. A student may not be excused from attending a class except for medical reasons or other serious personal conditions beyond his or her control. Requests for special consideration must be submitted in writing to the instructor. If accepted, a student may be allowed to take a late or special examination or to submit missing work. Tardiness in contacting the instructor is cause for denying acceptance. For university policy regarding religious holidays, see "Equal Opportunity and Affirmative Action," page 22.

Employment. It is difficult for students in professional programs to carry part-time employment while in school. Acceptance to any of the college's upper-division programs presumes a commitment of a minimum of eight hours a day for professional studies. Prior work experience is not a requirement for admission to upper-division programs.

Retention of Student Work. The college reserves the right to retain any or all projects or work submitted to meet course requirements for the college's future use in instruction, publication, and exhibition.

Student Leave of Absence. Upper-division students who withdraw from classes or do not continue sequentially in enrollment must request both a leave of absence and readmission in writing from the head of the appropriate academic unit. Leaves of absence are for one-year increments

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

and may be approved for personal reasons, travel, work, or additional study in other disciplines. A student on leave must make the written request for readmission before April 15 for the fall semester of the year of return or before November 1 for the spring semester so that a space may be reserved. Failure to request a leave of absence may result in removal from the program and deferrals are not allowed.

STUDENT RESPONSIBILITY

The purpose of this code is to promulgate standards of conduct for students of the College of Architecture and Environmental Design and to establish procedures for reviewing violations. Students are expected to support and maintain the highest professional standards with regard to their individual conduct and their personal and common environments in the college. Copies of the *Code of Student Responsibilities* are available from the Office of the Dean and a college academic advisor.

SPECIAL PROGRAMS

The college and its academic units regularly sponsor lecture series, symposia, and exhibits. In addition, faculty and students attend regional and national meetings of educators and professionals. Academic units sponsor student awards programs and regularly invite professionals and critics to reviews of student projects. The college also participates with the Barrett Honors College, offering a wide range of courses for honors credit.

GENERAL INFORMATION

Accreditation. Most states require that an individual intending to become an architect hold an accredited degree. There are two types of degrees that are accredited by the National Architectural Accrediting Board (NAAB): (1) the Bachelor of Architecture, which requires a minimum of five years of study, and (2) the Master of Architecture, which requires a minimum of two years of study following a related preprofessional bachelor's degree or three years following an unrelated bachelor's degree. These professional degrees are structured to educate those who aspire to registration/licensure as architects.

The four-year preprofessional degree, where offered, is not accredited by NAAB. The preprofessional degree is useful for those wishing a foundation in the field of architecture, as preparation for either continued education in a professional degree program or for employment options in architecturally related areas. For more information, see "Accreditation and Affiliation," page 683.

Dean's List. Undergraduate students who earn 12 or more graded semester hours ("A," "B," "C," "D," or "E") during a semester in residence at ASU with a GPA of 3.50 or higher are eligible for the Dean's List. A notation of achieving the distinction of being listed on the Dean's List appears on the final grade report for that semester.

College of Architecture and Environmental Design Alumni Association. The College of Architecture and Environmental Design Alumni Association encourages graduates to contribute to the college by acting as liaisons among the college community, students, and practicing professionals. The college also calls on the members of the Architecture Guild of Arizona State, the Arizona Design Institute, the Council for Design Excellence, and the Planning Advisory Committee for advice and to promote the goals of the college.

Council for Design Excellence. The Council for Design Excellence has been created to consolidate a partnership between the College of Architecture and Environmental Design and key community leaders who share a vital interest in the development of high quality in the built environment of the Phoenix metropolitan area. By joining together professionals, business and civic leaders, students, and faculty in a common pursuit of design excellence, the council seeks to make a profound difference in the quality of life.

Affiliations. For information on affiliations maintained by the college, see "Accreditation and Affiliation," page 683.

Student Professional Associations. The purpose of the student associations is to assist students with the transition into professional life and to acquaint them with the profession relating to their program of study. These include the following associations:

- American Institute of Architecture Students
- Sigma Phi Zeta
- Student Association of the College of Architecture and Environmental Design
- Student Association of Interior Designers (ASID, IALD, IFDA, IFMA, IIDA)
- Student Chapter/American Planning Association
- Student Chapter/American Society of Landscape Architects
- Student Chapter/Industrial Designers Society of America
- Student Chapter/Society of Environmental Graphic Designers

School of Architecture

www.asu.edu/caed/SOA
480/965-3536
AED 162D

Ron McCoy, Director

Regents' Professor: Cook

Professors: Hoffman, McCoy, Meunier, Ozel, Rotondi, Underhill, Underwood

Associate Professors: Bryan, Ellin, Hartman, Kroloff, Loope, Spellman, Van Duzer, Zygas

Assistant Professors: Burnette, Caicco, Hejduk, Innes, Kobayashi, Lerum, Murff, Petrucci, Vekstein

PURPOSE

The architecture program at ASU offers an integrated curriculum of professional courses and focuses on the design laboratory. The program reflects an awareness of the complex factors affecting the quality of the built environment. The program seeks through scholarship, teaching, research, design, and community service to develop the discipline and the knowledge necessary to address the important environmental and design issues faced by society.

In addition to developing knowledge and skills in architectural design, building technology, and professional practice, students are encouraged to select electives from a broad range of approved courses both within the college and across the university. These electives may be selected to devise a minor, to further professional study, or in some other fashion to enrich the student's academic experience.

ORGANIZATION

The School of Architecture's program is organized by the faculty under the direction and administration of the director and standing committees of the faculty.

DEGREES

The faculty in the School of Architecture offer the Bachelor of Science in Design degree with a major in Architectural Studies.

The program in architecture culminates with the professional degree Master of Architecture, which is accredited by the National Architectural Accrediting Board (NAAB). Completion of the program is intended to take six years.

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The NAAB, which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree, which, when earned sequentially, compose an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

Admission to the professional program in architecture is competitive and begins after completion of lower-division requirements, as described in "Admission," on this page and "Degree Requirements," page 131. The professional program includes two years of upper-division study leading to the Bachelor of Science in Design (B.S.D.) and two years of graduate study leading to the Master of Architecture, as described in "Upper-Division Professional Program," page 129.

Applicants who already hold a bachelor's degree in another field should apply to the 3+ year Master of Architecture degree program. See the *Graduate Catalog* for more information.

In cooperation with the Barrett Honors College, the school offers a special honors curriculum for students with Barrett Honors College standing. Consult the advising officers in the school for information.

ADMISSION

Lower-Division Program. New and transfer students who have been admitted to the university and who have selected Architectural Studies as their major are admitted to the lower-division architecture program without separate application to the School of Architecture. Completion of lower-division requirements does not ensure acceptance to the upper-division professional program.

Transfer credits for the lower-division program are reviewed by the college faculty. To be admissible to this curriculum, transfer courses must be equivalent in both content and level of offering. A review of samples of work is required for studio classes. Consult a college academic advisor for an appointment.

Entering lower-division students who are not prepared to enroll in some of the required courses are required to complete additional university course work. These additional prerequisite courses do not apply to the Bachelor of Science in Design degree requirements.

Upper-Division Professional Program. Admission to the upper-division professional program is competitive and limited by available resources. Admission is awarded to those applicants demonstrating the highest promise for professional success.

Transfer students who have completed the equivalent required lower-division course work may apply to the upper-division program. Prior attendance at ASU is not required for application to the upper-division program.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

To be eligible for admission to the upper-division program, the following requirements must be met:

1. admission to ASU (note that application and admission to the upper-division program are separate from application and admission to ASU);
2. completion of lower-division requirements or equivalents as approved by a college academic advisor and the faculty of the school;
3. a minimum university cumulative GPA of 3.00 as well as a 3.00 GPA based only on the required lower-division courses or equivalents; and
4. submission of a portfolio (for detailed information about this requirement, see "Portfolio Format Requirements," on this page).

In an unusual circumstance, when the admission standard deficiency is slight, written evidence of extenuating circumstances is convincing, and promise for success is evident, a student may be granted admission to the upper division on a *provisional* basis.

Students not admitted to the upper-division program are not dismissed from the school and may reapply or may transfer to other programs. Students who intend to reapply should meet with a college academic advisor.

Applications for transfer into the upper-division professional program are considered only if transfer students have met the eligibility requirements above. Transfer applicants must demonstrate that equivalent course work has been completed, and applicants must be academically competitive with continuing students.

Students who successfully complete the upper-division requirements receive the Bachelor of Science in Design degree in Architectural Studies. This is not a professional degree. To complete the professional architecture program, students must attain the NAAB-accredited Master of Architecture degree. Students who receive the B.S.D. are eligible to apply for the graduate program and should see the *Graduate Catalog* for proper application procedures. This application process is competitive and based on a thorough review of a student's undergraduate preparation and performance.

Students with the four-year Bachelor of Science in Design degree (with a major in Architectural Studies or an equivalent degree from another school that offers an accredited professional degree in architecture) should apply directly to the graduate program.

APPLICATION TO UPPER-DIVISION PROGRAMS

Upper-Division Application Procedures. Students should access the Web site www.asu.edu/caed/SOA for the application form well in advance of the application deadline. The following dates and procedures are for students applying to 2004–2005 upper-division programs.

Upper-Division Application Deadlines. *April 25, 2004.* Portfolio and application documents are due in the school office by 5 P.M. Applications received after the deadline are not accepted.

June 1, 2004. If the spring 2004 semester includes transfer course work (i.e., course work taken at an institution other than ASU), a student must submit his or her transcripts to the school no later than June 3. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Undergraduate Admissions office. The application is not complete until the university receives official transcripts for transfer course work. For those transfer students whose academic term ends in June rather than May, this deadline may be extended upon the written request of the applicant.

July 1, 2004. Acceptance notices are mailed no later than July 1.

Return of Letter of Acceptance. A signed receipt of acceptance of admission must be received by the school by the date indicated on the Notice of Acceptance. Alternates may be accepted at a later date if space becomes available.

Matriculation. An accepted student is expected to begin his or her upper-division professional program at the beginning of the immediate fall term. There is no spring admission to the upper division and deferrals are not allowed.

Portfolio Format Requirements. Application materials must be submitted at one time in a presentation binder (portfolio).

Students should present work sufficient to demonstrate the depth and breadth of their creative activity. This work should include (but is not limited to) examples of two- and three-dimensional design and graphics. Each project should be clearly identified (course, length of project, etc.), with a concise accompanying description of the assignment. Students should consult the School of Architecture Web site at www.asu.edu/caed/SOA for specific application information.

Students are encouraged to include additional materials, written or pictorial, that provide additional evidence of skills and abilities and of the aptitude and commitment to the major. When any work submitted is not completely original, the source must be given. When work is of a team nature, the applicant's role should be clearly indicated. Original examples or slides must not be submitted. All examples must be photographs or other reproduction graphic media.

Return of Portfolios. The application and essay remain the property of the College of Architecture and Environmental Design. However, the remaining portfolio is returned after the admissions review, provided the applicant encloses a self-addressed return mailer with sufficient prepaid postage. Portfolios may be claimed in person after July 1, 2004. If the applicant provides written permission, another person may claim the portfolio. After one year, unclaimed portfolios are discarded. While care is taken in handling the portfolios, no liability for lost or damaged materials is assumed by the college or school.

ADVISING

Advising for the lower-division curriculum is through the college Academic Advising Office. Advising for upper-division curriculum is provided by the school's academic advisor.

DEGREE REQUIREMENTS

The Bachelor of Science in Design degree in Architectural Studies requires a minimum of 120 hours of course work. Most lower-division students pursue option A; however, those who intend eventually to seek an advanced degree in either engineering or building science are encouraged to fulfill the requirements outlined in option B. See an advisor in the Academic Advising/Student Services Office (ARCH 141) for further information about option B.

Option B students who intend to pursue graduate degrees in an engineering discipline should also consult with the College of Engineering and Applied Sciences advising office for any additional requirements.

GENERAL STUDIES REQUIREMENT

The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 85, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses.

GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 81, and "College Degree Requirements," page 126.

The accredited professional degree Master of Architecture requires an additional 56 hours of approved graduate-level course work. For more information, see the *Graduate Catalog*.

Architectural Studies—B.S.D.
Lower-Division Requirements
Option A[1]

First Year

Fall

APH	100 Introduction to Environmental Design *HU, G, H*	3
	or ADE 120 Design Fundamentals I[2] (3)	
ENG	101 First-Year Composition	3
Elective		3
Elective (MAT 170 Precalculus may be needed)		3
SB elective		3
Total		15

Spring

ADE	120 Design Fundamentals I[2]	3
	or APH 100 Introduction to Environmental Design *HU, G, H* (3)	
ENG	102 First-Year Composition	3
MAT	210 Brief Calculus *MA*	3
C elective		3
SB elective		3
Total		15

Second Year

Fall

ADE	221 Design Fundamentals II[2]	3
ADE	223 Design Fundamentals II Lecture	1
ANP	236 Introduction to Computer Modeling *CS*	3
APH	200 Introduction to Architecture *HU, G*	3
PHY	101 Introduction to Physics *SQ*	4
Total		14

Spring

ADE	222 Design Fundamentals III[2]	3
ADE	224 Design Fundamentals III Lecture	1
Elective		3
L elective		3
SG or SQ elective		4
Total		14

Option A lower-division total 58

[1] Transfer credits are reviewed by the college and evaluated for applicability to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering.

[2] Portfolio review is required for transfer studio work. Submit the portfolio to the Academic Advising Office, ARCH 141.

Architectural Studies—B.S.D.
Upper-Division Requirements
Option A

Third Year

Fall

ADE	321 Architectural Studio I	5
APH	313 History of Architecture I *L/HU, G**	3
ATE	353 Architectural Construction	3
Elective*		3
Total		14

Spring

ADE	322 Architectural Studio II	5
ANP	331 Programming for Design	3
APH	314 History of Architecture II *L/HU, G**	3
ATE	361 Building Structures I	3
Total		14

Summer

ARP	484 Clinical Internship	3
Total		3

Fourth Year

Fall

ADE	421 Architectural Studio III	5
ATE	451 Building Systems I	3
ATE	462 Building Structures II	3
Elective*		3
Professional elective*		3
Total		17

Spring

ADE	422 Architectural Studio IV	5
ATE	452 Building Systems II	3
Architectural history elective		3

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

Elective* 3

Total 14

Option A upper-division total 62

B.S.D. option A minimum total 120

* These courses may be completed before admission into the upper division.

Master of Architecture
Graduate-Level Professional Program Requirements

Fifth Year

Fall
ADE 521 Advanced Architectural Studio I 5
APH 505 Foundation Theory Seminar 3
ATE 553 Building Systems III 3
ATE 563 Building Structures III 3

Total 14

Spring
ADE 522 Advanced Architectural Studio II 5
APH 515 Current Issues and Topics 3
ATE 556 Building Development 3
Professional elective 3

Total 14

Sixth Year

Fall
AAD 551 Architectural Management I 3
ADE 621 Advanced Architectural Studio III 5
ANP 681 Project Development 3
Professional elective 3

Total 14

Spring
AAD 552 Architectural Management II 3
ADE 622 Advanced Architectural Studio IV 5
Approved elective 3
Professional elective 3

Total 14

Graduate division total 56

ARCHITECTURAL STUDIES MINOR

The Architectural Studies minor is available to non-architecture majors interested in this field, but who are pursuing another major. A minimum of 18 semester hours are required for the minor. The courses are designed to provide an overview of architecture throughout history while focusing on architectural design with the intention to explore the process of design thinking.

Required Courses
APH 200 Introduction to Architecture *HU, G* 3
APH 300 World Architecture I/Western Cultures *HU, G, H* 3
APH 313 History of Architecture I *L/HU, G* 3
APH 314 History of Architecture II *L/HU, G* 3

Total 12

Six additional semester hours of electives in the architectural history and theory concentration, with a course prefix of APH or approved PUP/PLA prefix, must be selected from the following list for a total of 18 semester hours:

ANP 331 Programming for Design* 3
APH 394 Special Topics 3
APH 411 History of Landscape Architecture *H* 3
APH 414 History of the City *H* 3
APH 446 20th-Century Architecture I *HU* 3
APH 447 20th-Century Architecture II *HU* 3
APH 494 Special Topics 3
APH 499 Individualized Instruction* 3
APH 511 Energy Environmental Theory 3

* These courses require a petition to the School of Architecture.

A minimum GPA of 3.00 is required to pursue the minor in Architectural Studies.

B.I.S. CONCENTRATION

A concentration in architectural studies is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 116.

INQUIRIES

For more information, contact a college academic advisor at 480/965-3584, e-mail caed.advising@asu.edu, or write

COLLEGE OF ARCHITECTURE AND
ENVIRONMENTAL DESIGN
ACADEMIC ADVISING/STUDENT
SERVICES OFFICE
ARIZONA STATE UNIVERSITY
PO BOX 871905
TEMPE AZ 85287-1905

COURSES

Subject matter within the school is categorized in the following instructional areas.

Architectural Administration and Management. AAD courses focus on the organizational and management aspects of architectural practice, including management coordination, administrative procedures, ethics, legal constraints, and the economics of practice.

Architectural Design and Technology Studios. ADE courses require the synthesis of knowledge and understanding gained from other course work and develop an understanding of design theory and design skill through a series of comprehensive design projects. Students apply analytical methods, compare alternative solutions, and develop sophisticated technical and conceptual results.

Environmental Analysis and Programming. ANP courses develop the ability to analyze and program environmental and human factors as preconditions for architectural design using existing and emerging methods of evaluation and analysis.

Architectural Philosophy and History. APH courses develop an understanding of architecture as both a determinant and a consequence of culture, technology, needs, and behavior in the past and present. Studies are concerned with the theory as well as the rationale behind methods and results of design and construction. Case studies are both domestic and international.

Architecture Professional Studies. ARP courses provide students with off-campus opportunities, educational experience in group and individual studies relative to specific student interests, and faculty expertise, including summer internships and field trips.

Architectural Technology. ATE courses develop knowledge of the technical determinants, resources, and processes of architecture. These studies focus on the science and technology of design and construction, including materials, building systems, acoustics, lighting, structural systems, environmental control systems, computer applications to design and technology, and both passive and active solar systems. Emphasis is on measurable and quantifiable aspects.

Architectural Communication. AVC courses develop the student's understanding of communication theory as it applies to architectural design and practice as well as skills in drawing, graphics, photography, presentation design, and the design process.

The courses required in the upper-division and graduate levels of the professional program are not open to nonmajors and students not admitted to the upper-division program.

GRADUATE PROGRAMS

The faculty of the School of Architecture offer a Master of Architecture and a M.S. degree in Building Design. Concurrent application to both degree programs is possible, and each application is evaluated by the respective admission committees separately. Also, a dual career program, Master of Architecture/Master of Business Administration, has been established in cooperation with the W. P. Carey School of Business. Also offered is a collegewide, interdisciplinary Ph.D. degree in Environmental Design and Planning with concentrations in design; history, theory, and criticism; and planning. For more information, see the *Graduate Catalog*.

ARCHITECTURAL ADMINISTRATION AND MANAGEMENT (AAD)

AAD 494 Special Topics. (1–4)
selected semesters

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

ARCHITECTURAL DESIGN AND TECHNOLOGY STUDIOS (ADE)

ADE 120 Design Fundamentals I. (3)
fall, spring, summer
Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving. Studio. Prerequisite: major in College of Architecture and Environmental Design.

ADE 221 Design Fundamentals II. (3)
fall
Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design. Lecture, studio. Prerequisite with a grade of "C" or higher: ADE 120. Corequisite: ADE 223.

ADE 222 Design Fundamentals III. (3)
spring
Applies design fundamentals with an emphasis on architectural issues. Lecture, studio. Prerequisite: APH 200. Prerequisite with a grade of "C" or higher: ADE 221. Corequisite: ADE 224.

ADE 223 Design Fundamentals II Lecture. (1)
fall
Theory and applications of basic design principles, history and theory of how architecture design is impacted by basic design. Lecture, discussion. Corequisite: ADE 221.

ADE 224 Design Fundamentals III Lecture. (1)
spring
History and theory of design fundamentals with an emphasis on architectural issues. Lecture, discussion. Corequisite: ADE 222.

ADE 321 Architectural Studio I. (5)
fall
Introductory building design problems. Emphasizes design process, communication methods, aesthetics, construction, and technology. Lecture, studio, field trips. Fee. Prerequisite: admission to upper division. Corequisite: ATE 353.

ADE 322 Architectural Studio II. (5)
spring
Site and building design problems. Emphasizes programmatic and environmental determinants and building in natural and urban contexts. Lecture, studio, field trips. Fee. Prerequisite with a grade of "C" or higher: ADE 321. Corequisite: ANP 331.

ADE 421 Architectural Studio III. (5)
fall
Topical design problems of intermediate complexity, including interdisciplinary problems. Lecture, studio, field trips. Fee. Prerequisite with a grade of "C" or higher: ADE 322. Corequisite: ARP 484.

ADE 422 Architectural Studio IV. (5)
spring
Topical design problems of advanced complexity, including interdisciplinary problems. Lecture, studio, field trips. Fee. Prerequisite with a grade of "C" or higher: ADE 421.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

ENVIRONMENTAL ANALYSIS AND PROGRAMMING (ANP)

ANP 236 Introduction to Computer Modeling. (3)
fall and spring
Fundamentals of computer operation, geographic information systems, geometric modeling of three-dimensional forms and rendering of light, mathematical modeling of processes using spreadsheets. Lab. Prerequisite: major in the School of Architecture.
General Studies: CS

ANP 331 Programming for Design. (3)
spring
Theory and methods for refracting "constraints" into opportunities for design excellence. Corequisite: ADE 322.

ANP 475 Computer Programming in Architecture. (3)
fall and spring
Computer programming for architectural problems and applications. Lecture, lab.

ANP 477 Computer Applications to Design Problems. (3)
fall
Examines generic microcomputer software in solving architectural design problems. Emphasizes the logic of problem formulation. Lecture, lab. Prerequisite: instructor approval.

ANP 494 Special Topics. (1–4)
fall, spring, summer

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

ARCHITECTURAL PHILOSOPHY AND HISTORY (APH)

APH 100 Introduction to Environmental Design. (3)
fall and spring
Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as DSC100/PUP 100. Credit is allowed for only APH 100 or DSC 100 or PUP 100.
General Studies: HU, G, H

APH 200 Introduction to Architecture. (3)
fall and summer
Survey of issues and polemics affecting current architectural theory and practice. Lecture, discussion.
General Studies: HU, G

APH 300 World Architecture I/Western Cultures. (3)
fall
Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants. Prerequisite: nonmajor.
General Studies: HU, G, H

APH 304 American Architecture. (3)
selected semesters
Architecture in the United States from earliest colonial times to present. Prerequisite: nonmajor.
General Studies: HU

APH 305 Contemporary Architecture. (3)
selected semesters
Europe and America from the foundations of the modern movement to the present. Prerequisite: nonmajor.
General Studies: HU

APH 313 History of Architecture I. (3)
fall
Survey of the monuments, buildings, and cities of Europe and Africa from the earliest human settlements to the present day. Prerequisite: junior standing or instructor approval.
General Studies: L/HU, G

APH 314 History of Architecture II. (3)
spring
Survey of the monuments, buildings, and cities of Asia and the Americas from the earliest human settlements to the present day. Prerequisite: APH 313.
General Studies: L/HU, G

APH 394 Special Topics. (1–4)
selected semesters

APH 411 History of Landscape Architecture. (3)
fall
Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design. Cross-listed as PLA 310. Credit is allowed for only APH 411 or PLA 310.
General Studies: H

APH 414 History of the City. (3)
fall
The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Cross-listed as PUP 412. Credit is allowed for only APH 414 or PUP 412.
General Studies: H

APH 441 Ancient Architecture. (3)
selected semesters
Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites. Prerequisite: APH 313.
General Studies: HU

APH 442 Preservation Planning. (3)
selected semesters
Principles and practices in planning for preservation, conservation and neighborhood redevelopment. Emphasizes evaluation of historic resources. Requires off-campus field practicum. Prerequisite: instructor approval.

APH 444 Baroque Architecture. (3)
selected semesters
Selected examples of Baroque architecture and urbanism with emphasis on relationships between architecture and other arts. Prerequisite: APH 314.
General Studies: HU

APH 446 20th-Century Architecture I. (3)
fall
Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style. Prerequisite: instructor approval.
General Studies: HU

APH 447 20th-Century Architecture II. (3)
spring
Developments in architecture since the international style. Prerequisite: APH 446.
General Studies: HU

APH 494 Special Topics. (1–4)
once a year

APH 499 Individualized Instruction. (1–3)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

ARCHITECTURE PROFESSIONAL STUDIES (ARP)

ARP 451 Architecture Field Studies. (1–6)
selected semesters
Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated with approval of director.

ARP 484 Clinical Internship. (1–3)
fall
Full-time internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit. Corequisite: ADE 421.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

ARCHITECTURAL TECHNOLOGY (ATE)

ATE 353 Architectural Construction. (3)
fall
Materials and methods of construction. Aesthetic, code, and cost considerations. Lecture, lab. Corequisite: ADE 321 or 511.

ATE 361 Building Structures I. (3)
spring
Introduces load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications. Lecture, lab. Prerequisite: admission to upper division or Master of Architecture program.

ATE 451 Building Systems I. (3)
fall
Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design. Lecture, lab. Prerequisite: admission to upper division or Master of Architecture program.

ATE 452 Building Systems II. (3)
spring
Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications. Lecture, lab. Prerequisite: ATE 451.

ATE 462 Building Structures II. (3)
fall
Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems. Lecture, lab. Prerequisite: ATE 361.

ATE 494 Special Topics. (1–4)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

ARCHITECTURAL COMMUNICATION (AVC)

AVC 161 Advanced Freehand Perspective Drawing. (2)
selected semesters
Introduces color media and analytical and design drawing exercises. 4 hours studio. Prerequisite: major in the College of Architecture and Environmental Design.

AVC 494 Special Topics. (1–4)
once a year

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.
fall or spring

ENVIRONMENTAL DESIGN AND PLANNING (EPD)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

School of Design

www.asu.edu/caed/SOD
480/965-4135
AED 154B

Jacques Giard, Director

Professors: Brandt, Giard, Kroelinger

Associate Professors: Bernardi, Cutler, Johnson, McDermott, Patel, Ratner, Sanft, Witt

Assistant Professors: Bender, Boradkar, Brungart, Herring, McCoy, Niederhelman, Rothstein, Schoenhoff, Thibeau Catsis, Weed

Adjunct Faculty: Heywood, Moore

Faculty Associates: Johannes, Kelly, Montgomery, Sneed, Sola, White

PURPOSE

The School of Design educates individuals for the professional worlds of graphic design, industrial design, and interior design. The curricula are focused on the skills and knowledge that are necessary in these design professions and are undertaken in a learning environment that bridges the academic milieu to the professional world. This direction is further conditioned by the belief that designers have a responsibility to the public and communities they serve. Consequently, students are exposed to a full breadth of learning experiences, from courses in design history, human factors, and the theories of the profession, to the rigors and demands of the design studio. Students learn to integrate aesthetic values into their designs while considering contextual issues. The goal of the school's academic program is to graduate designers who are accomplished and visually sophisticated and who will continue to evolve in their chosen profession. To this end, the school provides an environment that is conducive to design excellence. It has a faculty of active professionals, excellent facilities and resources, and a network that is international in scope.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

For more information, access www.asu.edu/caed/SOD or send e-mail to caed.advising@asu.edu.

ORGANIZATION

Programs in the School of Design are organized by the faculty of the school under the direction and administration of the director, and standing committees of the faculty.

DEGREES

The faculty in the School of Design offer the Bachelor of Science in Design degree with three majors: Graphic Design, Industrial Design, and Interior Design. Applications are not being accepted to the major in Design Science. The School of Design is an accredited member of the National Association of Schools of Art and Design.

Graphic Design. The Graphic Design program not only prepares individuals for the graphic design profession, but also for graduate work. The goal of the faculty is to offer the best graphic design education, allowing the graduating student every option available. Studio classroom projects are planned to strengthen and refine students' proficiency in the language, process, and technical aspects of the profession. Projects are intended to help students think critically, both as individuals and as members of a group. Students opting for the profession can expect to work in the areas of advertising design, brand identity, broadcast graphics, corporate identity, environmental graphics, informational graphics, in-house corporate design, museum informational design, publication design, and Web site design. Students pursuing graduate studies can expect to be equally well prepared with critical and analytical thinking skills coupled with a diversified portfolio. The program is dedicated to a comprehensive education in graphic design as it relates to the changing communication standards of today and in the future.

Industrial Design. The program in Industrial Design prepares creative individuals to design manufactured objects used by people on a daily basis. The industrial design profession serves the needs of consumers and manufacturers by developing products that are attractive, useful, safe, convenient, and comfortable to use. The designer's special talents and skills include a sense of the aesthetic, knowledge of materials and processes, and an understanding of the physical and psychological needs of the user. Industrial designers often serve as a catalyst among management, marketing, and engineering.

By way of studio projects, students learn to visualize ideas, to communicate them to others, and to refine their skills in freehand sketching, computer-aided design, and model making. Assignments are a balance of conceptual aspects and practical techniques. Typical projects include electronics, toys, furniture, sports equipment, and packaging. Focus is placed on the role of the industrial designer as a member of a team. Third-year students perform internships in a corporation or in a consulting design agency.

Interior Design. The program in Interior Design is accredited by the Foundation for Interior Design Education Research, the national accrediting agency. The five-year curriculum emphasizes design process, technical skill development, problem solving, and the management skills needed to work in collaboration with the allied design professions. The goal of interior design is to create high-quality environments for human use.

Significant changes in the interior design profession over the last two decades are reflected in the program. The school is committed to integrating computer technology into each level of the curriculum. In doing so, the program offers an excellent environment for experimenting with and testing innovative applications of computer-aided design and simulation to interior design.

MINORS

Design Studies

The minor in Design Studies is available to students interested in design courses but who do not wish to major in graphic, industrial, or interior design. The courses are designed to appeal especially to students who have not been accepted to the upper-division of graphic, industrial, or interior design but who wish to pursue the study of design within the Bachelor of Interdisciplinary Studies degree.

The selected courses satisfy the minimum requirement (18 semester hours) for the minor. Furthermore, 12 semester hours must be taken in upper-division course work. To enhance understanding of the subject matter, some of the selected courses are sequential in nature and require certain prerequisites. Consequently, students should carefully note the semester in which these particular courses are offered. All courses are non-studio courses.

To pursue the minor in Design Studies, students must have a minimum cumulative GPA of 2.50.

Designated Courses for the Minor

Design

DSC	101	Design Awareness *HU, G*	3
DSC	344	Human Factors in Design	3

Graphic Design

GRA	318	History of Graphic Design *HU*	3

Industrial Design

IND	242	Materials and Design	3
IND	243	Process and Design	3
IND	316	20th-Century Design I *HU, H*	3
IND	317	20th-Century Design II *HU, H*	3
IND	354	Principles of Product Design	3
IND	470	Professional Practice for Industrial Design *L*	3
IND	474	Design Seminar	3

Interior Design

INT	223	Interior Design Issues and Theories *HU*	3
INT	235	User Needs and Behavior in Interior Design	3
INT	294	ST: AutoCad	3
INT	310	History of Interior Design I *HU, H*	3
INT	311	History of Interior Design II *HU, H*	3
INT	341	Interior Materials and Finishes	3
INT	366	Construction Methods in Interior Design	3
INT	412	History of Decorative Arts in Interiors *HU*	3
INT	413	History of Textiles in Interior Design	3
INT	442	Specifications and Documents for Interiors *L*	3
INT	455	Environmental Control Systems	3
INT	457	Acoustics for Interior Design	3
INT	458	Lighting for Interior Design	3
INT	472	Professional Practice for Interior Design	3

Interior Design History

The minor in Interior Design History is available to students interested in design and culture. The courses designated for the minor are part of the professional studies in interior design within the School of Design. Moreover, the courses serve to inform the students about the importance of the global community, especially sociocultural groups, and the impact of the global community on the design of the interior environment.

The selected courses satisfy the minimum requirement (18 semester hours) for the minor. To enhance the understanding of the subject matter, the selected courses are sequential in nature and require certain prerequisites. Consequently, students should carefully note the semester in which any of these courses is offered.

Required Courses

DSC	101	Design Awareness *HU, G*	3
INT	223	Interior Design Issues and Theories *HU*	3
INT	310	History of Interior Design I *HU, H*	3
INT	311	History of Interior Design II *HU, H*	3
INT	412	History of Decorative Arts in Interiors *HU*	3
INT	413	History of Textiles in Interior Design	3
Total			18

The minor in Interior Design History is open to students majoring in Architectural Studies, Art, Communication, Psychology, or Sociology and students in any W. P. Carey School of Business major or the Bachelor of Interdisciplinary Studies program. All other majors are considered on an individual basis and approved by the coordinator of the Interior Design program within the School of Design. To pursue the minor in Interior Design History, students must have a minimum cumulative GPA of 2.50.

B.I.S. CONCENTRATIONS

Concentrations in design studies and interior design history are available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 116.

GRADUATE PROGRAMS

The School of Design offers a Master of Science in Design (M.S.D.) degree with concentrations in graphic design, industrial design, and interior design. The faculty also participates in a collegewide, interdisciplinary Ph.D. degree in Environmental Design and Planning with concentrations in design; history, theory, and criticism; and planning. For more information, see the *Graduate Catalog*.

ADMISSION

Lower-Division Program. New and transfer students who have been admitted to the university and who have selected Graphic Design, Industrial Design, or Interior Design as a major are admitted to the appropriate lower-division program. Transfer credits for the lower-division program are reviewed by the college and evaluated for applicability to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering. A review of samples of work is required for studio classes. Consult a college academic advisor for further information.

Lower-division students entering the program who are not prepared for certain courses in the curriculum (for example, algebra and trigonometry or a second course in computer programming) are required to take additional courses that do not apply to the Bachelor of Science in Design degree. If such courses are required, an additional year of study may be necessary to complete the lower-division program.

Completion of lower-division requirements does not ensure acceptance to an upper-division professional program.

Upper-Division Program. When students have completed the lower-division curriculum requirements, they may apply for acceptance to upper-division programs in Graphic Design, Industrial Design, or Interior Design. The limited spaces available each year are awarded to applicants with the highest promise for professional success, as determined by each program. The faculty of the School of Design retain the right to admit any meritorious student who may be deficient in a published school criterion. Such admission requires an extraordinary review of the applicant by the school's admissions committee. Should the faculty choose to admit such an applicant, the student is placed automatically on a provisional admission status with stipulations as to what is required to be removed from probation. See "Application to Upper-Division Programs," page 137.

Students not admitted to upper-division programs are not dismissed from the university and may reapply or transfer to other programs. Students who intend to reapply should meet with a college academic advisor.

APPLICATION TO UPPER-DIVISION PROGRAMS

Upper-Division Application Procedures. Students should write to a college academic advisor for the application form well in advance of the application deadline. For more information on portfolios, students should ask for a copy of the application and portfolio guidelines for the program to which they intend to apply from a college academic advisor. The following dates and procedures are for students applying to 2004–2005 upper-division programs.

Upper-Division Application Deadlines. The following dates and procedures apply to all three majors in the School of Design.

April 15, 2004. Portfolio and application documents are due in the school office by 5 P.M.

June 1, 2004. If the spring 2004 semester includes transfer course work (i.e., course work taken at an institution other than ASU), a student must submit his or her transcripts to

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

the Academic Advising/Student Services office, ARCH 141, no later than June 1. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Undergraduate Admissions office. Application is not complete until the university receives official transcripts for transfer course work. For those transfer students whose academic term ends in June rather than May, this deadline may be extended upon the written request of the applicant.

July 1, 2004. Acceptance notices are mailed no later than July 1.

Return of Letter of Acceptance. A signed receipt of acceptance of admission must be received by the school by the date indicated on the Notice of Acceptance. Alternates may be accepted at a later date if space becomes available.

Matriculation. An accepted student is expected to begin his or her upper-division professional program at the beginning of the immediate fall term. There is no spring admission to the upper division and deferrals are not allowed.

Graphic Design Application Requirements. Individual applicants are responsible for obtaining the Graphic Design Application Packet by visiting the College of Architecture and Environmental Design Academic Advising Office in ARCH 141. Application materials are submitted in a portfolio organized by the individual applicant. The student's name must be affixed to the outside, with completed materials appearing in the following order:

1. application to the Graphic Design upper-division program;
2. "Commonly Asked Questions" form; and
3. the Graphic Design Aptitude Test.

The packet contains complete instructions for completing the standard test. This test requires the completion of five problems that are reviewed by the faculty and that become the portfolio of materials considered for admission to the upper-division program.

Industrial and Interior Design Portfolio Format Requirements. Each applicant is responsible for obtaining the following documents and including them in the portfolio. Application materials are submitted at one time in a presentation binder (portfolio); 8.5" x 11" format only. The student's name must be affixed to the outside. Items must appear in the following order:

Page 1. The application form should be completely filled out with the first page visible. Application forms are available from the college Academic Advising Office.

Page 2. The second page of the application should be visible.

Page 3. Application Essay or Letter of Intent.

Page 4. All college transcripts for both ASU and transfer work should be included through the fall 2003 semester. Copies are acceptable. An academic advisor forwards 2004 ASU transcripts. (Applicants wishing to transfer spring semester 2004 work are responsible for submitting these transcripts by June 1 so that they may be added to their portfolios. The student is also responsible for getting an official transfer transcript sent directly to the Office of the Registrar.)

Page 5. A certificate of admission to ASU is necessary only for those students who have been newly admitted for fall 2004 and who are applying directly into an upper-division program. The certificate is not required for students currently attending ASU.

Following Pages (Usually from 10 to 20 Sheets). Students should present work sufficient to demonstrate the depth and breadth of their creative activity. This work should include (but is not limited to) examples of two- and three-dimensional design and graphics. Each project should be clearly identified (course, length of project, etc.), with a concise accompanying description of the assignment.

Students should obtain an application and a portfolio guidelines form for their major from the college's Academic Advising Office, ARCH 141, at the beginning of the academic year in which they intend to apply to the upper-division program. Requirements or instructions indicated in the guidelines for that academic year take precedence over any other printed material.

Students are encouraged to include additional materials, written or pictorial, that provide further evidence of skills and abilities and of the aptitude and commitment to the major. When any work submitted is not completely original, the source must be given. When work is of a team nature, the applicant's role should be clearly indicated. Original examples or slides must not be submitted unless specified in the guidelines. All examples must be photographs or other reproduction graphic media.

Return of Portfolios. Application documents (pages 1–5) remain the property of the College of Architecture and Environmental Design. However, the remainder of the portfolio is returned after the admissions review, provided the applicant encloses a self-addressed return mailer with sufficient prepaid postage. Portfolios may be claimed in person after July 2, 2004. If the applicant provides written permission, another person may claim the portfolio. After one year, unclaimed portfolios are discarded. While care is taken in handling the portfolios, no liability for lost or damaged materials is assumed by the college or school.

ADVISING

Advising for the lower- and upper-division curricula is through a college academic advisor (ARCH 141).

DEGREE REQUIREMENTS

The Bachelor of Science in Design degree requires a minimum of 120 semester hours for a major in Graphic Design and Industrial Design and a minimum of 150 semester hours for a major in Interior Design. The program includes required field trips. Students are responsible for these additional costs. Foreign study opportunities are available for students. An internship is a required part of the program.

Graphic Design

The curriculum in Graphic Design is divided into a preprofessional (first year) and a professional program (second, third, and fourth years):

Preprofessional program	30
Professional program	90
Total	120

The preprofessional curriculum balances a foundation in academic subjects such as English, numeracy, and psychology with design courses that include history and theory, as well as studio courses in drawing and design fundamentals as they relate to conceptual design. Students apply for entry into the professional program after fulfilling the first year School of Design foundation courses. The upper-division curriculum includes studio work in graphic design and its relationship to problem solving at multiple scales. Projects are intended to educate students to think critically as individuals and as team participants in small and large corporate facilities. A formal eight-week summer internship is required in the professional program. The internship is coordinated by the faculty. Students intern in a variety of settings, including in-house corporate design, publication design, and advertising design agencies.

General Studies Requirement. The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 85, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements for this professional degree, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 81, and "College Degree Requirements," page 126.

Graphic Design—B.S.D.
Preprofessional Program Requirements[1]

First Year

Fall		
DSC	101	Design Awareness *HU, G* 3
ENG	101	First-Year Composition 3
		or ENG 105 Advanced First-Year Composition (3) if qualified
GRA	121	Principles for Graphic Design I[1] 3
Elective[2]		3
MA elective[2]		3
Total		15
Spring		
ARS	102	Art from Renaissance to Present *HU, H* 3
ENG	102	First-Year Composition 3
		or elective if ENG 105 is taken (3)
GRA	120	Drawing for Graphic Design[1] 3
GRA	122	Principles for Graphic Design II[1] 3
GS	101	Introduction to Psychology *SB* 3
Total		15
Preprofessional program total		30

Transfer credits for the lower-division program must be equivalent in both content and level of offering. Samples of studio work to be accepted for credit must be submitted for evaluation through the college's Academic Advising Office, ARCH 141. Most studio courses and some lecture courses are sequential. They must be taken in, and may be offered only during, the semester noted.

[2] A list of courses that fulfill design electives, general studies, and other electives is available from the college academic advisor.

Graphic Design—B.S.D.
Professional Program Requirements

Second Year

Fall		
DSC	494	ST: Finding Purpose: Survival in Design 3
GRA	283	Letterform I[1] 3
GRA	284	Visual Communication I[1] 3
L elective[2]		3
SB elective[2]		3
Total		15
Spring		
GRA	286	Visual Communication II[1] 3
GRA	287	Letterform II[1] 3
Design elective[2]		3
CS elective[2]		3
SQ, SG elective with laboratory I[2]		4
Total		16

Third Year

Fall		
GRA	345	Design Rhetoric *L* 3
GRA	383	Typography I 3
GRA	386	Visual Communication III[1] 3
Electives[2]		6
Total		15
Spring		
DSC	483	Preinternship Seminar 1
GRA	318	History of Graphic Design *HU* 3
GRA	385	Typography II[1] 3
GRA	387	Visual Communication IV[1] 3
C elective[2]		3
Upper-division design elective[2]		3
Total		16
Summer		
DSC	484	Internship[1] 3
Total		3

Fourth Year

Fall		
GRA	481	Visual Communication V[1] 3
GRA	494	ST: Graphic Design 3
SQ, SG elective with laboratory II[2]		4
Upper-division design elective[2]		3
Total		13
Spring		
GRA	482	Visual Communication VI[1] 3
GRA	494	ST: Graphic Design 3
Elective[2]		3

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

Upper-division elective[2]	3
Total	12
Professional program total	90
B.S.D. minimum total	120

[1] Transfer credits for the lower-division program must be equivalent in both content and level of offering. Samples of studio work to be accepted for credit must be submitted for evaluation through the college's Academic Advising Office, ARCH 141. Most studio courses and some lecture courses are sequential. They must be taken in, and may be offered only during, the semester noted.

[2] A list of courses that fulfill design electives, general studies, and other electives is available from the college academic advisor.

Industrial Design

The curriculum in Industrial Design is divided into a preprofessional (first and second years) and a professional program (third and fourth years):

Preprofessional program	61
Professional program	59
Total	120

The preprofessional curriculum balances a foundation in academic subjects such as English, algebra and trigonometry, computing, and physics with design courses that include history as well as studio courses in drawing, design fundamentals, human factors, and materials and processes.

The professional curriculum includes studio and laboratory work in industrial design, graphics, project development, and professional practice. Students also take a number of approved program electives. A supervised summer internship is part of the curriculum.

Upper-division studios emphasize projects that promote an interdisciplinary approach to solving problems and that develop the student's intellectual understanding of the philosophy, methodology, and theories related to industrial design. Problems proceed from small consumer products with simple task functions to larger and more complex problems and systems. Studio projects also emphasize the design processes: problem resolution through concept ideation, dialogue with specialists in related areas, and product development, presentation, and marketing.

Graduates of the program accept positions in industry and with firms involved in industrial design. Designers may focus on consumer products, transportation, electronics, medical devices, health products, or recreational products, among others. Designers may also choose to continue their education with graduate studies to enrich their design knowledge, to specialize, or to prepare for college-level teaching.

General Studies Requirement. The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 85, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 81, and "College Degree Requirements," page 126.

Industrial Design—B.S.D.
Preprofessional Program Requirements[1]

First Year

Fall

DSC	101	Design Awareness *HU, G*	3
ENG	101	First-Year Composition or ENG 105 Advanced First-Year Composition (3) if qualified	3
IND	121	Principles for Industrial Design I[1]	3
MAT	170	Precalculus *MA*	3
Elective			3
Total			15

Spring

ENG	102	First-Year Composition or elective if ENG 105 is taken (3)	3
IND	120	Drawing for Industrial Design[1]	3
IND	122	Principles for Industrial Design II[1]	3
PGS	101	Introduction to Psychology *SB*	3
PHY	111	General Physics *SQ*[2]	3
PHY	113	General Physics Laboratory *SQ*[2]	1
Total			16

Second Year

Fall

IND	227	Visual Methods for Problem Solving	3
IND	236	Introduction to Computer Modeling for Industrial Design	3
IND	242	Materials and Design	3
IND	260	Industrial Design I	3
IND	316	20th-Century Design I *HU, H*	3
Total			15

Spring

ECN	112	Microeconomic Principles *SB*	3
IND	228	Imaging and Visualization	3
IND	243	Process and Design	3
IND	261	Industrial Design II	3
IND	317	20th-Century Design II *HU, H*	3
Total			15
Preprofessional program total			61

[1] Transfer credits for the lower-division program must be equivalent in both content and level of offering. Samples of studio work to be accepted for credit must be submitted for evaluation through the college's Academic Advising Office, ARCH 141. Most studio courses and some lecture courses are sequential. They must be taken in, and may be offered only during, the semester noted.

[2] Both PHY 111 and 113 must be taken to secure SQ credit.

Industrial Design—B.S.D.
Professional Program Requirements

Third Year

Fall

DSC	344	Human Factors in Design	3
IND	327	Presentation Graphics	3
IND	354	Principles of Product Design	3
IND	360	Industrial Design III	5
Total			14

Spring

IND	328	Graphics for Industrial Design	3
IND	361	Industrial Design IV	5
MKT	300	Principles of Marketing	3
Elective			3
Total			14

Summer

DSC	484	Internship	2
Total			2

Fourth Year

Fall

ENG	301	Writing for the Professions *L*	3
IND	460	Design Project I	5
IND	470	Professional Practice for Industrial Design *L*	3
Elective			3
Total			14

Spring

IND	461	Design Project II	5
Elective			3
C elective			3
SQ, SG elective with approved laboratory			4
Total			15
Professional program total			59
B.S.D. minimum total			120

Interior Design

The curriculum in Interior Design is divided into a preprofessional program (first and second year) and a professional program (third, fourth, and fifth years):

Preprofessional program	55
Professional program	95
Total	150

The preprofessional curriculum balances a foundation in academic subjects such as English, algebra and trigonometry, computer technology, and physics with design courses that include history and theory, as well as studio courses in drawing, design fundamentals, and conceptual design.

The professional curriculum includes studio work in interior design, furniture design, construction methods/structures, codes as related to materials and finishes, human factors, environmental control systems, as well as lecture courses in the history of interior design, decorative arts, and textiles. An eight-week supervised summer internship is part of the curriculum. The fifth year is an interdisciplinary year in which students address real-life environmental problems. This final year is a capstone experience that utilizes all previous learning within and outside the professional program. The student's final design project is completed in consultation with a member of the local professional community.

Graduates from the program accept entry-level professional positions in a variety of settings, including interior design firms, departments of space planning, architectural firms, public institutions, and industry. Students may also choose to continue their education through graduate studies, which provide greater enrichment in studio disciplines and contribute to the possibility for postsecondary-level academic appointments.

General Studies Requirement. The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 85, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 81, and "College Degree Requirements," page 126.

Interior Design—B.S.D.
Preprofessional Program Requirements[1]

First Year

Fall

DSC	101	Design Awareness *HU, G*	3
ENG	101	First-Year Composition	3
		or ENG 105 Advanced First-Year Composition (3) if qualified	
INT	121	Principles for Interior Design I[1]	3
MAT	170	Precalculus *MA*	3
Elective			3
Total			15

Spring

ENG	102	First-Year Composition	3
		or elective if ENG 105 is taken (3)	
INT	120	Drawing for Interior Design[1]	3
INT	122	Principles for Interior Design II[1]	3
PHY	111	General Physics *SQ*[2]	3
PHY	113	General Physics Laboratory *SQ*[2]	1
SB elective			3
Total			16

Second Year

Fall

INT	194	ST: Drafting for Interior Design[1]	3
INT	223	Interior Design Issues and Theories *HU*[1]	3
INT	235	User Needs and Behavior in Interior Design[1]	3
INT	236	Introduction to Computer Modeling for Interior Design	3
Total			12

Spring

ARS	102	Art from Renaissance to Present *HU, H*	3
INT	220	Media for Design Development[1]	3
INT	231	Concepts for Interior Design[1]	3
Elective			3
Total			12
Preprofessional program total			55

[1] Transfer credits for the lower-division program must be equivalent in both content and level of offering. Samples of studio work to be accepted for credit must be submitted for evaluation

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

through the college's Academic Advising Office, ARCH 141. Most studio courses and some lecture courses are sequential. They must be taken in, and may be offered only during, the semester noted.

[2] Both PHY 111 and 113 must be taken to secure SQ credit.

Interior Design—B.S.D.
Professional Program Requirements

Third Year

Fall

DSC	344 Human Factors in Design	3
INT	310 History of Interior Design I *HU, H*	3
INT	340 Interior Codes: Public Welfare and Safety	3
INT	364 Interior Design Studio I	5
INT	366 Construction Methods in Interior Design	3
Total		17

Spring

DSC	483 Preinternship Seminar	1
INT	311 History of Interior Design II *HU, H*	3
INT	341 Interior Materials and Finishes	3
INT	365 Interior Design Studio II	5
INT	455 Environmental Control Systems	3
Total		15

Summer

DSC	484 Internship	3
Total		3

Fourth Year

Fall

INT	412 History of Decorative Arts in Interiors *HU*	3
INT	442 Specifications and Documents for Interiors *L*	3
INT	458 Lighting for Interior Design	3
INT	464 Interior Design Studio III	5
L elective		3
Total		17

Spring

INT	413 History of Textiles in Interior Design	3
INT	457 Acoustics for Interior Design	3
INT	465 Interior Design Studio IV	5
Natural science elective with laboratory		4
Total		15

Fifth Year*

Fall

INT	422 Facilities Planning and Management I	3
INT	446 Furniture Design and Production	3
INT	466 Interior Design Studio V	5
SB and C elective		3
Total		14

Spring

INT	423 Facilities Planning and Management II	3
INT	467 Interior Design Studio VI	5
INT	472 Professional Practice for Interior Design	3
Elective		3
Total		14
Professional program total		95
B.S.D. minimum total		150

* See "Fifth Year" below.

Fifth Year. During the fifth year, the student concentrates on research and application of that research related to the development of a comprehensive project. This year is self-directed in nature and prepares the student for independent thinking and creative problem solving. The fifth-year experience promotes high expectations for producing professional work that represents the culmination of the major's academic experience.

INQUIRIES

For more information, contact a college academic advisor at 480/965-3584, e-mail caed.advising@asu.edu, or write

COLLEGE OF ARCHITECTURE AND
ENVIRONMENTAL DESIGN
ACADEMIC ADVISING/STUDENT SERVICES
OFFICE
ARIZONA STATE UNIVERSITY
PO BOX 871905
TEMPE AZ 85287-1905

DESIGN (DSC)

DSC 100 Introduction to Environmental Design. (3)
fall and spring
Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as APH 100/PUP 100. Credit is allowed for only APH 100 or DSC 100 or PUP 100.
General Studies: HU, G, H

DSC 101 Design Awareness. (3)
fall and spring
Survey of cultural, global, and historical context for the design professions.
General Studies: HU, G

DSC 236 Introduction to Computer Modeling. (3)
fall and spring
Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation. Lab. Prerequisite: Design major.
General Studies: CS

DSC 344 Human Factors in Design. (3)
fall
Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.

DSC 483 Preinternship Seminar. (1)
spring
Preparation of internship materials that produce and enhance a successful internship experience. Seminar. Prerequisite: 3rd-year major in the School of Design.

DSC 484 Internship. (1–3)
summer
Full-time summer internship under supervision of practitioners in the Phoenix area or other locales. Prerequisite: instructor approval.

DSC 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Finding Purpose: Survival in Design. (3)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

ENVIRONMENTAL DESIGN AND PLANNING (EPD)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

GRAPHIC DESIGN (GRA)

GRA 120 Drawing for Graphic Design. (3)
spring
Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for graphic design thinking. Studio. Prerequisite: GRA 121. Corequisite: GRA 122.

GRA 121 Principles for Graphic Design I. (3)
spring
Graphic design as a language and process for creative thinking and realization. Studio. Prerequisite: Graphic Design major.

GRA 122 Principles for Graphic Design II. (3)
spring
Continued exploration of graphic design as a language and process for creative thinking and realization. Studio. Prerequisite: GRA 121. Corequisite: GRA 120.

GRA 283 Letterform I. (3)
fall
Drawing of letterforms with focus on proportion and structure. Introduces letterform nomenclature and classifications. 6 hours a week. Fee. Prerequisites: GRA 122; acceptance into Graphic Design professional program. Corequisite: GRA 284.

GRA 284 Visual Communication I. (3)
fall
Theoretical and applied studies in shape, drawing, and color. 6 hours a week. Fee. Prerequisite: acceptance into Graphic Design professional program. Corequisite: GRA 283.

GRA 286 Visual Communication II. (3)
spring
Transition from theoretical to applied problems. Emphasizes refinement of visual skills. 6 hours a week. Fee. Prerequisites: GRA 284; acceptance into Graphic Design professional program. Corequisite: GRA 287.

GRA 287 Letterform II. (3)
spring
Continuation of GRA 283 with emphasis on lowercase letters; basics of pen writing and font design. 6 hours per week. Fee. Prerequisites: GRA 284; acceptance into Graphic Design professional program. Corequisite: GRA 286.

GRA 318 History of Graphic Design. (3)
fall
Surveys development in the graphic arts, innovative printing methods, aesthetic values, and social and cultural environments that shape them.
General Studies: HU

GRA 345 Design Rhetoric. (3)
fall and spring
Develops critical thinking and expression of ideas in concise and persuasive written and spoken form. Prerequisites: ENG 101, 102.
General Studies: L

GRA 382 Graphic Representation. (3)
fall
Studio practice in drawing with an application toward graphic communication. 6 hours a week. May be repeated once for credit. Fee. Prerequisite: GRA 284.

GRA 383 Typography I. (3)
fall
Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week. Fee. Prerequisites: GRA 286, 287. Corequisite: GRA 386.

GRA 385 Typography II. (3)
spring
Problems in composition, choice, and combinations of typefaces, formats, and their application to a variety of design projects. 6 hours a week. Fee. Prerequisite: GRA 383. Corequisite: GRA 387.

GRA 386 Visual Communication III. (3)
fall
Problems in specific design applications such as poster, packaging, publications. Emphasizes development of concepts in visual communications. 6 hours a week. Fee. Prerequisites: GRA 286, 287. Corequisite: GRA 383.

GRA 387 Visual Communication IV. (3)
spring
Client-oriented projects. Multifaceted problems with emphases on continuity of design in more than one medium and format. 6 hours a week. Fee. Prerequisites: GRA 383, 386. Corequisite: GRA 385.

GRA 481 Visual Communication V. (3)
fall
Studio problems with emphasis on analysis, problem solving, and professional portfolio preparation. 6 hours a week. Fee. Prerequisites: GRA 385, 387.

GRA 482 Visual Communication VI. (3)
spring
Individual and group projects with outside clients. All projects culminate in an exhibit. 6 hours a week. Fee. Prerequisite: GRA 481.

GRA 484 Internship: Graphic Design. (1–3)
summer
Full-time summer internship under supervision of practitioners in the Phoenix area or other locales. Prerequisite: GRA 387.

GRA 485 Graphic Design Workshop. (3)
selected semesters
Preprofessional client/designer situations from concept to printed work. Studio workshop and internships for selected students. 6 hours a week. May be repeated once for credit. Fee. Prerequisite: instructor approval.

GRA 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Graphic Design. (3)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

INDUSTRIAL DESIGN (IND)

IND 120 Drawing for Industrial Design. (3)
spring
Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for industrial design thinking. Studio. Prerequisite: IND 121. Corequisite: IND 122.

IND 121 Principles for Industrial Design I. (3)
spring
Industrial design as a language and process for creative thinking and realization. Studio. Prerequisite: Industrial Design major.

IND 122 Principles for Industrial Design II. (3)
fall
Continued exploration of industrial design as a language and process for creative thinking and realization. Studio. Prerequisite: IND 121. Corequisite: IND 120.

IND 194 Special Topics. (1–4)
selected semesters

IND 227 Visual Methods for Problem Solving. (3)
fall
Introduces conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts. Seminar, studio. Prerequisite: IND 122.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

IND 228 Imaging and Visualization. (3)
spring
Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation. Seminar, studio. Prerequisite: IND 227.

IND 236 Introduction to Computer Modeling for Industrial Design. (3)
fall and spring
Computers in industrial design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation. Lab. Prerequisite: Industrial Design major.

IND 242 Materials and Design. (3)
fall
Materials application in design. Introduces characteristics and properties of metals and organic materials, including plastics, and inorganic materials.

IND 243 Process and Design. (3)
spring
Influences of industrial processing on design. Introduces basic materials processing and post-forming processes. Emphasizes appearance enhancement and design constraints of material processing. Prerequisite: IND 242.

IND 260 Industrial Design I. (3)
fall
Introduces the method and process of the industrial designer. Determinants necessary in small product design. 1 hour lecture, 2 hours studio. Prerequisite: IND 122.

IND 261 Industrial Design II. (3)
spring
Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics. 1 hour lecture, 2 hours studio. Prerequisite: IND 260 (or its equivalent).

IND 316 20th-Century Design I. (3)
fall
Modern European and American design from 1900 to 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.
General Studies: HU, H

IND 317 20th-Century Design II. (3)
spring
Modern European, Asian, and American design since 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.
General Studies: HU, H

IND 327 Presentation Graphics. (3)
fall
Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship. Seminar, studio. Prerequisite: acceptance into Industrial Design professional program.

IND 328 Graphics for Industrial Design. (3)
spring
Investigates and applies packaging applications and planning to the development of an identity for a product line structured as a system. Lab. Prerequisite: IND 327.

IND 354 Principles of Product Design. (3)
fall
Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics. Prerequisite: PHY 111.

IND 360 Industrial Design III. (5)
fall
Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques. 10 hours studio. Fee. Prerequisite: school approval.

IND 361 Industrial Design IV. (5)
spring
Emphasizes developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing. 10 hours studio. Fee. Prerequisite: IND 360.

IND 460 Design Project I. (5)
fall
Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasizes professional standards. 10 hours studio. Fee. Prerequisites: DSC 484; IND 361.

IND 461 Design Project II. (5)
spring
Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction. 10 hours studio. Fee. Prerequisite: IND 460.

IND 470 Professional Practice for Industrial Design. (3)
fall
Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions. May be repeated for credit. Prerequisite: senior standing.
General Studies: L

IND 474 Design Seminar. (3)
spring
Manufacturer's liability, statutes, regulations, and common law rules; role of expert witnesses; insurance and product safety programs. Seminar. Prerequisite: senior standing.

IND 484 Internship: Industrial Design. (1–3)
summer
Full-time summer internship under supervision of practitioners in the Phoenix area or other locales. Prerequisite: IND 361.

IND 494 Special Topics. (3)
selected semesters
Applies mechanical drafting knowledge and skills. Manual drafting principles and techniques with transition to computer-aided industrial design.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

INTERIOR DESIGN (INT)

INT 120 Drawing for Interior Design. (3)
spring
Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for interior design thinking. Studio. Prerequisite: INT 121. Corequisite: INT 122.

INT 121 Principles for Interior Design I. (3)
spring
Interior design as a language and process for creative thinking and realization. Studio. Prerequisite: Interior Design major.

INT 122 Principles for Interior Design II. (3)
spring
Continued exploration of interior design as a language and process for creative thinking and realization. Studio. Prerequisite: INT 121. Corequisite: INT 120.

INT 194 Special Topics. (1–4)
fall
Topics may include the following:
- Drafting for Interior Design. (3)

INT 220 Media for Design Development. (3)
spring
Graphic representation methods used to describe and analyze space; emphasizes quick presentation techniques. 6 hours studio. Prerequisite: INT 122.

INT 223 Interior Design Issues and Theories. (3)
fall
Interiors issues, theories, and philosophies. Emphasizes unique social and cultural factors that shape 20th-century design concepts.
General Studies: HU

INT 231 Concepts for Interior Design. (3)
spring
Conceptual design development, including scale and proportion, light, texture, form, volume, and spatial hierarchy; passage and repose. 1 hour lecture, 4 hours lab. Prerequisite: DSC 236.

INT 235 User Needs and Behavior in Interior Design. (3)
fall
Applies conceptual design to issues of programming and space planning, user needs, and behavior. 1 hour lecture, 4 hours lab.

INT 236 Introduction to Computer Modeling for Interior Design. (3)
fall and spring
Computers in interior design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation. Lab. Prerequisite: Interior Design major.

INT 294 Special Topics. (1–4)
selected semesters
Topics may include the following:
- AutoCad. (3)

INT 310 History of Interior Design I. (3)
fall
Design of interior spaces as an expression of cultural influences to 1835.
General Studies: HU, H

INT 311 History of Interior Design II. (3)
spring
Design of interiors as an expression of cultural influences from 1835 to the present. Prerequisite: INT 310 or instructor approval.
General Studies: HU, H

INT 340 Interior Codes: Public Welfare and Safety. (3)
fall
Codes and regulations as performance criteria for interior design. Corequisite: INT 366.

INT 341 Interior Materials and Finishes. (3)
spring
General analysis of quality control measures relating to interior design materials, finishes, and performance criteria. Prerequisites: INT 340, 366.

INT 364 Interior Design Studio I. (5)
fall
Studio problems in interior design related to behavioral response in personal and small group spaces. 10 hours studio. Fee. Prerequisite: school approval.

INT 365 Interior Design Studio II. (5)
spring
Studio problems in interior design, with emphasis on issues of public and private use of interior places of assembly. 10 hours studio. Fee. Prerequisite: INT 364.

INT 366 Construction Methods in Interior Design. (3)
fall
Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design. Lecture, field trips. Corequisite: INT 340.

INT 412 History of Decorative Arts in Interiors. (3)
fall
Design of decorative arts as an expression of cultural influences and as an extension of interior spaces. Prerequisite: INT 311 or instructor approval.
General Studies: HU

INT 413 History of Textiles in Interior Design. (3)
spring
Cultural and historical expression of textiles as related to interiors. Possible field trips. Prerequisite: INT 412 or instructor approval.

INT 422 Facilities Planning and Management I. (3)
fall
Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs. Prerequisite: senior standing.

INT 423 Facilities Planning and Management II. (3)
spring
Formation of facilities policies, procedures, and standards. Facilities database, space allocations, and management process. Evaluation of programming criteria. Prerequisites: INT 422; senior standing.

INT 442 Specifications and Documents for Interiors. (3)
fall
Contract specifications, documents, schedules, and bidding procedures for interior design. Prerequisites: INT 341, 365.
General Studies: L

INT 446 Furniture Design and Production. (3)
fall
Design, construction, cost estimating, and installation in interior furniture and millwork. 1 hour lecture, 4 hours studio. Prerequisite: acceptance into Interior Design professional program or instructor approval.

INT 455 Environmental Control Systems. (3)
spring
Survey of environmental control systems and their application in the design of building interiors. Lecture, field trips. Prerequisites: MAT 170; PHY 111, 113; junior standing.

INT 457 Acoustics for Interior Design. (3)
fall
Physical properties of sound. Studies pertaining to sound-absorbing materials, constructions, and room acoustics. Prerequisites: MAT 170; PHY 111, 113.

INT 458 Lighting for Interior Design. (3)
spring
Light as an aspect of interior design. Evaluation of light sources for distribution, color, and cost.

INT 464 Interior Design Studio III. (5)
fall
Studio problems in interior design related to commercial spaces. 10 hours studio. Fee. Prerequisites: DSC 484; INT 365.

INT 465 Interior Design Studio IV. (5)
spring
Studio problems in interior design related to health and educational facilities. 10 hours studio. Fee. Prerequisite: INT 464.

INT 466 Interior Design Studio V. (5)
fall
Advanced interior design problem solving, design theory, and criticism. Thesis project development based upon the major's concentration. 10 hours studio. Fee. Prerequisite: INT 465.

INT 467 Interior Design Studio VI. (5)
spring
Advanced series of specialized projects or continuation of thesis project based upon the major's concentration. 10 hours studio. Fee. Prerequisite: INT 466.

INT 472 Professional Practice for Interior Design. (3)
spring
Business procedures, project control, fee structures, and professional product liabilities.

INT 484 Internship: Interior Design. (1–3)
summer
Full-time summer internship under supervision of practitioners in the Phoenix area or other locales. Prerequisite: INT 365.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

School of Planning and Landscape Architecture

www.asu.edu/caed/SPLA
480/965-7167
AED 158

Hemalata Dandekar, Director

Professors: Dandekar, Kihl, Lai, Mushkatel, Pijawka

Associate Professors: Cameron, Cook, Guhathakurta, Kim, McSherry, Yabes

Assistant Professors: Crewe, Ewan, Fish Ewan, Musacchio

Faculty Associates: Abele, Cafarella, Dollin, Fry, Gammage, Holway

PURPOSE

The faculty in the School of Planning and Landscape Architecture offer curricula that provide an education for careers in environmental planning, housing and urban development, landscape architecture, urban and regional planning, and urban design. The goal of the faculty is to advance the professions of planning and landscape architecture through scholarship, teaching, research, and community service.

Planners and landscape architects work on projects that range in scale from site and landscape development to the design of entire communities and the formulation of policies that shape urban and regional growth. Planning and landscape architecture graduates work for private firms and government agencies. Their work typically involves fields such as land-use planning, housing, natural resource management, urban transportation, development controls, and environmental impact assessment.

ORGANIZATION

The programs are organized by the faculty of the school under the direction and administration of the program coordinators and the school director.

DEGREES

The faculty in the School of Planning and Landscape Architecture offer the Bachelor of Science in Planning degree in Urban Planning, Bachelor of Science in Landscape Architecture degree, and Bachelor of Science in Design degree in Housing and Urban Development.

Bachelor of Science in Planning (B.S.P.)

The B.S.P. degree prepares students for careers in urban planning. Students take courses that include comprehensive planning, socioeconomic and environmental analysis, computer and analytical methods, planning law, site planning, landscape architecture, urban design, and public-policy formulation and administration. An internship or an approved elective is required between the third and fourth years. Many students continue to specialize in planning at the graduate level. Students in planning are exposed to the theories, methods, and practices of the profession of planning.

Bachelor of Science in Landscape Architecture (B.S.L.A.)

The B.S.L.A. degree prepares students to be professional landscape architects. Students explore the reasons for and the techniques involved in the analysis, planning, and design of the environment, both natural and built. The B.S.L.A. is an accredited program.

Bachelor of Science in Design (B.S.D.)

A B.S.D. degree with a major in Housing and Urban Development (HUD) educates and trains professionals to lead in the production of high-quality affordable housing, in the development of creatively designed and soundly planned neighborhoods and communities, in the revitalization of communities, and in the exemplification of social inclusiveness and environmental sensitivity in responsible land development. HUD graduates may pursue careers in the private home development industry, in publicly sponsored housing and community redevelopment, with nonprofit housing agencies, or in postgraduate housing and urban development research and education. The B.S.D. degree with a major in Housing and Urban Development is offered in conjunction with the College of Extended Education.

MINORS

Landscape Studies

The minor in Landscape Studies is designed for students who have an interest in landscape aesthetics, but are pursuing a major in another field. The course selection is intended to provide greater understanding of landscape issues that may be relevant in related professional disciplines and to broaden knowledge about the landscape in which we live.

Students must complete a minimum of 18 semester hours from the following list of courses. Students may petition to have other PLA special topics courses considered as part of the 18 semester hours required.

PLA	101	Landscape and Society *HU, G*	3
PLA	310	History of Landscape Architecture *H*	3
PLA	311	Contemporary Landscape Architecture	3
PLA	410	Social Factors in Landscape and Urban Planning	3
PLA	411	Landscape Architecture Theory and Criticism *L*	3
PLA	412	Landscape Ecology and Planning	3
PLA	413	Southwest Landscape Interpretation	3
PLA	485	International Field Studies in Planning and Landscape Architecture *G*	6

The minor is open to students of all majors. Students must however, have an overall GPA of 3.00 or higher and achieve a minimum 3.00 GPA in minor classes to be awarded the minor. Students seeking admission to the minor in Landscape Studies must submit a minor verification form to the landscape architecture coordinator in the School of Planning and Landscape Architecture.

Urban Planning

The minor in Urban Planning is designed for students who are interested in the field but who wish to pursue other majors. The course selection is designed to provide an overview of the field and offer information of broad appeal.

All students must complete a minimum of 15 semester hours from the following courses:

PUP	200 The Planned Environment *HU, H*	3
PUP	301 Introduction to Urban Planning *L**	3
PUP	412 History of the City *H*	3
PUP	425 Urban Housing Analysis	3
PUP	430 Transportation Planning and the Environment	3
PUP	432 Planning and Development Control Law	3
PUP	433 Zoning Ordinances, Subdivision Regulations, and Building Codes	3
PUP	442 Environmental Planning	3
PUP	444 Preservation Planning	3
PUP	475 Environmental Impact Assessment	3
PUP	494 Special Topics	3
PUP	510 Citizen Participation	3

* PUP 301 Introduction to Urban Planning is required. Landscape Architecture students must choose another class with an advisor's approval since PUP 301 is already required for the B.S.L.A.

The minor is open to students of all majors. Students must however, have an overall GPA of 3.00 or higher and achieve a minimum 3.00 GPA in minor classes to be awarded the minor. Students seeking admission to the minor in Urban Planning must submit a minor verification form to the B.S. in Planning coordinator in the School of Planning and Landscape Architecture.

B.I.S. CONCENTRATIONS

Concentrations in landscape studies and urban planning are available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 116.

Graduate Programs

The faculty in the School of Planning and Landscape Architecture offer concentrations in landscape ecological planning, urban and regional development, and urban design under the Master of Environmental Planning (M.E.P.) degree and a collegewide, interdisciplinary Ph.D. degree in Environmental Design and Planning with concentrations in design; history, theory, and criticism; and planning. For more information, see the *Graduate Catalog*.

ADMISSION

Lower-Division Program. New and transfer students who have been admitted to the university and who have selected a program in the School of Planning and Landscape Architecture are admitted to the lower-division program. Transfer credits for the lower-division program are reviewed by the college and evaluated for applicability to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering. A review of samples of work is required for studio classes. See a college academic advisor for an appointment.

Completion of lower-division requirements does not ensure acceptance to the upper-division professional program. Admission to the upper division is competitive and limited to the space available. Admission requires formal application and acceptance.

Upper-Division Program. Admission to the upper-division programs of the School of Planning and Landscape Architecture is limited to applicants who have completed the lower-division program requirements and who are determined by the admissions committee to have the best potential for academic success. Spaces in the program are limited by available facilities, faculty, and qualified applicants. A minimum lower-division program GPA of 3.00 may be required. See "Application to Upper-Division Programs," on this page.

Students not admitted to upper-division programs are not dismissed from the university and may reapply later or may transfer to other programs. Students who plan to reapply should meet with a college academic advisor.

APPLICATION TO UPPER-DIVISION PROGRAMS

Upper-Division Application Procedures. Students should write to a college academic advisor for the application form well in advance of the application deadline. For more information on portfolios, ask for a copy of the portfolio guidelines from a college academic advisor.

Landscape Architecture students in good standing who will complete all required lower-division courses by the end of the fall semester of their sophomore year may apply for admission to the upper-division in November of their sophomore year. Urban Planning, and Housing and Urban Development students in good standing who will complete all required lower-division courses by the end of the spring semester of their sophomore year may apply for admission to the upper-division in April of their sophomore year.

Upper-Division Application Deadlines. *November 15, 2003.* Landscape Architecture portfolio and application documents are due in the school office by 5 P.M.

December 16, 2003. Acceptance notices are mailed to Landscape Architecture students no later than December 16.

January 3, 2004. Landscape Architecture students must submit transcripts of non-ASU course work if their fall semester includes course work taken at another institution. These transcripts may be unofficial copies.

April 15, 2004. Urban Planning, and Housing and Urban Development portfolio and application documents due in the school office by 5 P.M.

June 1, 2004. Urban Planning, and Housing and Urban Development students must submit transcripts of non-ASU course work if their spring semester includes course work

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

taken at another institution. These transcripts may be unofficial copies.

Official Transcripts. A second set of official transcripts must be sent to the university's Office of the Registrar. An application is not complete until the university receives official transcripts for transfer course work.

July 1, 2004. Acceptance notices are mailed no later than July 1.

Return of Letter of Acceptance. A signed receipt of acceptance of admission must be received by the school by the date indicated on the Notice of Acceptance. Alternates may be accepted at a later date if space becomes available.

Matriculation. An accepted student is expected to begin his or her upper-division professional program at the beginning of the immediate fall term for Urban Planning, and Housing and Urban Development, or the immediate spring term for Landscape Architecture. Deferrals are not allowed.

Portfolio Format Requirements. Each applicant is responsible for obtaining the following documents and including them in a presentation binder (portfolio) with plastic sleeves (8.5" x 11" format only) and a label, with the student's name, affixed to the outside:

1. evidence of graphic and design work shown in 35 mm slides or 3" x 5" or other appropriately sized photographs (20 maximum);
2. a statement of intent describing the applicant's specific background and interest in the major;
3. latest college-level transcript(s) (no high school transcripts are required);
4. one example of written work (e.g., a class paper); and
5. samples of individual work; team work can be included, but the contribution of the candidate must be clarified.

Students are also strongly encouraged to submit evidence of other endeavors related to the major. The applicant's GPA based on required courses and cumulative GPA is evaluated. Housing and Urban Development students completing the Phoenix Community College (PCC) articulation program with the B.S.D.-HUD program should submit similar material from PCC.

Students should obtain portfolio guidelines for their major from the college's Academic Advising Office, ARCH 141, at the beginning of the academic year in which they intend to apply to the upper-division program. Requirements or instructions indicated in the guidelines for that academic year take precedence over any other printed material.

Return of Portfolios. Application documents remain the property of the School of Planning and Landscape Architecture. However, the remainder of the portfolio is returned after the admissions review, provided the applicant encloses a self-addressed return mailer with sufficient prepaid postage. Portfolios may be claimed in person after the letter of response is submitted. If the applicant provides written permission, another person may claim the portfolio. After one year, unclaimed portfolios are discarded. While care is taken in handling the portfolios, no liability for lost or damaged materials is assumed by the college or school.

ADVISING

Advising for the lower-division curriculum is provided through a college academic advisor. Advising for the upper-division curriculum is provided by the school's academic advisor.

DEGREE REQUIREMENTS

Urban Planning

The Bachelor of Science in Planning degree requires a total of 120 semester hours.

Preprofessional program courses	61
Professional program courses core	56
Internship	3
Total	120

General Studies Requirement. The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 85, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 81, and "College Degree Requirements," page 126.

Bachelor of Science in Planning,
Major in Urban Planning
Preprofessional Program Requirements[1]

First Year

Fall			
ENG	101	First-Year Composition	3
		or ENG 105 Advanced First-Year Composition (3) if qualified	
MAT	117	College Algebra *MA*	3
		or approved more advanced MA elective (3)	
PUP	100	Introduction to Environmental Design *HU, G, H*	3
PUP	161	Graphic Communication[2]	3
Elective			3
Total			15
Spring			
ENG	102	First-Year Composition	3
		or elective if ENG 105 is taken (3)	
Elective			3
C elective			3
SB elective			3
SQ elective			4
Total			16

Second Year

Fall			
PLA	101	Landscape and Society *HU, G*	3
		or any HU or SB elective	
PUP	261	Urban Planning I[2]	4
PUP	301	Introduction to Urban Planning *L*	3
PUP	322	Computers in Planning	3

HU elective	3
Total	16

Spring

PUP 262 Urban Planning II[2]	4
PUP 363 History of Planning	3
Approved statistics or quantitative reasoning elective	3
SQ or SG elective	4
Total	14
Preprofessional program total	61

[1] Transfer credits are reviewed by the college and evaluated as applicable to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering.

[2] Portfolio review is required for transfer studio work. Samples of studio work to be accepted for credit must be submitted for evaluation through the college's Academic Advising office, ARCH 141. Most studio courses and some lecture courses are sequential. They must be taken in, and may be offered only during, the semester noted.

The first round of admission to the upper-division takes place after the fall semester of the second year. The second round, if needed, takes place after the spring semester.

Bachelor of Science in Planning,
Major in Urban Planning
Professional Program Requirements

Third Year

Fall

PUP 361 Urban Planning III	4
PUP 424 Planning Methods	4
PUP 452 Ethics and Theory in Planning *L*	3
Elective	3
Minimum total	14

Spring

PUP 362 Urban Planning IV	4
PUP 436 City Structure and Planning	3
PUP 510 Citizen Participation	3
Approved program elective[1]	3
SB elective	3
Total	16

Summer

PUP 484 Internship	3
or PUP 484 Study Abroad[2] (3)	
or PUP 485 International Field Studies in Planning and Landscape Architecture *G* (3)	
or approved elective (3)	
Total	3

Fourth Year

Fall

PUP 432 Planning and Development Control Law	3
PUP 442 Environmental Planning	3
PUP 461 Urban Planning V	4
Approved program elective[1]	3
Total	13

Spring

PUP 434 Urban Land Economics	3
or approved program elective[1] (3)	
PUP 462 Urban Planning VI	4
Elective	3
HU elective	3
Total	13
Professional program total	59
B.S.P. minimum total	120

[1] Select a minimum of nine semester hours from approved SPLA elective list.

[2] Use elective credit.

Landscape Architecture

The Bachelor of Science in Landscape Architecture degree requires a total of 120 semester hours.

Preprofessional program courses	47
Professional program courses	73
Total	120

General Studies Requirement. The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 85, for requirements and a list of approved courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 81, and "College Degree Requirements," page 126.

Bachelor of Science in Landscape Architecture
Preprofessional Requirements[1]

First Year

Fall

ENG 101 First-Year Composition	3
or ENG 105 Advanced First-Year Composition (3)	
MAT 117 College Algebra *MA*	3
PLA 101 Landscape and Society *HU, G*	3
PLA 161 Graphic Communication[2]	3
Elective	3
Total	15

Spring

ARS 102 Art from Renaissance to Present *HU, H*	3
ENG 102 First-Year Composition	3
GPH 111 Introduction to Physical Geography *SQ*	4
PLA 194 ST: Presentation Graphics	3
Elective	3
Total	16

Second Year

Fall

PLA 240 Landscape Survey Techniques	3
PLA 261 Landscape Architecture I[2]	4
PLA 310 History of Landscape Architecture *H*	3

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

PLA 494 ST: Plant Materials 3
PUP 301 Introduction to Urban Planning *L* 3
Total 16

Preprofessional program total 47

[1] Transfer credits are reviewed by the college and evaluated as applicable to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering.

[2] Portfolio review is required for transfer studio work. Samples of studio work to be accepted for credit must be submitted for evaluation through the college's Academic Advising office, ARCH 141. Most studio courses and some lecture courses are sequential. They must be taken in, and may be offered only during, the semester noted.

Bachelor of Science in Landscape Architecture
Professional Program Requirements

Second Year

Spring
PLA 222 Computers in Landscape Architecture *CS* 3
PLA 242 Landscape Construction I 4
PLA 262 Landscape Architecture II 4
SQ or SG elective 4
Total 15

Third Year

Fall
PLA 311 Contemporary Landscape Architecture 3
PLA 344 Landscape Construction II 4
PLA 361 Landscape Architecture III 4
C elective 3
SB elective 3
Total 17

Spring
PLA 345 Professional Practice Seminar 1
PLA 362 Landscape Architecture IV 4
PLA 363 Landscape Planting Design 4
HU elective 3
Elective 3
Minimum total 15

Summer
PLA 484 Internship (optional) 3
or PLA 485 International Field Studies in Planning and Landscape Architecture (6) (optional)*

Fourth Year

Fall
PLA 410 Social Factors in Landscape and Urban Planning 3
PLA 461 Landscape Architecture V 4
PUP 432 Planning and Development Control Law 3
Elective 3
Total 13

Spring
PLA 411 Landscape Architecture Theory and Criticism *L* 3
PLA 446 Landscape Construction III 3
PLA 462 Landscape Architecture VI 4
Electives 3
Total 13

Professional program total 73

B.S.L.A. minimum total 120

* PLA 484 or 485 would be used as an elective in the fourth year.

Housing and Urban Development

The Bachelor of Science in Design degree in Housing and Urban Development requires a total of 120 semester hours.

Preprofessional program courses 61
Professional program courses core 59
Total 120

General Studies Requirements

The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 85, for requirements and a list of approved courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 81, and "College Degree Requirements," page 126.

Bachelor of Science in Design,
Major in Housing and Urban Development
Preprofessional Program Requirements[1]

First Year

Fall
ENG 101 First-Year Composition 3
HUD 161 Graphic Communication 3
MAT 117 College Algebra *MA* 3
or MAT 170 Precalculus *MA* (3)
or MAT 210 Brief Calculus *MA* (3)
Elective 3
SB elective 3
Total 15

Spring
ENG 102 First-Year Composition 3
HUD 201 Introduction to Housing and Urban Development 3
HU, H elective 3
SB elective 3
SQ elective 4
Total 16

Second Year

Fall
APH 200 Introduction to Architecture *HU, G* 3
or any CAED history course listed below (3)[2]
CON 252 Building Construction Methods, Materials, and Equipment 3
PLA 261 Landscape Architecture I 4
or PUP 261 Urban Planning I (4)
C elective 3
CS statistics elective 3
Total 16

Spring

ACC	230	Uses of Accounting Information I ... 3
CON	244	Working Drawings Analysis ... 1
L elective		... 3
SQ or SG elective		... 4
Upper-division HU elective		... 3
Total		... 14

Preprofessional program total ... 61

[1] Transfer credits are reviewed by the college and evaluated as admissible to this curriculum. To be admissible, transfer courses must be equivalent in both content and level of offering.

[2] See "CAED History Courses," on this page. If the selected course does not also satisfy the G requirement, the student must select a course that does satisfy the G requirement either as an elective, or in conjunction with another General Studies course.

CAED History Courses. These CAED history courses also fulfill HU. See the course listings for prerequisites.

APH	300	World Architecture I/Western Cultures *HU, G, H* ... 3
APH	305	Contemporary Architecture *HU* ... 3
APH	313	History of Architecture I *L/HU, G* ... 3
APH	446	20th-Century Architecture I *HU* ... 3
DSC	101	Design Awareness *HU, G* ... 3
GRA	318	History of Graphic Design *HU* ... 3
IND	316	20th-Century Design I *HU, H* ... 3
IND	317	20th-Century Design II *HU, H* ... 3
INT	223	Interior Design Issues and Theories *HU* ... 3
INT	310	History of Interior Design I *HU, H* ... 3
INT	311	History of Interior Design II *HU, H* ... 3
INT	412	History of Decorative Arts in Interiors *HU* ... 3
PUP	200	The Planned Environment *HU, H* ... 3
PUP	420	Theory of Urban Design *HU* ... 3

Bachelor of Science in Design,
Major in Housing and Urban Development
Professional Program Requirements

Third Year

Fall

CON	383	Construction Estimating ... 3
HUD	301	Housing and Community Design and Development ... 3
HUD	361	Housing and Urban Development Studio I: Residential Design and Development ... 2
HUD	363	Housing and Urban Development Seminar I: Residential Design and Development ... 3
REA elective course		... 3
Total		... 14

Spring

CON	389	Construction Cost Accounting and Control *CS* ... 3
HUD	302	Housing Production Process ... 3
HUD	362	Housing and Urban Development Studio II: Community Design and Development ... 2
HUD	364	Housing and Urban Development Seminar II: Community Design and Development ... 3
HUD	403	Advanced Topics in Housing and Urban Development ... 3
Elective		... 3
Total		... 17

Fourth Year

Fall

CON	495	Construction Planning and Scheduling *CS* ... 3
HUD	401	Assisted Housing ... 3
HUD	461	Housing and Urban Development Studio III: Comprehensive Housing Development Process ... 2
HUD	463	Housing and Urban Development Seminar III: Comprehensive Housing Development Process ... 3
PUP	452	Ethics and Theory in Planning *L* ... 3
Total		... 14

Spring

HUD	402	Community Revitalization: Problems and Strategies ... 3
HUD	462	Housing and Urban Development Studio IV: Neighborhood Revitalization Process ... 2
HUD	464	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process ... 3
PUP	433	Zoning Ordinances, Subdivision Regulations, and Building Codes ... 3 or PUP 432 Planning and Development Control Law (3)
Elective		... 3
Total		... 14

Professional program total ... 59

B.S.D.-HUD minimum total ... 120

INQUIRIES

For more information, contact a college academic advisor at 480/965-3584, e-mail caed.advising@asu.edu, or write

COLLEGE OF ARCHITECTURE AND
ENVIRONMENTAL DESIGN
ACADEMIC ADVISING/STUDENT SERVICES
OFFICE
ARIZONA STATE UNIVERSITY
PO BOX 871905
TEMPE AZ 85287-1905

ENVIRONMENTAL DESIGN AND PLANNING (EPD)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

HOUSING AND URBAN DEVELOPMENT (HUD)

HUD 161 Graphic Communication. (3)
fall
Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions. Studio. Cross-listed as PLA 161/PUP 161. Credit is allowed for only HUD 161 or PLA 161 or PUP 161.

HUD 201 Introduction to Housing and Urban Development. (3)
spring
Perspectives and issues concerning HUD. Guest lectures by interdisciplinary faculty and private, public, and nonprofit practitioners.

HUD 301 Housing and Community Design and Development. (3)
fall
Single- and multi-family housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

HUD 302 Housing Production Process. (3)
spring
Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.

HUD 361 Housing and Urban Development Studio I: Residential Design and Development. (2)
fall
Affordable residential design, development, and production process. Studio. Pre- or corequisites: HUD 301, 363; upper-division HUD major.

HUD 362 Housing and Urban Development Studio II: Community Design and Development. (2)
spring
Neighborhood and new community design and development process. Studio. Pre- or corequisites: HUD 301, 361, 363, 364; upper-division HUD major.

HUD 363 Housing and Urban Development Seminar I: Residential Design and Development. (3)
fall
Affordable residential design, development, and production process. Seminar. Pre- or corequisites: HUD 301, 361; upper-division HUD major.

HUD 364 Housing and Urban Development Seminar II: Community Design and Development. (3)
spring
Neighborhood and new community design and development process. Seminar. Pre- or corequisites: HUD 301, 361, 362, 363; upper-division HUD major.

HUD 401 Assisted Housing. (3)
fall
Publicly subsidized and nonprofit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.

HUD 402 Community Revitalization: Problems and Strategies. (3)
spring
Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.

HUD 403 Advanced Topics in Housing and Urban Development. (3)
fall and spring
Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.

HUD 461 Housing and Urban Development Studio III: Comprehensive Housing Development Process. (2)
fall
Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing. Studio. Pre- or corequisites: HUD 302, 463; upper-division HUD major.

HUD 462 Housing and Urban Development Studio IV: Neighborhood Revitalization Process. (2)
spring
Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation, etc. Studio. Pre- or corequisites: HUD 401, 402, 464; upper-division HUD major.

HUD 463 Housing and Urban Development Seminar III: Comprehensive Housing Development Process. (3)
fall
Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing. Seminar. Pre- or corequisites: HUD 302, 461; upper-division HUD major.

HUD 464 Housing and Urban Development Seminar IV: Neighborhood Revitalization Process. (3)
spring
Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation, etc. Seminar. Pre- or corequisites: HUD 401, 402, 462; upper-division HUD major.

HUD 484 Internship. (1)
summer

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

LANDSCAPE ARCHITECTURE (PLA)

PLA 101 Landscape and Society. (3)
fall
Examines interrelationship between society and the landscape with emphasis on human involvement in shaping the landscape.
General Studies: HU, G

PLA 161 Graphic Communication. (3)
fall
Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions. Studio. Cross-listed as HUD 161/PUP 161. Credit is allowed for only HUD 161 or PLA 161 or PUP 161.

PLA 194 Special Topics. (1–4)
selected semesters
Topics may include the following:
- Presentation Graphics. (3)

PLA 222 Computers in Landscape Architecture. (3)
spring
Computer applications in landscape architecture, including CAD, GIS, graphics, and visualization. Lab.
General Studies: CS

PLA 240 Landscape Survey Techniques. (3)
fall
Develops landscape survey skills, including aerial photography, satellite images, geo-referencing, landscape surveys, and field data collection. Lecture, lab.

PLA 242 Landscape Construction I. (4)
spring
Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork. Studio. Prerequisite: admission to professional program.

PLA 261 Landscape Architecture I. (4)
fall
Landscape communication: communication techniques for urban planning and landscape architecture. Credit is allowed for only PLA 261 or PUP 261. Studio. Prerequisites: ADE 120; GPH 111.

PLA 262 Landscape Architecture II. (4)
spring
Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes. Prerequisites: ADE 120; PLA 261; admission to professional program.

PLA 310 History of Landscape Architecture. (3)
fall
Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design. Cross-listed as APH 411. Credit is allowed for only APH 411 or PLA 310.
General Studies: H

PLA 311 Contemporary Landscape Architecture. (3)
fall
Explores concerns, projects, and movements in landscape architecture of late 20th-century understanding; social, ecological, regional, and historical influences.

PLA 344 Landscape Construction II. (4)
fall
Characteristics of materials and methods used in landscape architectural construction. Studio. Prerequisite: PLA 242 or instructor approval.

PLA 345 Professional Practice Seminar. (1)
spring
Landscape architecture practice, including contracts, project and office management, liability, licensing, and professional development.

PLA 361 Landscape Architecture III. (4)
fall
Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. Studio. Fee.
Prerequisite: admission to professional program.

PLA 362 Landscape Architecture IV. (4)
spring
Site design: site-specific design of configured space by the creative development of form. Studio. Fee. Prerequisite: admission to professional program.

PLA 363 Landscape Planting Design. (4)
spring
Functional and aesthetic use of plants in arid-region landscape design. Explores design philosophies through planting design problems. Studio. Prerequisite: admission to professional program.

PLA 410 Social Factors in Landscape and Urban Planning. (3)
fall
Examines the influence of social factors in landscape architecture and urban planning.

PLA 411 Landscape Architecture Theory and Criticism. (3)
spring
Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society. Prerequisites: PLA 310, 361, 362, 420, 461.
General Studies: L

PLA 412 Landscape Ecology and Planning. (3)
selected semesters
Reviews the evolution of landscape ecology and landscape planning and examines use and value.

PLA 413 Southwest Landscape Interpretation. (3)
selected semesters
Explores methods and implications of landscape interpretation within the American Southwest.

PLA 420 Theory of Urban Design. (3)
spring
Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models. Prerequisite: junior standing.
General Studies: HU

PLA 446 Landscape Construction III. (3)
spring
Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems. Lecture, studio.

PLA 461 Landscape Architecture V. (4)
fall
Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale. Studio. Fee. Prerequisite: PLA 362.

PLA 462 Landscape Architecture VI. (4)
spring
Advanced landscape architecture: integrative capstone studio with multifaceted design problems. Fee. Prerequisite: PLA 461.

PLA 484 Internship. (3)
fall, spring, summer session 1
Full-time internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit. Prerequisite: school major or instructor approval.

PLA 485 International Field Studies in Planning and Landscape Architecture. (1–12)
fall, spring, summer
Organized field study of planning and landscape architecture in specified international locations. May be repeated for credit with school approval. Study abroad. Cross-listed as PUP 485. Credit is allowed for only PLA 485 or PUP 485.
General Studies: G (a minimum of 3 hours must be taken to fulfill G credit)

PLA 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Plant Materials. (3)

PLA 498 Pro-Seminar. (1–7)
spring
Topics may include the following:
- Professional Senior Seminar. (1)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

URBAN AND ENVIRONMENTAL PLANNING (PUP)

PUP 100 Introduction to Environmental Design. (3)
fall and spring
Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as APH 100/DSC 100. Credit is allowed for only APH 100 or DSC 100 or PUP 100.
General Studies: HU, G, H

PUP 161 Graphic Communication. (3)
fall
Develops drawing skills and understanding of the graphic communication systems used by planning, home building, and landscape architecture professions. Studio. Cross-listed as HUD 161/PLA 161. Credit is allowed for only HUD 161 or PLA 161 or PUP 161.

PUP 200 The Planned Environment. (3)
fall
Environmental, aesthetic, social, economic, political, and other factors influencing urban development.
General Studies: HU, H

PUP 236 Introduction to Computer Modeling. (3)
fall and spring
Fundamentals of computer operation, geographic information systems, geometric modeling of three-dimensional forms and rendering of light, mathematical modeling of processes using spreadsheets. Lab. Prerequisite: major in the College of Architecture and Environmental Design.
General Studies: CS

PUP 261 Urban Planning I. (4)
fall
Planning communication: communication techniques for urban planning and landscape architecture communication. Credit is allowed only for PUP 261 or PLA 261. Prerequisite: PUP 161 (or its equivalent).

PUP 262 Urban Planning II. (4)
spring
Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes. Studio. Prerequisite: PUP 261.

PUP 301 Introduction to Urban Planning. (3)
fall, spring, summer
Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society.
General Studies: L

PUP 322 Computers in Planning. (3)
fall
Planning methods using Geographic Information Systems, database, spreadsheet, image manipulation, and desktop publishing computer software packages. Lecture, lab.

PUP 361 Urban Planning III. (4)
fall
Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. Studio. Fee. Prerequisite: school major or instructor approval.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

PUP 362 Urban Planning IV. (4)
spring
Neighborhood planning: local community plan making; urban development and neighborhood improvement. Studio. Fee. Prerequisite: PUP 361 or instructor approval.

PUP 363 History of Planning. (3)
spring
Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.

PUP 412 History of the City. (3)
fall
The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Cross-listed as APH 414. Credit is allowed for only APH 414 or PUP 412.
General Studies: H

PUP 420 Theory of Urban Design. (3)
spring
Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models. Prerequisite: junior standing.
General Studies: HU

PUP 424 Planning Methods. (4)
fall
Tools useful for urban planning research; emphasizes research design and survey methods. Studio. Prerequisite: PUP 301 or instructor approval.

PUP 425 Urban Housing Analysis. (3)
fall
Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.

PUP 430 Transportation Planning and the Environment. (3)
spring
Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs. Lecture, discussion. Prerequisite: junior standing or instructor approval.

PUP 432 Planning and Development Control Law. (3)
fall
Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation. Prerequisite: admission to upper division or Construction major or instructor approval.

PUP 433 Zoning Ordinances, Subdivision Regulations, and Building Codes. (3)
spring
Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development. Prerequisite: admission to upper division or instructor approval.

PUP 434 Urban Land Economics. (3)
spring
Interaction between space and economic behavior. Examines the use and value of land through economic theories. Prerequisite: admission to upper division or instructor approval.

PUP 436 City Structure and Planning. (3)
spring
Political structure and organization of government as it relates to planning. Prerequisite: PUP 301.

PUP 442 Environmental Planning. (3)
fall
Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise. Field trips. Prerequisite: PUP 301 or instructor approval.

PUP 444 Preservation Planning. (3)
spring
History, theory, and principles of historic preservation. Emphasizes legal framework and methods practiced. Lecture, off-campus field study. Prerequisite: instructor approval.

PUP 445 Women and Environments. (3)
fall
Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples. Prerequisite: admission to upper division or graduate standing.
General Studies: C

PUP 452 Ethics and Theory in Planning. (3)
fall
Ethics and theory of professional planning practice in urban and regional communities. Prerequisite: admission to upper division or instructor approval.
General Studies: L

PUP 461 Urban Planning V. (4)
fall
Comprehensive planning: collection and analysis of economic, social, and environmental data relevant to urban planning; development of land-use plans. Studio. Fee. Prerequisite: PLA 362 or PUP 362 or instructor approval.

PUP 462 Urban Planning VI. (4)
spring
Capstone studio: project focusing on synthesis aspects of plan making. Studio. Fee. Prerequisite: PUP 461 or instructor approval.

PUP 475 Environmental Impact Assessment. (3)
spring
Criteria and methods for compliance with environmental laws; development of skills and techniques needed to prepare environmental impact statements/assessments.

PUP 484 Internship. (1–12)
fall, spring, summer session 1
Full-time internship under the supervision of practitioners in the Phoenix area or other locale. Credit/no credit. Topics may include the following:
- Study Abroad. (3)

Prerequisite: school major or instructor approval.

PUP 485 International Field Studies in Planning and Landscape Architecture. (1–12)
fall, spring, summer
Organized field study of planning and landscape architecture in specified international locations. May be repeated for credit with school approval. Study abroad. Cross-listed as PLA 485. Credit is allowed for only PLA 485 or PUP 485.
General Studies: G (a minimum of 3 hours must be taken to fulfill G credit)

PUP 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Environmental Planning Economics. (3)

PUP 498 Pro-Seminar. (1–7)
fall
Topics may include the following:
- Senior Pro-Seminar. (1)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

W. P. Carey School of Business

www.wpcarey.asu.edu **Larry E. Penley, Ph.D., Dean**

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PURPOSE

The mission of the W. P. Carey School of Business is to expand the knowledge of business and to educate men and women for managerial leadership through research activities and professional educational programs. These programs address issues of importance to future managers in a world characterized by demands for continuous improvements in quality; growing sophistication of information technology; globalized markets; racial, cultural, and gender diversity in the workforce; and a demand for managers with practical, realistic skills.

Students have many opportunities to supplement their academic experiences. The school offers an honors program for academically talented students, an Academic Access Program to assist underrepresented and other targeted students, an international component to provide a variety of international opportunities, an internship program that provides related practical experience, and 18 cocurricular organizations to increase student interaction and learning.

The school is a member of AACSB International—The Association to Advance Collegiate Schools of Business, the official accrediting organization in the field of business. The undergraduate and graduate programs and the School of Accountancy and Information Management are accredited by this organization.

The school is host to a chapter of Beta Gamma Sigma, a national society that recognizes high academic achievement in AACSB International-accredited schools. Selection to Beta Gamma Sigma is the highest scholastic honor a student in business can earn.

In addition to the regular degree curricula, other programs of study in the school are designed to meet special needs. Selected majors are available in the evening, and continuing education courses are conducted for qualified persons who are regularly employed and who otherwise would be unable to enroll in college courses. Short courses and institutes on a noncredit basis are organized in cooperation with various business groups for the furtherance of in-service training of employed personnel.

The school works in partnership with the business community, and the board of the Dean's Council of 100 serves as a primary source of advice and counsel for the school. Through the various divisions of the L. William Seidman Research Institute, the school reaches out to the business community through research and executive education. For more information, access the school's Web site at www.wpcarey.asu.edu.

ORGANIZATION

The courses offered by the W. P. Carey School of Business are organized into groups so that a related sequence may be established for the various subject fields. For administrative purposes, these fields are organized into the following academic units:

School of Accountancy and Information Management
Business Administration (East College)
Department of Economics
Department of Finance
School of Health Administration and Policy
Department of Management
Department of Marketing
Department of Supply Chain Management

ADMISSION

The Prebusiness Program. Each student admitted to the W. P. Carey School of Business is designated as a prebusiness student. The student follows the freshman and sophomore sequence of courses listed in the curriculum outline. Students are required to follow the recommendations of an academic advisor in completing the prescribed background and skill courses in preparation for the subsequent professional program. The skill courses follow.

ACC	230	Uses of Accounting Information I	3
ACC	240	Uses of Accounting Information II	3
CIS	200	Computer Applications and Information Technology *CS*	3

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

ECN 111 Macroeconomic Principles *SB*	3
ECN 112 Microeconomic Principles *SB*	3
Choose between the course combinations below	6 or 3
ENG 101 First-Year Composition (3)	
ENG 102 First-Year Composition (3)	
—or—	
ENG 105 Advanced First-Year Composition (3)	
—or—	
ENG 107 English for Foreign Students (3)	
ENG 108 English for Foreign Students (3)	
MAT 119 Finite Mathematics *MA*	3
MAT 210 Brief Calculus *MA*	3
QBA 221 Statistical Analysis *CS*	3
Total	27 or 30

Accountancy and Computer Information Systems majors should refer to their specific requirements under the "School of Accountancy and Information Management," page 163, which lists variations in the skill courses.

Completion of lower-division requirements does not ensure acceptance to the upper-division professional program. Prebusiness students are not allowed to register for 300- and 400-level business courses.

The Professional Program. The junior and senior years constitute the professional program of the undergraduate curriculum. Admission to the professional program is competitive and limited by available resources. Admission is awarded to those applicants demonstrating the highest promise for professional success.

Students who wish to apply to the W. P. Carey School of Business professional program must submit an application during one of the three annual application periods. Candidates are strongly encouraged to visit the Undergraduate Programs Office, BA 109, at the beginning of the semester in which they wish to apply to pick up information regarding academic qualifications, admissions criteria, and application deadlines. The application can be found on the Web at www.wpcarey.asu.edu/up/up_professional_program.cfm. All applicants must be admitted to ASU by the time they submit their professional program application and must provide their SAT or ACT scores. Students are also required to complete the Business Basics workshop before applying to the professional program.

Nonbusiness Students. A nonbusiness student is permitted to register for selected 300- and 400-level business courses only during online registration and only if, (1) at the time of registration, the student has junior standing (56 semester hours completed) and (2) the student has a minimum cumulative GPA of 2.50 at ASU and a minimum GPA of 2.50 for all business courses completed at ASU. Students who have 56 semester hours completed but have never attended ASU are given a one-semester period to register and to establish a GPA at ASU. Students must meet all prerequisites and course requirements as listed in the catalog. Economics courses have different prerequisites; see the individual economics courses for those requirements (see page 167).

Nonbusiness majors are limited to a maximum of 15 semester hours of selected upper-division business courses (excluding ECN courses).

Bachelor of Interdisciplinary Studies. The W. P. Carey School of Business participates in the Bachelor of Interdisciplinary Studies (B.I.S.) degree. For details about the B.I.S. degree, refer to "Bachelor of Interdisciplinary Studies," page 116.

Minors. Two minors are available to nonbusiness students: a minor in Business and a minor in Small Business. The Small Business minor is offered only at ASU East. To complete the Business minor, students must obtain the requirements from the Undergraduate Programs Office in the W. P. Carey School of Business and complete the specified business courses with a grade of "C" or higher. To complete the Small Business minor, students must obtain the requirements from the ASU East Business Administration program at CNTR 76. Courses used in a student's major may not be used toward a minor. Students are advised to consult an advisor in the colleges of their majors to ensure the proper selection of courses for the minor. The upper-division courses for the minor are restricted to students with 56 hours who are in good standing (a 2.00 ASU GPA or better).

Nondegree Undergraduate and Graduate Students. A nondegree undergraduate or graduate student is permitted to enroll in selected 300- and 400-level business courses only during online registration and only if (1) the student has an ASU cumulative GPA of at least 2.50 and an ASU cumulative business GPA of at least 2.50 at the time of online registration or (2) the student has never attended ASU, in which case he or she is given a one-semester period to register during online registration and to establish a GPA at ASU. Students must meet all prerequisites and course requirements as listed in the catalog. Economics courses have different prerequisites; see the individual economics courses for those requirements (see page 167).

Nondegree undergraduate and graduate students are limited to a maximum of 15 semester hours of selected upper-division business courses (excluding ECN courses).

ADVISING

The student should follow the sequence of courses in the "Curriculum Outline Prebusiness Program," on this page, and the recommendations of the academic advisor in completing the prescribed background and skill courses in preparation for the subsequent professional program.

For more advising information, access the Undergraduate Programs Web site at www.wpcarey.asu.edu/up/index-upo.cfm.

Curriculum Outline Prebusiness Program

First Year

First Semester	
ECN 111 Macroeconomic Principles *SB*	3
or ECN 112 Microeconomic Principles *SB* (3)	
ENG 101 First-Year Composition	3
or ENG 107 English for Foreign Students (3)	
MAT 210 Brief Calculus *MA*	3
General Studies	3
PGS or SOC course	3
Total	15

Second Semester

COM	100 Introduction to Human Communication *SB*	3
	or COM 225 Public Speaking *L* (3)	
	or COM 230 Small Group Communication *SB* (3)	
	or COM 259 Communication in Business and the Professions (3)	
ECN	112 Microeconomic Principles *SB*	3
	or ECN 111 Macroeconomic Principles *SB* (3)	
ENG	102 First-Year Composition	3
	or ENG 108 English for Foreign Students (3)	
MAT	119 Finite Mathematics *MA*	3
Laboratory science *SQ*		4
Total		16

Second Year

Third Semester

ACC	230 Uses of Accounting Information I	3
QBA	221 Statistical Analysis *CS*	3
General Studies		3
Laboratory science *SQ/SG*		4
PGS or SOC course		3
Total		16

Fourth Semester

ACC	240 Uses of Accounting Information II	3
CIS	200 Computer Applications and Information Technology *CS*	3
General Studies		9
Total		15
Prebusiness program total		62

Accountancy and Computer Information Systems majors should refer to their specific course requirements under the "School of Accountancy and Information Management," page 163, which lists course requirement variations. Management majors should refer to their specific course requirements under the "Department of Management," page 172.

Students are encouraged to have College Algebra (MAT 117) proficiency before registering in ECN 111 and 112. ECN 111 and 112 may be taken during the second and third semesters without any delay in the prebusiness program.

Professional Program. Students admitted to the professional program should select the necessary upper-division business courses to complete the major by consulting their departmental advising guide, with an academic advisor, or with a faculty advisor. Professional program students must complete BUS 301, COB 301, and SCM 300 during their first semester in the professional program. Accountancy and Management students substitute ENG 301 for BUS 301.

Transfer Credit. Credit from other institutions is accepted subject to the following guidelines. Students planning to take their first two years of work at a community college or another four-year college should take only those courses in business and economics that are offered as freshman- or sophomore-level courses at any of the state-supported Arizona universities. These lower-division courses are numbered 100 through 299. *A maximum of 30 hours of business and economics courses from community colleges are accepted toward a bachelor's degree in business.*

Students may transfer a maximum of nine semester hours of approved upper-division business course work required for the business degree to ASU Main. Professional business courses taught in the junior or senior year in the state universities may not be completed at a two-year college for transfer credit in the business core or major. The introductory course in the legal, ethical, and regulatory issues in business is accepted as an exception to this policy, but only lower-division credit is granted. Such courses may be utilized in the free elective category subject to the 30-hour limitation. Courses taught as vocational or career classes at the community colleges that are not taught in the schools of business at any one of the state universities are not accepted for credit toward a bachelor's degree. Courses taught in the upper-division business core at the state universities must be completed at the degree-granting institution unless transferred from an accredited four-year school. Normally, upper-division transfer credits are accepted only from AACSB International-accredited schools. To be accepted for credit as part of the professional program in business, all courses transferred from other institutions must carry prerequisites similar to those of the courses they are replacing at ASU.

An Associate in Transfer Partnership degree is available to Maricopa community college students who wish to complete their first two years of course work at a Maricopa community college and transfer to the W. P. Carey School of Business without loss of credit. An Associate of Business degree is available to students who wish to complete their first two years of course work at an Arizona community college and transfer to the W. P. Carey School of Business without loss of credit. Students should consult with an academic advisor in the Undergraduate Programs Office to plan curriculum requirements and/or access Business Transfer Guides for optimal course selection at www.asu.edu/provost/articulation.

DEGREES

The faculty in the W. P. Carey School of Business offer the B.S. degree in Accountancy, Business Administration (East Campus), Computer Information Systems, Economics, Finance, Management, Marketing, Real Estate, and Supply Chain Management upon successful completion of a four-year curriculum of 120 semester hours. Students may select one of the majors shown in the "W. P. Carey School of Business Baccalaureate Degrees and Majors" table, page 158. Each major is administered by the academic unit indicated.

GRADUATE PROGRAMS

The faculty in the W. P. Carey School of Business offer graduate degrees as shown in the "W. P. Carey School of Business Graduate Degrees and Majors" table, page 159. Students have the opportunity to obtain dual degrees in two years with several master's degree programs in the

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

W. P. Carey School of Business Baccalaureate Degrees and Majors

Major	Degree	Concentration	Administered By
Accountancy	B.S.	—	School of Accountancy and Information Management
Business Administration	B.S.	—	East College
Computer Information Systems	B.S.	—	School of Accountancy and Information Management
Economics*	B.S.	—	Department of Economics
Finance	B.S.	—	Department of Finance
Management	B.S.	—	Department of Management
Marketing	B.S.	—	Department of Marketing
Real Estate	B.S.	—	Department of Supply Chain Management
Supply Chain Management	B.S.	—	Department of Supply Chain Management

* This major is offered by the College of Liberal Arts and Sciences as well, with different requirements.

W. P. Carey School of Business, including these examples:

M.B.A./M.A.I.S.
M.B.A./M.H.S.A.
M.B.A./M.S. degree in Information Management
M.B.A./M.S. degree in Economics
M.B.A./M.Tax.

Other concurrent degrees available are as follows:

M.B.A./J.D.
M.B.A./M.Arch.
M.B.A./M.I.M. with American Graduate School of International Management (Thunderbird), Glendale, AZ; Graduate School of Business Administration (Peru); Graduate School of Commerce (France); Monterrey Institute for Technical and Superior Studies, Mexico State Campus (Mexico); and Carlos III University of Madrid (Spain)

In addition to the full-time W. P. Carey M.B.A., the school of business offers the Evening M.B.A. and the Technology M.B.A. The Executive M.B.A. is available to those with significant work experience.

For more information about the W. P. Carey M.B.A. program, see the *Graduate Catalog.*

ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and beyond. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges, including the W. P. Carey School of Business, to meet the instructional and informational needs of a diverse community.

The ASU Extended Campus goes beyond the boundaries of the university's three physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies including television, the Internet, and Independent Learning. The Extended Campus also offers a variety of professional continuing education and community outreach programs.

For more information, see "ASU Extended Campus," page 671, or access the Web site at www.asu.edu/xed.

UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling school and major requirements, students must meet all university graduation requirements. For more information, see "University Graduation Requirements," page 81.

General Studies Requirement

All students enrolled in a baccalaureate degree program must satisfy a university requirement for a minimum of 35 hours of approved course work in General Studies, as described under "General Studies," page 85. Note that all three General Studies awareness areas are required.

General Studies courses are listed in the "General Studies Courses" table, page 88, in the course descriptions, in the *Schedule of Classes,* and in the *Summer Sessions Bulletin.*

First-Year Composition Requirement

Completion of both ENG 101 and 102 or ENG 105 with a grade of "C" or higher is required for graduation from ASU in any baccalaureate program.

SCHOOL DEGREE REQUIREMENTS

School degree requirements supplement the General Studies requirement with additional course work from the approved university general studies list or the W. P. Carey School of Business Policy Statement. Business courses may not be used to fulfill school degree requirements except for ECN 111 and 112 and QBA 221.

A well-planned program of study may enable students to complete many General Studies and school degree requirements concurrently. Students are encouraged to consult with an academic advisor in planning a program to ensure that they comply with all necessary requirements.

Specific courses from the following areas must be taken to fulfill the school degree requirements.

Social and Behavioral Sciences. W. P. Carey School of Business students must complete ECN 111 and 112, one course with the PGS prefix, and one course with the SOC prefix and may include these courses toward the General Studies requirements.

Mathematical Studies. W. P. Carey School of Business students must complete MAT 119 and MAT 210 (or a more advanced MAT course) and QBA 221 and may include these courses toward the General Studies requirements.

W. P. Carey School of Business Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Accountancy and Information Systems	M.A.I.S.	—	School of Accountancy and Information Management
Business Administration	M.B.A.	—	W. P. Carey School of Business
	Ph.D.	Accountancy, computer information systems, finance, health services research,[1] management, marketing, supply chain management	W. P. Carey School of Business
Economics	M.S., Ph.D.	—	Department of Economics
Health Services Administration	M.H.S.A.	—	School of Health Administration and Policy
Information Management	M.S.	—	School of Accountancy and Information Management
Public Health[2]	M.P.H.	Community health practice,[3] health administration and policy	School of Health Administration and Policy
Statistics[4]	M.S.	—	Committee on Statistics
Taxation	M.Tax.	—	School of Accountancy and Information Management

[1] Applications are not being accepted at this time.

[2] This collaborative program is offered by the three state universities. Another concentration is offered by the College of Nursing.

[3] This concentration is administered by the College of Nursing.

[4] This program is administered by the Graduate College.

Communication. All students in the W. P. Carey School of Business except Accountancy and Management majors must complete COM 100, 225, 230, or 259. Accountancy majors must complete COM 230 (or 100) and 259. Management majors must complete COM 225 (or 259).

Additional Courses. Additional courses, as needed to complete 60 hours (54 hours for Accountancy majors), may be selected from the General Studies areas (see "General Studies," page 85) or from the W. P. Carey School of Business Policy Statement. Students are encouraged to consult with an academic advisor to ensure that they comply with all necessary requirements. Business courses may not be used to fulfill this requirement except for ECN 111 and 112 and QBA 221.

Additional Graduation Requirements

In addition to completion of courses outlined under "Major Requirements," on this page, to be eligible for the B.S. degree in the W. P. Carey School of Business, a student must

1. have completed at least 30 semester hours at ASU Main;
2. have attained a cumulative GPA of 2.00 or higher for all courses taken at this university, for all business courses taken at this university, and for all courses for the major taken at this university;
3. have earned a "C" or higher in each lower-division core and skill course and each course in the major;
4. have earned a minimum of 51 semester hours in traditional courses that were designed primarily for junior or senior students and were completed in an accredited, four-year institution; and
5. have met all university degree requirements.

Exceptions. Any exception to these requirements must be approved by the Standards Committee of the W. P. Carey School of Business.

Declaration of Graduation. A student in a professional program must complete a Declaration of Graduation during the semester in which the student completes 87 semester hours. The Degree Audit Reporting System should be used to guide the student in accomplishing successful completion of degree requirements in a timely manner. Students who have not met this requirement are prevented from further registration. Some students may be required to complete a Program of Study in place of the Declaration of Graduation. Students should consult their advisors for the proper procedure.

Pass/Fail

Business majors may not include among the credits required for graduation any courses taken at this university on a pass/fail basis. Pass/fail credits taken at another institution may be petitioned for use, but only if the student can demonstrate proof that the pass grade was equivalent to a "C" or higher.

MAJOR REQUIREMENTS

Students seeking a B.S. degree in the W. P. Carey School of Business must satisfactorily complete a curriculum of 120 semester hours.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

A major consists of a pattern of 18 to 24 semester hours in related courses falling primarily within a given subject field. Available majors are shown in the "W. P. Carey School of Business Baccalaureate Degrees and Majors" table, page 158.

Major Proficiency Requirements. Students must receive grades of "C" or higher in upper-division courses for the major. If a student receives a grade below "C" in any course in the major, this course must be repeated. If a second grade below "C" is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in that major. University policy states a course may be repeated only one time.

Business Core Requirements

The business core is designed to provide an understanding of the fundamentals of business and to develop a broad business background. The faculty designed the core to cover the impact of information technology and e-business practices on business. By educating and training students in the use of data-driven decision-making tools and applications software, the school provides greater opportunity for its students. All students seeking a B.S. degree in the W. P. Carey School of Business complete the core courses.

The lower-division business core courses provide the fundamental skills needed in professional program courses and introduce students to the supply chain, business processes, and enterprise solutions software in addition to technology skills such as Excel and Access.

Lower-Division Business Core

ACC	230	Uses of Accounting Information I	3
ACC	240	Uses of Accounting Information II	3
CIS	200	Computer Applications and Information Technology *CS*	3
Lower-division business core total			9

The upper-division business core provides an enhanced understanding of the digital economy, e-business, and business processes in addition to increasing content knowledge and other skills.

Upper-Division Business Core

BUS	301	Fundamentals of Management Communication *L* (first semester)	3
COB	301	Business Forum (first semester)	1
FIN	300	Fundamentals of Finance	3
LES	305	Legal, Ethical, and Regulatory Issues in Business	3
MGT	300	Organizational Management and Leadership	3
MKT	300	Principles of Marketing	3
SCM	300	Global Supply Operations	3
International business course			3
Upper-division business core total			22
Business core total			31

Accountancy, Computer Information Systems, and Management majors should refer to their specific requirements under the "School of Accountancy and Information Management," page 163, and "Department of Management," page 172, which lists variations in the business core courses.

Elective Courses

Sufficient elective courses are to be selected by the student to complete the total of 120 semester hours required for graduation.

ACADEMIC STANDARDS

Probation. All business students, freshman through senior, must maintain a minimum GPA of 2.00 for all courses completed at ASU. If these standards are not maintained, the student is placed on probation. Students on probation must see an advisor before further registration.

Students on probation must obtain a semester GPA of 2.50 with no grade lower than a "C." If a student on probation meets this requirement, but the cumulative GPA remains below 2.00, the student is given an additional semester on continued probation. At the end of continued probation, the student must return to good standing (a GPA of 2.00) to avoid disqualification.

Disqualification. Students who do not meet probation requirements are academically disqualified. Disqualified students should meet with an academic advisor. These students may attend ASU during summer and winter sessions; however, they are not eligible to enroll in upper-division business courses.

Reinstatement and Readmission. Students seeking reinstatement (after disqualification) or readmission (after an absence from the university) should contact the Undergraduate Programs Office regarding procedures and guidance for returning to good standing.

Academic Dishonesty. The faculty of the W. P. Carey School of Business follow the guidelines in the Student Academic Integrity Policy on academic dishonesty. A copy of the policy may be obtained in the Undergraduate Programs Office.

Student Appeal Procedure on Grades. The faculty of the W. P. Carey School of Business have adopted a policy on the student appeal procedure on grades. A copy of the policy may be obtained in the Undergraduate Programs Office.

SPECIAL PROGRAMS

Academic Access Program. The primary mission of the Academic Access Program (AAP) is to assist W. P. Carey School of Business underrepresented and first generation college students in having successful college experiences. AAP advises student business organizations; offers seminars and workshops on study, work issues, and academic success strategies; and refers students to other campus support offices.

For more information, visit BA 127, call 480/965-4066, or access the AAP Web site at www.wpcarey.asu.edu/aap.

Asian Studies. Students in the W. P. Carey School of Business may pursue a program with an emphasis in Asian studies as part of the B.S. degree requirements in business. For more information, visit the Center for Asian Studies, in WHALL 105, or call 480/965-7184.

Certificate in Dealership Management. The Certificate in Dealership Management is available only to business majors at ASU. This certificate program provides students with the knowledge and basic skills necessary to enter careers in automotive dealership management. These skills include hiring and managing personnel and teams, understanding consumers and human behavior, managing financing and cash flows, handling the demand chain for car inventory, managing customer service operations, and managing new and used car marketing efforts.

Students are required to complete a bachelor's degree from the ASU W. P. Carey School of Business and complete a minimum of 15 semester hours of approved course work, including the following six hours:

COB 494 Special Topics 1–3
MGT 494 ST: Dealership Management 3
or MKT 494 ST: Dealership Management (3)

To complete the certificate the student selects at least nine additional hours of business courses, including a three-semester-hour internship. Courses must be approved in advance by the faculty advisor for the certificate program. The student must complete the 15 semester hours of course work with grades of "C" or higher.

To assist students toward gaining a quality experience, space in the Certificate in Dealership Management program is limited and based on available resources. Professional program students must submit an application. Admission criteria include GPA, career goals, and application materials.

For more information, call 480/965-9640, visit BA 109, or access the Web site at www.wpcarey.asu.edu/dealership.

Certificate in Small Business and Entrepreneurship. A certificate in Small Business and Entrepreneurship is available to only business majors at ASU. The certificate requires 15 semester hours of classes, of which the following six semester hours must be included:

MGT 440 Small Business and Entrepreneurship 3
MGT 445 Business Plan Development 3

The remaining nine semester hours consist of three additional upper-division courses relevant to small business. A copy of the approved electives for business majors pursuing the Certificate in Small Business and Entrepreneurship is available in the Undergraduate Programs Office. To receive the certificate, students must complete the specified business courses with a grade of "C" or higher.

Certificate in International Business Studies. See "Certificate in International Business Studies," page 171, for requirements.

Certificate in Quality Analysis. The program of study leading to the Certificate in Quality Analysis prepares students to perform technical analyses associated with quality measurement and improvement of manufacturing and service processes. Graduates with the ability to implement these analyses are in high demand in the marketplace. This program is not a substitute for the listed areas of business specialization; rather, the courses required for the certificate add quantitative strength and implementation skills for quality tools to the student's chosen field of specialization.

Students are required to complete a minimum of 15 semester hours of approved course work, including the following nine hours:

OPM 450 Changing Business Processes *L* 3
QBA 321 Applied Quality Analysis I 3
QBA 421 Applied Quality Analysis II 3

To complete the certificate, the student selects at least six additional hours of course work related to quality analysis approved in advance by the advisor for the certificate program. The student must also complete the 15 hours of course work with a minimum GPA of 2.50.

B.I.S. Concentration. A concentration in quality analysis is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 116.

Business Honors. W. P. Carey School of Business students who have been admitted to the Barrett Honors College are eligible to participate in the Business Honors program.

The Business Honors program provides opportunities for academically talented undergraduate business students to interact with other leading students, faculty, and business professionals inside and outside the classroom. The result is a challenging and enriched education experience that is valuable for professional career or graduate work.

To be admitted to the Business Honors program, students must meet the following criteria:

1. be enrolled in the Barrett Honors College,
2. have a cumulative GPA of 3.40 or higher, and
3. have sufficient time to complete the honors requirements.

Upon acceptance into the program, a valuable learning experience begins. The honors course work consists of HON 171 and 172 The Human Event or HON 394 Special Topics and an additional 18 semester hours of upper-division honors courses, including the following six semester hours:

COB 492 Honors Directed Study 2
COB 494 ST: Honors Research 1
Honors Thesis* 3

* See "Honors Courses," page 57, for an explanation of this course.

The ASU Honors Curriculum normally allows students to complete all requirements within the 120 semester hours of credit required for graduation. All courses taken for honors

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

credit count toward graduation even if the student does not graduate from the Barrett Honors College.

The Business Honors program emphasizes activities beyond the normal classroom setting in order to broaden the educational experience. Such activities include special honors scholarships, student/faculty mixers, professional seminars and panel discussions, and the Global Business Series with the opportunity for international travel. Students are also encouraged to participate in the Mentoring Program, which allows students the opportunity to interact with local business professionals.

An academic advisor is assigned strictly to assist honors students in course selection, to monitor progress toward the honors recognition, and to be actively involved in career and educational guidance upon completion of the degree.

While the program focuses on students in the professional program, freshman and sophomore honors students are offered break-out sections in core classes, are invited to attend selected events, and can be assigned a junior or senior honors mentor. Prebusiness students should plan to meet with the honors advisor.

For more information, see "The Barrett Honors College," page 120, visit the Business Honors Program Office in BA 150, call 480/965-8710, or access the Business Honors program Web site at www.wpcarey.asu.edu/honors. Faxes may be sent to 480/727-7277.

Rodel Community Scholars. With the establishment of the Rodel Community Scholars Program, the ASU W. P. Carey School of Business greatly expands its effort to produce civic-minded business leaders for the Phoenix metropolitan area and Arizona. The program focuses the energy and intellect of ASU business honors students and their business faculty advisors on a substantial challenge: developing and implementing strategies to assist high-potential, at-risk students in three Valley high schools to graduate from ASU.

Internships. The school encourages students to complement their academic program with career-related work. This practical experience gives students a distinct advantage in the job market when seeking their first full-time professional positions. Additional benefits include industry contacts, a deeper understanding of career options, and monetary compensation that helps students finance their education.

Formal internships and co-ops offer professional work experience and experiential learning opportunities that enrich the student's academic preparation. Students may undertake internships in the summer or part-time during semesters. Co-op positions are full-time and require a one-semester or longer break in school attendance. The school provides guidelines to companies and encourages them to sponsor internship and co-op positions that benefit both the firm and the student. Both benefit because positions are built around projects and challenging responsibilities that enable students to apply learning acquired in advanced business classes.

ASU Career Services and the W. P. Carey School of Business work cooperatively to help students identify and obtain career-related work. The process of obtaining internships and co-ops is a learning opportunity. Students use the same job-search skills and resources that are utilized to obtain permanent career positions. Informational materials, workshops, and required class activities help students learn job-search and career-exploration skills and locate internship and co-op opportunities.

Some academic units within the school offer internship courses. Work assignments for these courses must be approved in advance by a designated faculty member, and all internship courses include an academic component. Limited numbers of international internship opportunities are available through the school's foreign partner institutions. Eligibility for these internships may require the student to participate in an exchange with the partner institutions or to pay additional fees.

For more information, call 480/965-4227, visit BA 109, or faculty advisors in the departments or Career Services, or access the school Web site at www.wpcarey.asu.edu/up/internship.cfm. Students interested in international internships should call 480/965-0596.

Latin American Studies Center. Students in the W. P. Carey School of Business may pursue a program with an emphasis in Latin American area studies. For more information, visit the Latin American Studies Center, in SS 213, or call 480/965-5127.

Prelaw Studies. Prelaw students may pursue a program of study in the W. P. Carey School of Business. Courses in accounting, economics, finance, insurance, labor relations, and statistics are recommended for any student planning to enter the legal profession.

The admission requirements of colleges of law differ considerably. The student should communicate with the dean of the law school the student hopes to attend and should plan a program to meet the requirements of that school. Most law schools, including the ASU College of Law, require a baccalaureate degree for admission.

Students who plan to complete a bachelor's degree before entering law school may follow any field of specialization in the W. P. Carey School of Business. Within the W. P. Carey School of Business are faculty members who are lawyers and who serve as advisors for students desiring a prelaw background.

RESEARCH CENTERS

L. William Seidman Research Institute

The school has seven research centers operating under the umbrella of the L. William Seidman Research Institute. These centers provide support for faculty research, give opportunities for advanced graduate students' involvement with faculty, and provide information and assistance to the business community on a wide variety of subjects:

Arizona Real Estate Center
Bank One Economic Outlook Center
Center for Advanced Purchasing Studies
Center for the Advancement of Small Business
Center for Business Research
Center for Services Leadership
Institute for Manufacturing Enterprise Systems

The institute's mission is to encourage and support applied business research by serving as a public access point

to the W. P. Carey School of Business, by supporting faculty and student research, by transferring new knowledge to the public, by encouraging the development of education programs grounded in applied business research, and by conducting high-quality, applied business research.

The institute increases the level of funded research by adding support services to facilitate grant preparation and assistance in grant administration and by facilitating the mission of research centers as liaisons between faculty and businesses. In addition, the institute provides desktop publishing services.

For more information, call 480/965-5362, access the institute's Web site at www.wpcarey.asu.edu/seid, or write

L. WILLIAM SEIDMAN RESEARCH INSTITUTE
PO BOX 874011
TEMPE AZ 85287-4011

SCHOOL OF BUSINESS (COB)

COB 194 Special Topics. (1–4)
selected semesters

COB 294 Special Topics. (1–4)
selected semesters

COB 301 Business Forum. (1)
fall, spring, summer
Provides professional program business students with information on careers, interviewing, job hunting, and résumé skills. Must be taken in the first semester of the professional program for business students. Prerequisite: professional program business student.

COB 380 Small Business Leadership. (3)
fall, spring, summer
Develops leadership skills needed to form, lead, and operate a small business. Emphasizes creating a vision, research, and problem solving. Team teaching, collaborative learning. Prerequisites: 2.00 GPA; 47 hours; non-business major.

COB 381 Small Business Accounting and Finance. (3)
fall and spring
Accounting and finance skills needed by small business owners to acquire, allocate, and track monetary resources and evaluate performance. Team teaching, collaborative learning. Prerequisites: COB 380; 2.00 GPA; 56 hours; non-business major.

COB 382 Small Business Sales and Market Development. (3)
fall and spring
Building and maintaining customers, developing a market identity and a niche, and the importance of sales. Team teaching, collaborative learning. Prerequisites: COB 380; 2.00 GPA; 56 hours; non-business major.

COB 383 Small Business Working Relationships. (3)
fall and spring
Addresses communication and the people in a business—clients, employees, suppliers, competitors, governments, family, and self development. Team teaching, collaborative learning. Prerequisites: COB 380; 2.00 GPA; 56 hours; non-business major.

COB 384 Small Business Operations and Planning. (3)
fall and spring
Planning and executing plans—the what, when, where, how, and who from product/service/project idea to pay back or completion. Team teaching, collaborative learning. Prerequisites: COB 380; 2.00 GPA; 56 hours; non-business major.

COB 394 Special Topics. (1–4)
fall and spring

COB 492 Honors Directed Study. (2)
fall and spring

COB 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Honors Research. (1)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

School of Accountancy and Information Management

www.wpcarey.asu.edu/acct
480/965-3631
BA 223

Professors: J.R. Boatsman, Christian, Goul, Gupta, Johnson, Kaplan, Pany, Pei, Philippakis, Reckers, Roy, Schultz, Smith, St. Louis, Steinbart, Vinze, Wyndelts

Associate Professors: David, Golen, Hwang, Iyer, Keim, Kulkarni, O'Dell, O'Leary, Regier, Whitecotton

Assistant Professors: Chen, Chenoweth, Comprix, Demirkan, Dowling, Lee, O'Donnell, Petersen, Ravindran, Robinson, Roussinov, Rowe, Santanam, Shao, Weiss

Senior Lecturers: Goldman, Maccracken, Shrednick

Lecturers: J.L. Boatsman, Geiger, Hayes, Wigal

The School of Accountancy and Information Management houses separate undergraduate degree programs in Accountancy and Computer Information Systems. The school also offers a dual degree program in which students complete requirements for both degree programs (Accountancy and Computer Information Systems) simultaneously. For more information, access the school's Web site at www.wpcarey.asu.edu/acct.

ADMISSION

The School of Accountancy and Information Management follows the W. P. Carey School of Business policies and procedures for admission to its undergraduate professional programs in Accountancy, Computer Information Systems, and the concurrent degree program of Accountancy and Computer Information Systems.

To be considered for admission to the Accountancy major, a student must meet the W. P. Carey School of Business admission requirements, and have a grade of "C" or higher in an introductory computer programming course as specified by the school. CIS 220 or its equivalent is taken in place of CIS 200.

To be considered for admission to the Computer Information Systems major, a student must meet the W. P. Carey School of Business admission requirements and have a grade of "C" or higher in an introductory computer science course as specified by the school. CSE 181 or its equivalent is taken in place of CIS 200.

Due to resource limitations, admission to all of the school's programs is very competitive. Approximately one

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

third of all applicants who apply to the professional programs in Accountancy and Computer Information Systems may be admitted. Applicants are reviewed using a portfolio approach. Among the factors considered are cumulative GPA, skill course GPA, transfer GPA and institution (if applicable), work experience, demonstrated community involvement and leadership skills, and responses to questions located in the professional program application. Current admission statistics are available at the Undergraduate Programs Office in the W. P. Carey School of Business.

ACCOUNTANCY—B.S.

The major in Accountancy includes the essential academic preparation for students who are

1. pursuing professional careers in public, corporate, and governmental accounting;
2. seeking positions in personal financial planning and portfolio analysis;
3. seeking positions in consulting;
4. planning to operate their own businesses; or
5. planning to pursue a graduate degree or attend law school.

The major in Accountancy consists of the following courses:

ACC	330 Enterprise Process Analysis and Design	4
ACC	340 External Reporting I	4
ACC	350 Internal Reporting	4
ACC	430 Taxes and Business Decisions *L*	4
ACC	440 External Reporting II	4
ACC	450 Principles of Auditing	4
Total		24

As part of the requirements, all Accountancy majors must complete the following courses:

ACC	250 Introductory Accounting Lab	1
CIS	220 Programming Concepts for Accountancy Majors[1]	3
CIS	360 Business Database Concepts	3
CIS	425 Electronic Commerce Strategy	3
COM	100 Introduction to Human Communication[2] *SB*	3
	or COM 230 Small Group Communication *SB* (3)[2]	
COM	259 Communication in Business and the Professions	3
ECN	306 Survey of International Economics *SB*, *G*[3]	3
ENG	301 Writing for the Professions *L*[4]	3
Total		22

[1] CIS 220 is used in the business core in place of CIS 200.

[2] COM 230 is recommended over COM 100.

[3] ECN 306 is counted in the business core in place of the international business course.

[4] ENG 301 is counted in the business core in place of BUS 301.

Accountancy majors must complete three CIS courses approved by the School of Accountancy and Information Management (one of these courses must be CIS 220 Programing Concepts for Accountancy Majors, which is included within the business core).

COMPUTER INFORMATION SYSTEMS—B.S.

The major in Computer Information Systems prepares students for professional careers involving the analysis, configuration, programming, and database aspects of the design and implementation of computerized business information systems. The course work prepares the student for a career in business information systems and for admission to graduate programs in information systems or information management.

The major in Computer Information Systems consists of the following courses:

ACC	330 Enterprise Process Analysis and Design	4
CIS	340 Object-Oriented Modeling and Programming	3
CIS	360 Business Database Concepts	3
CIS	425 Electronic Commerce Strategy	3
CIS	430 Networks and Distributed Systems	3
CIS	440 Systems Design and Electronic Commerce *L*	3
Total		19

All Computer Information Systems majors must complete an introductory computer science course as specified by the school, which may be used as a school of business requirement, and CIS 235 Business Information Systems Development, which is used in the business core.

MAJOR PROFICIENCY REQUIREMENTS

In addition to school of business and university requirements, Accountancy and Computer Information Systems majors must receive grades of "C" or higher in the required upper-division major and major support courses. If a student receives a grade below "C" in any required upper-division major course, this course must be repeated before any other upper-division major course can be taken. If a second grade below "C" is received in either an upper-division major course already taken or in a different upper-division major course, the student is no longer eligible to take additional upper-division major courses.

GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and school requirements. See "University Graduation Requirements," page 81, and "School Degree Requirements," page 158.

ACCOUNTANCY (ACC)

ACC 230 Uses of Accounting Information I. (3)
fall, spring, summer
Introduces the uses of accounting information focusing on the evolution of the business cycle, including hands-on exposure to enterprise systems. Fee. Prerequisite: sophomore standing.

ACC 240 Uses of Accounting Information II. (3)
fall, spring, summer
Introduces the uses of accounting information focusing on the evolution of the business cycle, including hands-on exposure to enterprise systems. Prerequisites: ACC 230; sophomore standing.

ACC 250 Introductory Accounting Lab. (1)
fall, spring, summer
Procedural details of accounting for the accumulation of information and generation of reports for internal and external users. Lab. Fee. Prerequisites: ACC 230; sophomore standing.

ACC 315 Financial Accounting and Reporting. (3)
fall and spring
Accounting theory and practice related to uses of financial statements by external decision makers. Prerequisite: non-Accountancy major. Prerequisites with a grade of "C" or higher: ACC 240, 250.

ACC 316 Management Uses of Accounting. (3)
fall and spring
Uses of accounting information for managerial decision making, budgeting, and control. Prerequisites: ACC 240; non-Accountancy major.

ACC 330 Enterprise Process Analysis and Design. (4)
fall, spring, summer
Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making. Fee. Prerequisite: professional program business student majoring in Accountancy or Computer Information Systems.

ACC 340 External Reporting I. (4)
fall, spring, summer
Financial accounting theory and practice related to external reporting. Fee. Prerequisites: FIN 300; professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 250.

ACC 350 Internal Reporting. (4)
fall, spring, summer
Internal reporting systems for planning, control, and decision making. Prerequisites: SCM 300; professional program business student majoring in Accountancy. Prerequisites with a grade of "C" or higher: ACC 250, 330.

ACC 394 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Financial Analysis and Accounting for Small Businesses. (3)

ACC 430 Taxes and Business Decisions. (4)
fall, spring, summer
Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions. Prerequisites: LES 305; professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 340.
General Studies: L

ACC 432 Problems in Managerial Accounting. (3)
selected semesters
Cases and computer applications in decision making, planning and control, and capital budgeting. Prerequisite: professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 350.

ACC 440 External Reporting II. (4)
fall, spring, summer
Continuation of ACC 340 with emphasis on the recognition, research, and resolution of financial reporting issues. Prerequisite: professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 340.

ACC 450 Principles of Auditing. (4)
fall and spring
Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations. Fee. Prerequisite: professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 440.

ACC 467 Management Advisory Services. (3)
selected semesters
Concepts and methods of providing advisory services with respect to accounting information systems and financial analysis. Administration of consulting practices. Prerequisite: professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 330.

ACC 494 Special Topics. (1–4)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

COMPUTER INFORMATION SYSTEMS (CIS)

CIS 200 Computer Applications and Information Technology. (3)
fall, spring, summer
Introduces business information systems and the uses of business application software with emphasis on database and spreadsheet packages. Fee. Prerequisite: MAT 117 or higher.
General Studies: CS

CIS 220 Programming Concepts for Accountancy Majors. (3)
fall, spring, summer
Introduces business computer programming. Uses programming languages such as Visual BASIC to teach proper programming style and practice. Fee. Prerequisite: prebusiness student.

CIS 235 Business Information Systems Development. (3)
fall, spring, summer
Developing information systems and electronic commerce applications using object-oriented languages (e.g., Java). Introduces business technology and systems analysis. Fee. Prerequisites: CSE 181; MAT 119 (or 210).

CIS 300 Computers in Business. (3)
selected semesters
Introduces information systems in business. Use of computers for business problem solving. Prerequisites: CIS 200; professional program business student.

CIS 335 Visual Paradigms for Information Systems Development. (3)
selected semesters
Uses visual programming languages such as Visual BASIC to implement data structures, file structures, and interfaces in business information systems. Fee. Prerequisites: both CSE 100 and professional program business student majoring in Computer Information Systems or both CIS 220 and professional program business student majoring in Accountancy.

CIS 340 Object-Oriented Modeling and Programming. (3)
fall and spring
Object-oriented modeling of business information systems. Abstract data types and object-oriented programming using a language such as Java. Fee. Prerequisite: professional program business student majoring in Computer Information Systems. Prerequisite with a grade of "C" or higher: CIS 235.

CIS 360 Business Database Concepts. (3)
fall and spring
Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages. Fee. Prerequisite: professional program business student majoring in Computer Information Systems or Accountancy. Prerequisite with a grade of "C" or higher: ACC 330.

CIS 394 Special Topics. (1–4)
selected semesters
See current *Schedule of Classes* for offerings of courses at ASU East.

CIS 425 Electronic Commerce Strategy. (3)
fall and spring
Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases. Prerequisite: professional program business student majoring in Computer Information Systems or Accountancy. Prerequisite with a grade of "C" or higher: CIS 360.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

CIS 430 Networks and Distributed Systems. (3)
fall and spring
Advanced topics such as communications protocols, distributed systems, and client-server systems; applications based on platforms such as networked UNIX. Fee. Prerequisites with a grade of "C" or higher: ACC 330; CIS 340; professional program business student majoring in Computer Information Systems. Pre- or corequisite with a grade of "C" or higher: CIS 360.

CIS 440 Systems Design and Electronic Commerce. (3)
fall and spring
Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools. Fee. Prerequisites with a grade of "C" or higher: CIS 360, 430; professional program business student majoring in Computer Information Systems.
General Studies: L

CIS 494 Special Topics. (1–4)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

Business Administration

www.east.asu.edu/ecollege/businessadmin
480/727-1515
CNTR 76

Roger W. Hutt, Faculty Head

The primary focus of the Business Administration degree program is the fundamental functions and activities performed in for-profit as well as not-for-profit organizations. The curriculum enables students to gain essential business competencies, knowledge of business disciplines and methods, and appreciation for contemporary business environments and cultures. Students are provided opportunities for additional depth in areas of their choosing. Students are prepared for careers in which a broad background and general knowledge in the field of business are requirements. Graduates may choose to enter one of the areas of business or industry for which their emphasis on business fundamentals has prepared them, to start their own businesses, or to pursue careers with local, state, or federal government. Some graduates choose to continue their education by enrolling in graduate programs or law school.

BUSINESS ADMINISTRATION—B.S.

Requirements for the Business Administration major consist of 30 semester hours of lower-division core and skill courses, 22 semester hours of upper-division core courses, a three hour capstone course, and 18 semester hours of approved electives. All of the upper-division business courses (with the exception of nine semester hours) must be taken at ASU East.

Business Administration Core

E BUS	394	ST: Professional Development	1
E FIN	300	Fundamentals of Finance	3
E IBS	300	Principles of International Business *G*	3
E LES	305	Legal, Ethical, and Regulatory Issues in Business	3
E MGT	300	Organizational Management and Leadership	3
E MKT	300	Principles of Marketing	3
E SCM	300	Global Supply Operations	3
E TWC	447	Business Reports *L*	3
Total			22

Capstone Course

E MGT	440	Small Business and Entrepreneurship	3
		or E MGT 460 Strategic Leadership (3)	
Total			3

Approved Electives. Students select 18 semester hours of electives toward a goal of building upon and integrating prior and current course work. This set of courses, which must be approved by the Business Administration program head, allows students to study a subset of business problems or issues and focus on career interests.

SMALL BUSINESS

The faculty of Business Administration at ASU East offer a Small Business minor to nonbusiness students and a concentration in small business for the Bachelor of Interdisciplinary Studies. For more information, access the Web site at www.east.asu.edu/ecollege/businessadmin.

Department of Economics

www.wpcarey.asu.edu/ecn
480/965-3531
BAC 659

Arthur E. Blakemore, Chair

Professors: Blakemore, Boyes, Brada, Burdick, Burgess, DeSerpa, Faith, Gooding, Happel, Hoffman, Hogan, Kingston, Low, Manelli, Mayer, McDowell, McPheters, Melvin, Méndez, Ormiston, Rogerson, Santos, Schlee, Zhou

Associate Professors: Ahn, Cogley, Datta, Reffett, Reiser, Wilson

Assistant Professors: Chade, Hendricks

Senior Lecturer: Roberts

The W. P. Carey School of Business offers a Bachelor of Science (B.S.) degree in Economics. The B.S. program of study can be designed for students intending to seek employment in the private or public sector of the economy upon completion of their undergraduate studies. Such a program provides students with the typical analytical and quantitative skills employers expect of individuals holding eco-

nomics degrees. The B.S. program of study can also be tailored to prepare students for graduate programs in economics, business, or law.

ECONOMICS—B.S.

Requirements for the W. P. Carey School of Business B.S. in Economics consist of three parts: university requirements, see "University Graduation Requirements," page 81, for all students at ASU; the requirements of the W. P. Carey School of Business; and the requirements of the Department of Economics.

DEPARTMENT OF ECONOMICS REQUIREMENTS

The B.S. program of study consists of 24 semester hours of upper-division course work as shown below. To qualify for upper-division course work in economics, business students must be admitted to the W. P. Carey School of Business professional program or the Barrett Honors College. Students must meet all prerequisites and course requirements as listed in the catalog.

1. Economic Theory: ECN 313 and 314;
2. Econometrics and Statistics: ECN 425 or QBA 321 or QBA 410;
3. A Capstone course or Honors Thesis: ECN 475 or 493; and
4. Economics electives at the 300-level or above to fill out the remaining hours. At least two of these courses must be at the 400-level or above. A maximum of three semester hours of ECN 484 Economics Internship can be used to satisfy this requirement. ECN 475 and 493 cannot be used to fulfill this requirement.

MAJOR PROFICIENCY REQUIREMENTS

Students must receive a grade of "C" or higher in all upper-division courses in the major. If a student receives a grade below "C" in any course in the major, the course must be repeated. If a second grade below "C" is received in the same course or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in the major. Any upper-division course in which a grade lower than "C" is earned may be repeated only one time.

GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students must fulfill university requirements, see "University Graduation Requirements," page 81, and "School Degree Requirements," page 158.

SPECIAL PROGRAMS

Latin American Studies Certificate or Emphasis. Students majoring in Economics may elect to pursue a Latin American Studies Certificate or emphasis, combining courses from the major with selected courses of wholly Latin American content. For more information, see "Latin American Studies Center," page 162.

Certificate in International Business Studies. Students majoring in Economics may elect to pursue a Certificate in International Business Studies, combining courses from the major with selected international business courses. For more information, see "International Business Studies," page 171.

Certificate in Quality Analysis. Students majoring in Economics may elect to pursue a Certificate in Quality Analysis, combining courses from the major with selected technical analysis courses. For more information, see "Certificate in Quality Analysis," page 161.

Nonbusiness Students. A nonbusiness student is eligible to register for upper-division economics courses if the student has an ASU GPA of 2.50 or higher and has met all prerequisites and course requirements as listed in the catalog.

Business Honors. Students admitted to the Barrett Honors College may substitute ECN 294 ST: Macroeconomics for ECN 111 and 313 and ECN 294 ST: Microeconomics for ECN 112 and 314. These courses with grades of "C" or higher satisfy the prerequisites and/or corequisites for all 400-level economics courses.

ECONOMICS (ECN)

ECN Note 1. MAT 210 or 270 with a grade of "C" or higher is a prerequisite for all upper-division economics courses except ECN 382 and 384. In addition, an ASU GPA of 2.50 or higher is a prerequisite for ECN 313 and 314.

ECN Note 2. ECN 313 and 314 with grades of "C" or higher are prerequisites or pre- or corequisites for all 400-level economics courses.

ECN 111 Macroeconomic Principles. (3)
fall, spring, summer
Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.
General Studies: SB

ECN 112 Microeconomic Principles. (3)
fall, spring, summer
Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.
General Studies: SB

ECN 294 Special Topics. (1–4)
once a year
Topics may include the following:

- Macroeconomics. (3)
  Introduces modern macroeconomic analysis. Theory of national income, unemployment, inflation, and economic growth and its application to economic policy. Not open to students with credit in ECN 313.
- Microeconomics. (3)
  Introduces modern microeconomic analysis. Theories of consumer behavior, production, and cost. Output and price determination in a variety of market settings. Welfare economics, general equilibrium, externalities, and public goods. Not open to students with credit in ECN 314.

Prerequisite: Barrett Honors College student. Pre- or corequisite: MAT 210 or 270 or AP calculus.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

ECN 306 Survey of International Economics. (3)
fall, spring, summer
Survey of international trade issues, commercial policy, trade theory, customs unions, and international monetary topics. Cross-listed as IBS 306. Credit is allowed for only ECN 306 or IBS 306. See ECN Note 1. Prerequisites: ECN 111, 112.
General Studies: SB, G

ECN 313 Intermediate Macroeconomic Theory. (3)
fall, spring, summer
Determinants of aggregate levels of employment, output, and income of an economy. See ECN Note 1. Prerequisites: ECN 111, 112.
General Studies: SB

ECN 314 Intermediate Microeconomic Theory. (3)
fall, spring, summer
Role of the price system in organizing economic activity under varying degrees of competition. See ECN Note 1. Prerequisites: ECN 111, 112.
General Studies: SB

ECN 315 Money and Banking. (3)
summer
Functions of money. Monetary systems, credit functions, banking practices, and central banking policy. See ECN Note 1. Prerequisites: ECN 111, 112.

ECN 331 Alternative Economic Systems. (3)
selected semesters
Alternative institutions, past and present, for organizing the social division of labor. Property rights, information, and incentives in industrial societies. See ECN Note 1. Prerequisites: ECN 111, 112.
General Studies: SB, G

ECN 360 Economic Development. (3)
selected semesters
Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth. See ECN Note 1. Prerequisites: ECN 111, 112.
General Studies: SB, G

ECN 365 Economics of Russia and Eastern Europe. (3)
selected semesters
Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century. See ECN Note 1. Prerequisites: ECN 111, 112.
General Studies: SB, G

ECN 382 Managerial Economics. (3)
fall, spring, summer
Applies economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Does not satisfy Economics major requirements. Prerequisites: minimum ASU GPA of 2.00; junior standing.

ECN 384 Economics of Social Behavior. (3)
selected semesters
Applies economic analysis to contemporary behavior; discrimination, work versus leisure, crime, medical care, macroeconomic policies. Does not satisfy Economics major requirements. Prerequisites: minimum ASU GPA of 2.00; junior standing.
General Studies: SB

ECN 394 Special Topics. (3)
selected semesters
Current topics of domestic or international interest. See current *Schedule of Classes* for offerings. See ECN Note 1. Prerequisites: ECN 111, 112.

ECN 404 History of Economic Thought. (3)
once a year
Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics. See ECN Note 2. Prerequisite: ECN 314. Pre- or corequisite: ECN 313.
General Studies: SB

ECN 421 Earnings and Employment. (3)
once a year
Origins of labor movement, analysis of labor unions, labor markets, collective bargaining, and current policy issues. See ECN Note 2. Prerequisite: ECN 314. Pre- or corequisite: ECN 313.
General Studies: SB

ECN 425 Introduction to Econometrics. (3)
once a year
Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasizes use of econometric results in assessment of economic theories. See ECN Note 2. Prerequisites: ECN 314; QBA 221 (or STP 226). Pre- or corequisite: ECN 313.
General Studies: CS

ECN 436 International Trade Theory. (3)
once a year
Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium. See ECN Note 2. Prerequisite: ECN 314. Pre- or corequisite: ECN 313.
General Studies: SB, G

ECN 438 International Monetary Economics. (3)
once a year
History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets, including Eurocurrency markets. See ECN Note 2. Prerequisite: ECN 313. Pre- or corequisite: ECN 314.
General Studies: SB, G

ECN 441 Public Finance. (3)
once a year
Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government. See ECN Note 2. Prerequisite: ECN 314. Pre- or corequisite: ECN 313.
General Studies: SB

ECN 450 Law and Economics. (3)
once a year
Economics of the legal system, including analysis of property, contracts, torts, commercial law, and other topics. See ECN Note 2. Prerequisite: ECN 314. Pre- or corequisite: ECN 313.
General Studies: L

ECN 453 Government and Business. (3)
once a year
Development of public policies toward business. Antitrust activity. Economic effects of government policies. See ECN Note 2. Prerequisite: ECN 314. Pre- or corequisite: ECN 313.

ECN 470 Mathematical Economics. (3)
once a year
Integrates economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory. See ECN Note 2. Prerequisite: ECN 314. Pre- or corequisite: ECN 313.

ECN 475 Capstone in Economics. (3)
fall and spring
Capstone course integrating several areas in economics. See ECN Note 2. Prerequisites: ECN 313, 314. Pre- or corequisite: ECN 425.
General Studies: L

ECN 484 Economics Internship. (3)
fall, spring, summer
Academic credit for professional work organized through the Internship Program. See ECN Note 2. Prerequisite: minimum cumulative ASU GPA of 3.00. Prerequisites: ECN 313, 314.

ECN 493 Honors Thesis. (3)
fall and spring
See ECN Note 2.
General Studies: L

ECN 494 Special Topics. (1–4)
selected semesters
Current economic topics of domestic or international interest. Analytical emphasis may be macro, micro, or both. See current *Schedule of Classes* for offerings. Topics may include the following:
- Public Choice

See ECN Note 2. Prerequisites: ECN 313, 314.

ECN 498 Pro-Seminar. (3)
selected semesters
Topics chosen from current area of interest. See ECN Note 2. Prerequisites: ECN 313, 314.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

QUANTITATIVE BUSINESS ANALYSIS (QBA)

QBA 221 Statistical Analysis. (3)
fall and spring
Methods of statistical description. Applies probability theory and statistical inference in business. Fee. Prerequisite: MAT 119 or 271.
General Studies: CS

QBA 321 Applied Quality Analysis I. (3)
once a year
Applies statistical tools employed in quality analysis. Primary emphasis on regression analysis using a variety of statistical software packages. Prerequisite: QBA 221.

QBA 410 Applied Business Forecasting. (3)
once a year
Applies forecasting techniques in business and institutional environments. Prerequisite: QBA 221.

QBA 421 Applied Quality Analysis II. (3)
once a year
Applies statistical tools employed in quality analysis. Topics include experimental design, customer surveys, and process control and capability. Prerequisite: QBA 221.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

Department of Finance

www.wpcarey.asu.edu/fin
480/965-3131
BAC 519

Herbert M. Kaufman, Chair

Professors: Bhattacharya, Booth, Coles, Hertzel, Kaufman, Poe, Sushka

Associate Professors: Cesta, Gallinger, Hoffmeister, Wilt

Assistant Professors: Deli, Griffin, Juergens, Martin, Nardari, Perry

Lecturer: Durham

FINANCE—B.S.

The study of finance prepares students to understand the financial implications inherent in virtually all business decisions. Students majoring in Finance are prepared for entry-level careers in corporate management, depository institutions, investment management, and financial services. The finance curriculum emphasizes financial markets, evaluation of investments, and efficient allocation of resources. The major in Finance consists of the following courses:

ACC	315	Financial Accounting and Reporting	3
FIN	331	Financial Markets and Institutions	3
FIN	361	Managerial Finance	3
FIN	421	Security Analysis and Portfolio Management	3
FIN	461	Financial Cases and Modeling *L*	3
		One additional approved 400-level FIN course	3
Total			18

As part of the requirements, all Finance majors must complete ACC 250 Introductory Accounting Lab. Finance majors are strongly advised to take ACC 316 Management Uses of Accounting. FIN 484 Finance Internship is available for nonmajor elective credit.

ACC 250 must be completed before taking ACC 315. FIN 300 must be completed before taking FIN 331 and 361. FIN 331 and 361 and ACC 315 must be completed before taking 400-level FIN courses.

MAJOR PROFICIENCY REQUIREMENTS

Students must receive grades of "C" or higher in upper-division courses for the major. If a student receives a grade below "C" in any course in the major, this course must be repeated before taking any further courses for which this course is a prerequisite. If a second grade below "C" is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in that major.

GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and school requirements. See "University Graduation Requirements," page 81, and "School Degree Requirements," page 158.

FINANCE (FIN)

FIN 300 Fundamentals of Finance. (3)
fall, spring, summer
Theory and problems in financial management of business enterprises. Prerequisites: ACC 240; ECN 112; QBA 221. Pre- or corequisite: SCM 300.

FIN 331 Financial Markets and Institutions. (3)
fall, spring, summer
Analyzes financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation. Prerequisite: professional program business student majoring in Finance. Prerequisite with a grade of "C" or higher: FIN 300.

FIN 361 Managerial Finance. (3)
fall, spring, summer
Theories and problems in resource allocation, cost of capital, CAPM and capital budgeting, asset valuation, capital structure, and financing policy. Prerequisite: professional program business student majoring in Finance. Prerequisite with a grade of "C" or higher: FIN 300.

FIN 380 Personal Financial Management. (3)
fall, spring, summer
Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning. Prerequisites: minimum cumulative GPA of 2.00; junior standing; non-Finance major.

FIN 394 Special Topics. (1–4)
selected semesters

FIN 421 Security Analysis and Portfolio Management. (3)
fall, spring, summer
Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis. Lecture, discussion. Prerequisite: professional program business student majoring in Finance. Prerequisites with a grade of "C" or higher: ACC 315; FIN 331, 361.

FIN 427 Derivative Financial Securities. (3)
fall, spring, summer
Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory. Lecture, discussion. Prerequisite: professional program business student majoring in Finance. Prerequisite with a grade of "C" or higher: FIN 421.

FIN 431 Management of Financial Institutions. (3)
fall, spring, summer
Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasizes commercial banks. Lecture, discussion. Prerequisite: professional program business student majoring in Finance. Prerequisites with a grade of "C" or higher: ACC 315; FIN 331, 361.

FIN 456 International Financial Management. (3)
fall, spring, summer
Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective. Prerequisite: professional program business student majoring in Finance. Prerequisites with a grade of "C" or higher: ACC 315; FIN 331, 361.
General Studies: G

FIN 461 Financial Cases and Modeling. (3)
fall and spring
Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy. Lecture, discussion, group work. Prerequisite: professional program business student majoring in Finance. Prerequisites with a grade of "C" or higher: ACC 315; FIN 331, 361.
General Studies: L

FIN 481 Honors Seminar in Finance. (3)
once a year
Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions. Lecture, discussion. Prerequisite: Finance Business Honors program student. Prerequisites with a grade of "C" or higher: ACC 315; FIN 331, 361.

FIN 484 Finance Internship. (3)
fall, spring, summer
Academic credit for field work in finance organized through the internship program. Prerequisites: FIN 331, 361; instructor approval.

FIN 494 Special Topics. (1–4)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

School of Health Administration and Policy

www.wpcarey.asu.edu/hap
480/965-7778
BA 318

Jeffrey R. Wilson, Interim Director

Professors: Baldwin, Forsyth, Johnson, Kirkman-Liff, Schneller

Associate Professor: Wilson

Assistant Professor: Rivers

While the School of Health Administration and Policy does not offer an undergraduate major, a number of courses at the 200 and 400 levels are available to students who have a strong interest in health care, public health, and health policy. Students may enroll in these courses regardless of their undergraduate major. Registration for courses at the 400 level is with permission of the instructor and due to seat availability.

HEALTH SERVICES ADMINISTRATION (HSA)

HSA 220 Health Care Organizations. (3)
selected semesters
Overview of United States health care delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management. Cross-listed as HCR 220. Credit is allowed for only HCR 220 or HSA 220. Prerequisites: both ENG 101 and 102 or only ENG 105.
General Studies: H

HSA 498 Pro-Seminar. (1–7)
selected semesters
Topics may include the following:
- Health Care Finance. (3)
- Health Economics. (3)
- Health Service Administration and Policy. (3)
- Policy Issues in Health Care. (3)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

International Business Studies

www.wpcarey.asu.edu/up/ipo.cfm
480/965-0596
BA 109

Josef C. Brada, Director

Adela Gasca, Coordinator

Certificate in International Business Studies

The Certificate in International Business Studies is designed to prepare students for positions with multinational firms, banks, government agencies, and international organizations. The certificate is not a substitute for the listed areas of business specialization; rather, the program of study for the certificate enables students to apply business skills in a global environment.

Requirements for the certificate are designed to provide an understanding of international business environments, principles and operations; to provide an awareness of global social processes and a sensitivity to foreign cultures; and to develop competence in a foreign language. These objectives are met in the following ways: international business principles and operations, global and area studies, foreign language, and GPA proficiency. Students seeking the certificate are strongly encouraged to obtain some international experience either through study or internship experience in a foreign country.

International Business Principles and Operations. At least nine semester hours of approved courses in international business are required. Students must take either IBS 300 Principles of International Business or ECN/IBS 306 Survey of International Economics. Other international business courses from which the remaining hours are selected include

ECN 306 Survey of International Economics *SB, G** 3
or IBS 306 Survey of International Economics *SB, G** (3)
ECN 331 Alternative Economic Systems *SB, G** 3
ECN 360 Economic Development *SB, G** 3
ECN 365 Economics of Russia and Eastern Europe *SB, G** 3
ECN 436 International Trade Theory *SB, G** 3
ECN 438 International Monetary Economics *SB, G** 3
FIN 456 International Financial Management *G** 3
IBS 300 Principles of International Business *G** 3
IBS 394 ST: Economics of Latin America 3
IBS 394 ST: Regional Business Environment of Southeast Asia 3
or IBS 494 ST: Regional Business Environment of Southeast Asia (3)
IBS 400 Cultural Factors in International Business *C, G** 3
or MGT 494 ST: Cultural Factors in International Business (3)
IBS 484 International Business Internship 3
IBS 493 International Honors Thesis *L** 3
IBS 499 Individualized Instruction of International Business 3
MGT 459 International Management 3
or IBS 494 ST: International Management (3)
MGT 494 ST: Applied International Management 3
MKT 394 ST: Global Markets 3
MKT 435 International Marketing 3
MKT 494 ST: Applied International Marketing 1–3
SCM 463 Global Supply Chain Management 3

* W. P. Carey School of Business students may not use this course to fulfill the 60 semester hours in school degree requirements.

Honors students who select an international topic for their thesis may use that as part of the 15 hours of international course work for the certificate.

Global and Area Studies. The global and areas studies requirement can be satisfied either by means of course work or through participation in programs the W. P. Carey School of Business has with foreign schools of business, or by some combination of the two. The course work option requires at least nine semester hours of approved credits in international and area studies.

The W. P. Carey School of Business has academic agreements with universities in Asia, Europe, and Latin America. Students who participate and are successful in one of these approved programs abroad for one semester are deemed to have fulfilled the global and area studies requirements of the Certificate in International Business. Students who participate in a W. P. Carey School of Business seminar of at least a six-week duration or in an approved internship abroad of at least eight weeks satisfy six of the nine semester hours.

The requirements for the international business studies concentration in the Bachelor of Interdisciplinary Studies degree are slightly different from those for the certificate. For more information call 480/965-0596.

Foreign Language. Evidence of competence in a foreign language equivalent to one year of college study is required.

Additional Requirements. Applicants for the Certificate in International Business must earn a "C" or higher in each of the courses selected for the certificate, have at least a 2.50 GPA for all course work applied to the certificate, and have completed all of the business course work at ASU Main.

Advising. When planning and selecting courses to meet the requirements for the certificate and to take advantage of opportunities for participation in exchanges with foreign schools of business, students should consult with an international business faculty advisor or the coordinator of international programs, in BA 109. For more information, call 480/965-0596, or access the Web site at www.wpcarey.asu.edu/up/ipo.cfm.

B.I.S. CONCENTRATION

A concentration in international business studies is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 116.

INTERNATIONAL BUSINESS STUDIES (IBS)

IBS Note 1. MAT 210 or 270 with a grade of "C" or higher is a prerequisite for all upper-division economics courses except ECN 382 and 384. In addition, an ASU GPA of 2.50 or higher is a prerequisite for ECN 313 and 314.

IBS 300 Principles of International Business. (3)
fall, spring, summer
Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies. Prerequisite: ECN 112.
General Studies: G

IBS 306 Survey of International Economics. (3)
fall and spring
Survey of international trade issues, commercial policy, trade theory, customs unions, and international monetary topics. Cross-listed as ECN 306. Credit is allowed for only ECN 306 or IBS 306. See IBS Note 1. Prerequisites: ECN 111, 112.
General Studies: SB, G

IBS 394 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Economics of Latin America. (3)
- Regional Business Environment of Southeast Asia. (3)

Prerequisites: 2.00 ASU GPA; junior standing.

IBS 400 Cultural Factors in International Business. (3)
fall, spring, summer
Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations. Prerequisites: IBS 300, 306 (or ECN 306).
General Studies: C, G

IBS 484 International Business Internship. (3)
selected semesters
Academic credit for professional work organized through the internship/international program. Prerequisites: IBS 300 or 306 (or ECN 306); professional program business student; senior; minimum cumulative ASU GPA of 3.40; minimum ASU business GPA of 3.40.

IBS 493 International Honors Thesis. (3)
fall and spring
General Studies: L

IBS 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- International Management. (3)
  Prerequisite: IBS 300 or MGT 300.
- Multinational Management. (3)
- Regional Business Environment of Southeast Asia. (3)

Credit is allowed for only IBS 494 ST: International Management or ST: Multinational Management or MGT 459.

IBS 499 Individualized Instruction of International Business. (3)
fall and spring

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Department of Management

www.wpcarey.asu.edu/mgt
480/965-3431
BA 323

William H. Glick, Chair

Professors: Ashforth, Bohlander, Cardy, Dooley, Glick, Gomez-Mejia, Hershauer, Hitt, Hom, Kinicki, Penley, Roberson, V. Smith-Daniels

Associate Professors: Boyd, Brenenstuhl, Callarman, Choi, Cook, Hillman, Keats, Keller, Lane, Moorhead, Olivas, Rungtusanatham, D. Smith-Daniels, Van Hook

Assistant Professors: Blancero, Koka

Clinical Professor: Keim

Lecturer: Davila

The faculty in the ASU Department of Management is widely recognized for their work in the areas of operations management, organizational behavior, human resource management, and strategic management. The faculty's research and instruction emphasize corporate governance, high-tech management, knowledge management, quality, process and project management, strategic alliances, value chain analysis, global supply operations, globalization, diversity, small business and entrepreneurship, change management, organizational identity, and human resource management practices in their research, consulting, and teaching.

The faculty has distinguished itself through research and contributions to premier journals. The department ranks 12th internationally for its rate of publication in academic journals and ranks sixth internationally in premier journal articles that impact practice in operations and management science.

Department of Management faculty take great pride in their teaching excellence and have been very active in continuing to improve collaborative teaching techniques. Eleven management faculty members and teaching assistants have won recent school, university, and international awards for their excellence in teaching effectiveness.

Department of Management faculty excel at developing the latest materials to facilitate student learning. Teaching awards and student evaluations place faculty among the elite at ASU. Faculty members also have the distinction of publishing more leading textbooks on management topics than faculty at any other university worldwide.

MANAGEMENT—B.S.

Business in the 21st century calls for managers who are dynamic leaders and effective team builders. The leaders of companies that are succeeding in the new marketplace pos-

sess excellent written and oral communications skills and experience in guiding collaborative teams. After analyzing surveys of students, graduates, and their employers and after many insightful discussions with executives and recruiters, the department concluded that the Management major should have a strong emphasis on collaboration, leadership, communication, team building, and major group projects with the community in both not-for-profit and business settings. The newly revised curriculum begins with the global supply operations course—an immersion in the fundamentals of the global economy, the world of e-business and collaborative teams. Students are encouraged to concurrently enroll in the introductory courses on collaborative team skills and managing people in organizations during their first semester. Throughout the program, understanding of theory and concepts of management are enhanced by experiencing and testing these concepts in skill-based exercises, case discussions, and team-based project work in the classroom and in the community.

The Management major prepares men and women for managerial leadership in a world characterized by the fast pace of e-business; demands for continuous process improvements to enhance the value chain; growing technological sophistication; racial, cultural, and gender diversity in the workforce; and the need for skills in communicating and working with people, managing projects, and managing change. Graduates with these skills are likely to be recruited by management consulting firms, high-tech firms, service and manufacturing firms, for-profit and not-for-profit organizations, and large and small organizations. These employers will recruit Management graduates for challenging trainee positions or entry-level management positions and immediately benefit from their preparation.

Program Requirements

The major in Management consists of the following courses:

MGT	320 Managing People in Organizations	3
MGT	410 Responsible Leadership	3
MGT	420 Performance Management	3
MGT	460 Strategic Leadership	3
OPM	450 Changing Business Processes *L*	3
Management electives*		6
Total		21

* Management electives must be selected from the approved list.

All Management majors must complete the following specific courses that fulfill other pre-business or professional program requirements:

ENG	301 Writing for the Professions[1] *L*	3
COM	225 Public Speaking *L*	3
	or COM 259 Communication in Business and the Professions[2] (3)	
IBS	300 Principles of International Business[3] *G*	3
MGT	310 Collaborative Team Skills[4]	3
Total		12

1 ENG 301 is counted in the business core in place of BUS 301.

2 COM 225 is recommended over COM 259. Either is counted in the school communication requirement.

3 IBS 300 is counted in the business core in place of the international business course.

4 MGT 310 is counted in place of MGT 300 in the business core.

Approved Electives for Management. The following electives have been approved for the management major.

ACC	316 Management Uses of Accounting	3
IBS	400 Cultural Factors in International Business *C, G*	3
MGT	433 Management Decision Analysis	3
MGT	440 Small Business and Entrepreneurship	3
MGT	445 Business Plan Development	3
MGT	459 International Management	3
MGT	484 Management Internship	3
MGT	494 Special Topics	3
MKT	302 Fundamentals of Marketing Management	3
OPM	484 Operations Management Internship	3
OPM	494 Special Topics	3

Undergraduate Internships in Management. The Department of Management strongly supports the concept of student internships, believing all students can benefit from the experience. Undergraduate internships in management provide an opportunity for students to gain on-the-job work experience related to their academic preparation and to increase their employment potential at graduation. For more information about the management internship program and the application process, access the department internship Web site at www.wpcarey.asu.edu/mgt/internships.cfm. Management majors may use a maximum of three semester hours of MGT 484 or OPM 484 for the major. Any additional internship credits may be used for nonmanagement electives.

Certificates. The Department of Management also strongly supports certification in key areas that strengthen the Management degree and help to differentiate individual students for recruiters. The certificates allow students to gain particular analytical skills related to their education and to increase their employment prospects. These certificates are particularly relevant to students majoring in Management:

1. the Certificate in Dealership Management (see www.wpcarey.asu.edu/up/certificates/dm_certificate.cfm);
2. the International Business Certificate (see www.wpcarey.asu.edu/up/ipo/ibc.cfm);
3. the Certificate in Quality Analysis (see www.wpcarey.asu.edu/up/qa_certificate.cfm); and

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

4. the Certificate in Small Business and Entrepreneurship (see www.wpcarey.asu.edu/up/smallbusiness.cfm).

Hot Links to Major in Management. More information, hot links to courses and faculty, and any updates on the undergraduate major in Management can be found on the Web at www.wpcarey.asu.edu/mgt.

Major Proficiency Requirements

Students must receive grades of "C" or better in upper-division courses for the major. If a student receives a grade below "C" in any course in the major, the course must be repeated. If a second grade below "C" is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in that major.

Graduation Requirements

In addition to fulfilling major requirements, students seeking a degree must meet all university and school requirements. See "University Graduation Requirements," page 81, and "School Degree Requirements," page 158.

GRADUATE PROGRAMS

The Department of Management participates actively in several master's and Ph.D. programs, particularly the technology M.B.A. and executive M.B.A. For a detailed description of these programs, see the *Graduate Catalog*.

The Department of Management has adopted a modular approach to Ph.D. education to improve our ability to deliver focused, high-quality seminars, give students more flexibility in defining their areas of expertise, increase their rate of quality publications, and enhance the quality of Ph.D. placements.

Hot Links to Graduate Programs. For additional information, hot links to courses and faculty, and general information about ASU MBA programs, access the Web at www.wpcarey.asu.edu/mba.

More information, application procedures, hot links to faculty, and any updates on the Ph.D. program in Management can be found on the Web at www.wpcarey.asu.edu/mgt/degree/phd.

MANAGEMENT (MGT)

MGT 300 Organizational Management and Leadership. (3)
fall, spring, summer
Analyzes strategic, behavioral, and human resource management perspectives, including principles of strategic management and leadership of human resources. Fee. Prerequisites: a course in psychology (social and behavioral) and a course in sociology. Pre- or corequisite: SCM 300.

MGT 310 Collaborative Team Skills. (3)
fall, spring, summer
Development of skills in managing and working in collaborative environments. Theories and applications in small group dynamics and team facilitation. Interactive, learner-centered. Prerequisite: professional program business student majoring in Management. Prerequisite for nonmajors: instructor approval. Pre- or corequisites: MGT 320; SCM 300 (recommended as corequisites).

MGT 320 Managing People in Organizations. (3)
fall, spring, summer
Management processes, fundamentals of business-level strategy, individual difference issues, motivation and leadership of people in organizations. Lecture, discussion, interactive, learner-centered. Prerequisite: professional program business student majoring in Management. Prerequisite for nonmajors: instructor approval. Pre- or corequisites: MGT 310; SCM 300 (recommended as corequisites).

MGT 380 Management and Strategy for Nonmajors. (3)
fall, spring, summer
Introduces the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility. Not open to business majors. Prerequisites: 2.00 ASU GPA; junior standing.

MGT 394 Special Topics. (3)
selected semesters

MGT 410 Responsible Leadership. (3)
fall, spring, summer
Values, core beliefs, legal and ethical mandates and cultural norms as they apply to the conduct of organizations; application through a Service Learning project. Interactive, learner-centered. Prerequisites: MGT 310, 320.

MGT 420 Performance Management. (3)
fall, spring, summer
Development of skills and knowledge to lead associates effectively: hiring, developing, evaluating, retaining, and rewarding employees. Preparation for leadership roles. Lecture, discussion, interactive, learner-centered. Prerequisites: MGT 310, 320.

MGT 433 Management Decision Analysis. (3)
selected semesters
Decision-making concepts and methods in the private and public sectors and their application to organizational problems. Understanding of individual and group decision making. Prerequisites: only MGT 300 or both MGT 310 and 320.

MGT 440 Small Business and Entrepreneurship. (3)
fall and spring
Opportunities, risks, and problems associated with small business development and operation.

MGT 445 Business Plan Development. (3)
fall and spring
Develops a complete strategic business plan emphasizing the planning process undertaken by successful small business owners and entrepreneurs. Lecture, discussion, experiential exercise. Prerequisite: MGT 440.

MGT 459 International Management. (3)
fall and spring
Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments. Credit is allowed for only MGT 459 or IBS 494 ST: International Management or ST: Multinational Management. Prerequisite: IBS 300.

MGT 460 Strategic Leadership. (3)
fall, spring, summer
Systems theory of organizations, strategy formulation and administration in organizations, creating organizational cohesiveness, and leading change within organizations. Lecture, cases, exercises. Prerequisites: MGT 410, 420; completion of 100 hours, including all business administration core requirements. Pre- or corequisite: OPM 450 (recommended as corequisite).

MGT 484 Management Internship. (3)
fall, spring, summer
Internships are strongly recommended to improve employment potential. The Department of Management internship coordinator must approve all internships to receive credit.

MGT 494 Special Topics. (1–4)
selected semesters
Current topics in management, primarily designed for business majors. See the *Schedule of Classes* for current offerings of courses at ASU Main and East. Topics may include the following:
- Applied International Management. (3)

- Cultural Factors in International Business. (3)
  Prerequisite: IBS 300 (or 494 ST: International Management) or MGT 300 (or 459).
- Dealership Management. (3)

MGT 499 Individualized Instruction. (1–3)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

OPERATIONS MANAGEMENT (OPM)

OPM 450 Changing Business Processes. (3)
selected semesters
Describes and analyzes business processes. Generates and evaluates alternatives. Creates improvement and implementation plans. Prerequisite: completion of 100 hours, including all business administration core requirements. Pre- or corequisite: FIN 461 or MGT 460 or MKT 460 or SCM 479 or any other recommended business integrative course.
General Studies: L

OPM 484 Operations Management Internship. (3)
fall, spring, summer
Internships are strongly recommended to improve employment potential. The Department of Management internship coordinator must approve all internships to receive credit.

OPM 494 Special Topics. (1–4)
selected semesters
Current topics in operations management, primarily designed for business majors. See the *Schedule of Classes* for current offerings. Topics may include the following:
- Management of Technology. (3)
- Project Management. (3)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

Department of Marketing

www.wpcarey.asu.edu/mkt
480/965-3621
BAC 460

Michael P. Mokwa, Chair

Professors: Bitner, Brown, Hutt, Jackson, Kumar, Lastovicka, Mokwa, L. Ostrom, Reingen, Schlacter, Ward

Associate Professors: Blasko, Nowlis, A. Ostrom, Sinha, Stephens, Walker

Assistant Professors: Hunter, Jarvis, Mandel

Senior Lecturer: Spiers

Study in the field of marketing involves analysis of how organizations plan, organize, deploy, and control their resources to achieve market objectives. Focus is placed on market forces, growth, and the deployment of firms in competitive markets and on the marketing strategy and tactics of the firm. Through the proper selection of courses, a student may prepare for a career in

1. selling and sales management;
2. services and retail marketing;
3. promotion and advertising management;
4. business to business marketing;
5. international marketing;
6. market research and planning;
7. general marketing management; or
8. retail management.

MARKETING—B.S.

The major in Marketing consists of 18 semester hours. The following courses must be included:

MKT 302 Fundamentals of Marketing Management	3
MKT 304 Consumer Behavior	3
MKT 451 Marketing Research	3
MKT 460 Strategic Marketing *L*	3
Total	12

To complete the major, students, in consultation with their faculty advisors, select six additional hours from among the following list of courses:

MKT 301 Principles of Advertising	3
MKT 310 Principles of Selling	3
MKT 311 Creative Strategy in Marketing	3
MKT 411 Sales Management	3

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

MKT 412 Promotion Management 3
MKT 424 Retail Management 3
MKT 430 Marketing for Service Industries 3
MKT 434 Business-to-Business Marketing 3
MKT 435 International Marketing 3
MKT 484 Internship 3
MKT 494 Special Topics 1–4
MKT 499 Individualized Instruction 1–3

Major Proficiency Requirements

Students must receive grades of "C" or higher in upper-division courses for the major. If a student receives a grade below "C" in any course in the major, this course must be repeated. If a second grade below "C" is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in the major.

GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and school requirements. See "University Graduation Requirements," page 81, and "School Degree Requirements," page 158.

GRADUATE PROGRAMS

The department offers a distinctive M.B.A. curriculum in services marketing and management. For more information, see the *Graduate Catalog*.

MARKETING (MKT)

MKT 300 Principles of Marketing. (3)
fall, spring, summer
Role and process of marketing within the society, economy, and business organization. Prerequisite: ECN 112. Pre- or corequisite: SCM 300.

MKT 301 Principles of Advertising. (3)
fall, spring, summer
Advertising as a communications tool in marketing and business management. Survey of market segmentation, creative strategy, media, and effectiveness measures. Prerequisite: MKT 300.

MKT 302 Fundamentals of Marketing Management. (3)
fall, spring, summer
Marketing planning, implementation, and control by organizations, with special emphasis on identifying market opportunities and developing marketing programs. Prerequisite: MKT 300.

MKT 304 Consumer Behavior. (3)
fall, spring, summer
Applies behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation. Prerequisite: MKT 300.

MKT 310 Principles of Selling. (3)
once a year
Basic principles underlying the selling process and their practical application in the sale of industrial goods, consumer goods, and intangibles. Prerequisite: MKT 300.

MKT 311 Creative Strategy in Marketing. (3)
selected semesters
Discussion, application and evaluation of creative concepts and strategies. Creation of a portfolio addressing distinctive advertising/marketing problems and opportunities. Prerequisites: MKT 301; nonbusiness majors must obtain department approval.

MKT 382 Advertising and Marketing Communication. (3)
fall and spring
Introduction for nonbusiness majors to the communication process within marketing and advertising. Creation and presentation of an ad campaign. Not open to business majors. Prerequisites: junior or senior standing; 2.00 ASU GPA.

MKT 394 Special Topics. (1–4)
fall
Topics may include the following:
- Applied International Marketing. (1–3)
- Global Markets. (3)
- Marketing and Selling. (3)

MKT 411 Sales Management. (3)
once a year
Applies management concepts to the administration of the sales operation. Prerequisite: MKT 302.

MKT 412 Promotion Management. (3)
once a year
Integrates the promotional activities of the firm, including advertising, personal selling, public relations, and sales promotion. Prerequisite: MKT 302.

MKT 424 Retail Management. (3)
selected semesters
Role of retailing in marketing. Problems and functions of retail managers within various retail institutions. Prerequisite: MKT 300.

MKT 430 Marketing for Service Industries. (3)
once a year
Concepts and strategies for addressing distinctive marketing problems and opportunities in service industries. Current issues and trends in the service sector. Prerequisites: MKT 300, professional program business student.

MKT 434 Business-to-Business Marketing. (3)
once a year
Strategies for marketing products and services to commercial, institutional, and governmental markets. Changing industry and market structures. Prerequisite: MKT 302 or instructor approval.

MKT 435 International Marketing. (3)
once a year
Analyzes marketing strategies developed by international firms to enter foreign markets and to adapt to changing international environments. Prerequisites: MKT 302 (or instructor approval); professional program business student.

MKT 451 Marketing Research. (3)
fall and spring
Integrated treatment of methods of market research and analysis of market factors affecting decisions in the organization. Prerequisites with a grade of "C" or higher: MKT 302; QBA 221.

MKT 460 Strategic Marketing. (3)
fall and spring
Policy formulation and decision making by the marketing executive. Integrates marketing programs and considers contemporary marketing issues. Prerequisite: professional program business student. Prerequisites with a grade of "C" or higher: MKT 302, 304, 451.
General Studies: L

MKT 484 Internship. (3)
fall, spring, summer
Prerequisite with a grade of "B" or higher: MKT 302.

MKT 494 Special Topics. (1–4)
fall, spring, summer
Chosen from topics in the marketing and international marketing arenas to include seminars in international marketing in Europe and Asia. Topics may include the following:
- Applied International Marketing
- Dealership Management

MKT 499 Individualized Instruction. (1–3)
fall, spring, summer
Topics of special interest chosen by students and agreed to by the departments to do independent studies with a professor acting as a guide.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

Department of Supply Chain Management

www.wpcarey.asu.edu/scm
480/965-6044
BA 446

Joseph R. Carter, Chair

Professors: J. Carter, P. Carter, Ellram, Guntermann, Hendrick, Jennings, Kirkwood, Pearson, Smeltzer

Associate Professors: Brooks, Butler, Choi, Davis, Dundas, Keefer, Krause, Lock, Lynch, Maltz, Siferd, Verdini

Assistant Professors: Barratt, Petersen, Rabinovich

Research Professor: Monczka

Adjunct Professor: Cavinato

Senior Lecturer: Langdon

The faculty in the Department of Supply Chain Management offer courses in four separate areas: legal and ethical studies, management communication, real estate, and supply chain management.

Legal and Ethical Studies

The legal and ethical studies faculty offer the undergraduate and the Master of Business Administration core requirements in legal and ethical studies. In addition, the faculty offer specialized courses in law and ethics relating to health care, insurance, real estate, and professional sports.

Management Communication

The management communication faculty serve the W. P. Carey School of Business by teaching the B.S. core requirement BUS 301 Fundamentals of Management Communication.

SUPPLY CHAIN MANAGEMENT—B.S.

A "supply chain" consists of all of the entities necessary to transform ideas into delivered products and services. Supply chain management directs and transforms a firm's resources in order to design, purchase, produce, and deliver high-quality goods and services. As goods and services flow from supplier to producer to customer to final user, supply chain management is particularly concerned with the interfaces between organizations. One way to view supply chain management is as the management of linkages between organizations.

The competitive and global nature of today's business environment dictates that this direction and transformation take place in a way that is as efficient and effective as possible. Continuing emphases on time, cost, and quality improvements have sharpened the need to coordinate and cooperate with trading partners around the world to achieve results that allow customers to be successful. Thus, supply chain management focuses on the integration of activities across several companies to manage the flow of products, services, people, equipment, facilities, and other resources. Supply chain management is also concerned with recycling, reuse, and final disposal of products.

The major in Supply Chain Management consists of the following courses:

SCM	345	Logistics Management 3
SCM	355	Supply Management 3
SCM	432	Planning and Control Systems for Supply Chain Management 3
SCM	440	Quality Management and Measurement 3
SCM	455	Research and Negotiation *L* 3
SCM	479	Supply Chain Strategy 3
Total		 18

REAL ESTATE—B.S.

The Real Estate faculty offer a unique, integrated, one-year program designed for the student's last year of college. This innovative and award-winning program emphasizes student involvement with real estate executives on projects in the Phoenix metropolitan area. Students work in teams to develop their analytical, communication, technology, and team skills.

The program is organized around five aspects of real estate: brokerage/management, development, financing, investments, and market analysis. With broad interdisciplinary perspective, emphasis on team work, and involvement in projects, students may pursue careers in land development, investment analysis, appraisal, property management, brokerage, and mortgage finance.

Successful completion of the program satisfies the requirements of the major based on the following courses:

LES	411	Real Estate Law 3
REA	300	Real Estate Analysis 3
REA	331	Real Estate Finance 3
REA	401	Real Estate Appraisal 3
REA	441	Real Estate Land Development 3
REA	456	Real Estate Investments 3
Total		 18

In addition to the courses listed for the major, students in the program also satisfy the requirement for BUS 301 Fundamentals of Management Communication (listed in the business core) and BUS 451 Business Research Methods (listed as a major support course). These courses are integrated into the major, not taken separately. Because of the emphasis on teamwork, interaction with business professionals, and completion of all requirements within a year, students may enter the program in only the fall semester. Classes meet from 9 to 11:45 A.M. Monday through Thursday in a classroom assigned to the Real Estate program.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

MAJOR PROFICIENCY REQUIREMENTS

Students must receive grades of "C" or higher in upper-division courses for the major. If a student receives a grade below "C" in any course in the major, this course must be repeated. If a second grade below "C" is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in that major.

GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and school requirements. See "University Graduation Requirements," page 81, and "School Degree Requirements," page 158.

BUSINESS (BUS)

BUS 301 Fundamentals of Management Communication. (3)
fall, spring, summer
Written and oral communication in a management context. Prerequisite: CIS 200. Prerequisite with a grade of "C" or higher: ENG 102.
General Studies: L

BUS 394 Special Topics. (1–4)
selected semesters
See current *Schedule of Classes* for offerings of courses at ASU East. Topics may include the following:
- Professional Development

BUS 451 Business Research Methods. (3)
selected semesters
Methods of collecting information pertinent to business problem solving, including design, collection, analysis, interpretation, and presentation of primary and secondary data.
General Studies: L

BUS 494 Special Topics. (1–4)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

LEGAL AND ETHICAL STUDIES (LES)

LES 305 Legal, Ethical, and Regulatory Issues in Business. (3)
fall, spring, summer
Legal theories, ethical issues, and regulatory climate affecting business policies and decisions. Lecture, Web-based delivery. Fee.

LES 308 Business and Legal Issues in Professional Sports. (3)
selected semesters
Economic structure of professional sports and application of contract, antitrust, arbitration, and labor laws in the industry. Prerequisites: 2.00 GPA; junior standing.

LES 380 Consumer Perspective of Business Law. (3)
fall and spring
Role of law as it affects society. Uses case studies to present principles that govern business and consumers. Lecture, television. Prerequisites: 2.00 GPA; junior standing.

LES 411 Real Estate Law. (3)
once a year
Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

QUANTITATIVE BUSINESS ANALYSIS (QBA)

For more QBA courses, see "Department of Economics."

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

REAL ESTATE (REA)

REA 300 Real Estate Analysis. (3)
once a year
Applies economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development. Prerequisite: professional program business student.

REA 331 Real Estate Finance. (3)
once a year
Legal, market, and institutional factors related to financing proposed and existing properties. Emphasizes current financing techniques and quantitative methods. Prerequisites: FIN 300; professional program business student.

REA 380 Real Estate Fundamentals. (3)
fall and spring
Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Not open to Real Estate majors. Prerequisites: 2.00 ASU GPA; junior standing.

REA 401 Real Estate Appraisal. (3)
once a year
Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques. Prerequisites: REA 300; professional program business student.

REA 441 Real Estate Land Development. (3)
once a year
Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties. Prerequisites: REA 300; professional program business student.

REA 456 Real Estate Investments. (3)
once a year
Analyzes investment decisions for various property types. Cash flow and rate of return analysis. Prerequisites: FIN 300; professional program business student.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

SUPPLY CHAIN MANAGEMENT (SCM)

SCM 300 Global Supply Operations. (3)
fall, spring, summer
Resources and information to create and deliver products globally. Interfirm systems and industry supply chains. Customer, producer, and employee perspectives. Lecture, discussion. Fee. Prerequisites: ACC 240; CIS 200; QBA 221.

SCM 301 Supply Chain Management. (3)
selected semesters
Examines the purchasing, materials, and logistics management areas. Presents techniques for acquiring, storing, processing, and moving material inventory. Prerequisite: professional program business student.

SCM 345 Logistics Management. (3)
fall and spring
Logistics and supply chain activities emphasizing integration of transportation, inventory, warehousing, facility location, customer service, packaging, and materials handling. Prerequisite: professional program business student majoring in Supply Chain Management. Pre- or corequisite: SCM 300.

SCM 355 Supply Management. (3)
fall and spring
Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination. Fee. Prerequisite: professional program business student majoring in Supply Chain Management. Pre- or corequisite: SCM 300.

SCM 405 Urban Transportation. (3)
selected semesters
Economic, social, political, and business aspects of passenger transportation. Public policy and government aid to urban transportation development. Prerequisites: both SCM 345 and upper-division standing or only instructor approval.

SCM 432 Planning and Control Systems for Supply Chain Management. (3)
fall and spring
Planning and control systems for product and service flows in supply chain: production planning, master scheduling, MRP, ERP, inventory management. Lab. Fee. Prerequisites: SCM 300; professional program business student majoring in Supply Chain Management. Pre- or corequisites: SCM 345, 355.

SCM 440 Quality Management and Measurement. (3)
fall and spring
Quality management and measurement, relationships with suppliers and customers, quality awards, certifications, programs, tools for process improvement and cost analyses. Prerequisites: SCM 300; professional program business student majoring in Supply Chain Management. Pre- or corequisites: SCM 345, 355.

SCM 455 Research and Negotiation. (3)
fall and spring
Current philosophy, methods, techniques for conducting strategic and tactical supply chain research and negotiations. Includes supplier price and cost analysis. Prerequisite: professional program business student majoring in Supply Chain Management. Prerequisite with a grade of "C" or higher: SCM 355.
General Studies: L

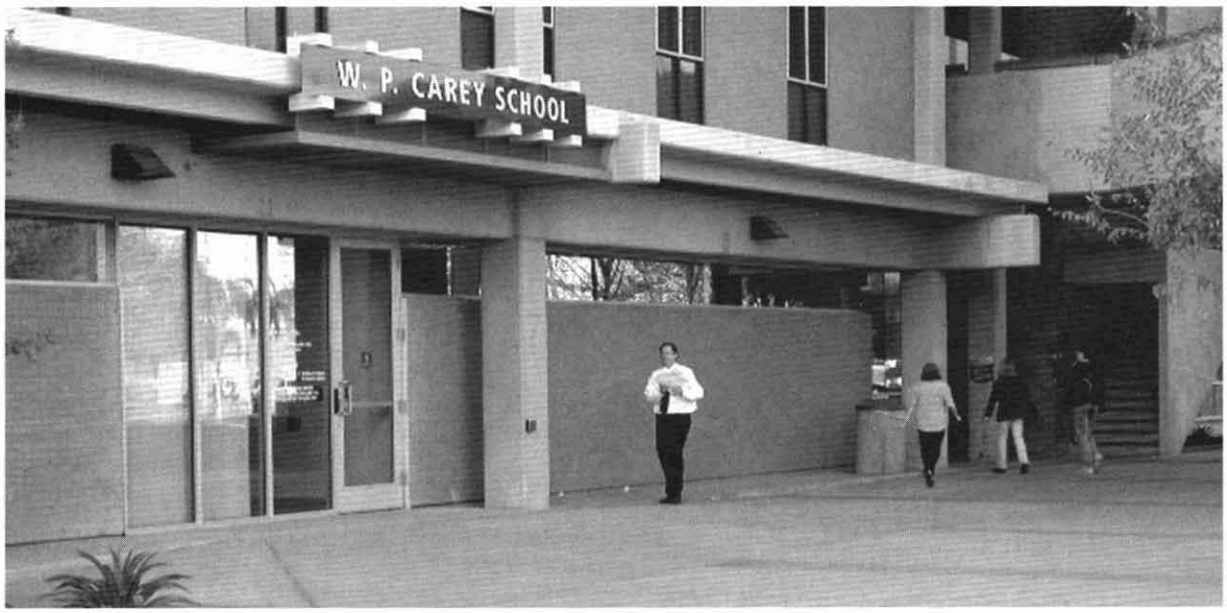
SCM 460 Carrier Management. (3)
selected semesters
Analyzes carrier economics, regulation, management, and rate-making practice; evaluates public policy issues related to carrier transportation. Prerequisites: both SCM 345 and upper-division standing or only instructor approval.

SCM 463 Global Supply Chain Management. (3)
once a year
Supply chain activities in international business with special emphasis on management of transportation, global sourcing, customs issues, and facility location in a global environment. Prerequisite: upper-division standing.

SCM 479 Supply Chain Strategy. (3)
fall and spring
Integrated supply chain strategies synthesizing supply management, production, logistics, and enterprise systems. Provides a comprehensive perspective of supply chain management. Prerequisite: professional program business student majoring in Supply Chain Management. Prerequisites with a grade of "C" or higher: SCM 345, 355, 432 (or 440).

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.



Business Administration building, home of the new W. P. Carey School of Business. John MacIsaac photo

College of Education

coe.asu.edu **Eugene E. Garcia, Ph.D., Dean**

Division of Curriculum and Instruction **193**
Division of Educational Leadership and Policy Studies **197**
Division of Psychology in Education **198**

PURPOSE

For students, choosing a professional college is an important step because it establishes the foundation on which a career will be built. The College of Education provides a stimulating, challenging forum wherein scholars and practitioners interact in the discovery and mastery of the science and art of educational endeavors. This balanced approach, in which research and practice are viewed as essential and complementary, enables the college to produce superior educators.

The purposes of the faculty of the College of Education are as follows:

1. to engage in the scholarly, scientific, and professional study of education;
2. to prepare competent professionals who will serve in a variety of critical educational roles;
3. to develop productive scholars who will make significant contributions to the educational literature and to the quality of educational practice; and
4. to serve the education profession at the local, national, and international levels.

In accord with these purposes, the College of Education is committed to producing quality scholarship and research and to excellence in teaching.

Information about the college can be found on the Web at *coe.asu.edu*.

ORGANIZATION

The College of Education is organized into three divisions. These divisions and their academic program areas are listed below:

Division of Curriculum and Instruction. The Initial Teacher Certification (ITC) program is the largest program in the college, designed to prepare students for teaching positions in bilingual education, early childhood education, elementary education, English as a second language, secondary education, and special education. Support experiences also come from the Division of Psychology in Education and the Division of Educational Leadership and Policy Studies. The program is a blend of on-campus and school-based methods courses. All programs involve professional school-based internships with experienced teachers. For specific program descriptions, see "Degrees," page 183.

Division of Educational Leadership and Policy Studies

- Educational Administration and Supervision
- Educational Policy Studies
- Higher and Postsecondary Education
- Social and Philosophical Foundations

Division of Psychology in Education

- Counseling
- Counseling Psychology
- Counselor Education
- Educational Psychology
  - Learning
  - Lifespan Developmental Psychology
  - Measurement, Statistics, and Methodological Studies
  - School Psychology
- Educational Technology

Services to students and the community are provided through various centers and offices.

Southwest Center for Education Equity and Language Diversity. This center conducts, supports, and promotes research, scholarship, and innovative practice in the linguistic education of minority students in public schools. The center's primary focus is on equity aspects of education in Arizona, especially as they relate to non-native English-speaking children and youth. Research, scholarly discourse, and program development activities, aimed at improving language education for minority students in public schools, serve the purpose of informing public policy in Arizona and the larger U.S. Southwest region. For more information, call 480/965-7134, or access the Web site at asu.edu/educ/sceed.

Education Policy Studies Laboratory. Located within the College of Education, the Education Policy Studies Laboratory (EPSL) conducts and coordinates original research in areas such as student performance standards, assessment, curriculum, and commercialism in schools. EPSL disseminates its analyses and reports to policy makers and educators and also concentrates on providing the public with readable accounts of research.

EPSL houses two research units – the Commercialism in Education Research Unit (CERU), which is the only national academic research center dedicated to schoolhouse commercialism; and the Education Policy Research Unit (EPRU), which conducts original research and facilitates implementation of educational innovations.

For more information, contact Alex Molnar, director and professor of Educational Leadership and Policy Studies,

EDB L1-01, call 480/965-1886, or access the laboratory's Web site at asu.edu/educ/epsl.

Center for Indian Education. The Center for Indian Education serves as a service agency to Native American communities, school districts, and students attending ASU. The center also conducts research on Indian education in Arizona and other states with American Indian populations. For more information, call 480/965-6292, or access the Web site at coe.asu.edu/cie.

Office of Student Services. The Office of Student Services (OSS) is committed to providing a quality, service-oriented environment to promote the development and growth of the education community. The OSS assists undergraduate and postbaccalaureate students interested in entering and completing a teacher preparation program. Services offered by the OSS include: high school outreach and recruitment, community college articulation and recruitment, a living and learning community in Manzanita Hall, academic advising, Initial Teacher Certification professional program admissions and retention, academic support services and tutoring, scholarships and financial aid, teacher placement, and certification assistance. Students should contact the OSS with questions regarding Declaration of Graduation, program agreements, student petitions, and the Arizona Educators Proficiency Assessment (AEPA) exam.

For more information about services, or to schedule an appointment with an advisor, call 480/965-5555, or access the Web site at coe.asu.edu/oss.

Office of Professional Field Experiences. Part of the Office of Student Services, the Office of Professional Field Experiences places all teacher preparation students in public schools and similar institutions for internships and student teaching. This office monitors students' progress in their field experiences, provides assistance for pre-service teachers who need intervention to improve performance, sponsors courses for mentor teachers, and conducts research on student teacher performance in the field. For more information, call 480/965-6255.

Counselor Training Center. The Counselor Training Center provides counseling for ASU students, staff, and the community at large regarding personal, relationship, and career development issues. Counseling is conducted by graduate students in counseling and counseling psychology under the supervision of licensed psychologists. For more information, call 480/965-5067.

Other Units. Other units within the college offering specialized research and educational services include the College of Education Preschool and Technology-Based Learning and Research.

For more information regarding the preschool, call 480/965-2510. For additional details about Technology-Based Learning and Research, call 480/965-3322.

TEACHER EDUCATION

Programs that prepare students for teacher certification by the state are available to both the undergraduate pursuing a first degree and the individual with a college degree in a noneducation field (postbaccalaureate).

Undergraduate students interested in teacher certification in art, music, or dance enroll through programs offered by the Herberger College of Fine Arts. These students must also meet the same eligibility requirements for admission to the Initial Teacher Certification (ITC) for certification, and a formal application must be submitted to the ITC program. For more information, see "Initial Teacher Certification Professional Program Admission," page 181.

Undergraduate programs leading to the Bachelor of Arts in Education degree are described in the text that follows. Information about postbaccalaureate certification programs can be obtained by either visiting the Office of Student Services, EDB L1-13, or by accessing the Web site at coe.asu.edu/oss/programs.php. For descriptions of graduate degree programs, see the *Graduate Catalog*. For more information, see the "College of Education Graduate Degrees and Majors," page 191.

ADMISSION

Preprofessional Admission

All newly admitted students to the ASU College of Education are admitted as preprofessional education majors. Preprofessional students are advised by a team of academic advisors whose primary focus is on preparing students for admission into the Initial Teacher Certification (ITC) program during their junior year. Admission to ASU with preprofessional status in the College of Education does not guarantee admission to the ITC program. Admission to the ITC is a separate, competitive process. Preprofessional students are strongly encouraged to meet each semester with the preprofessional team of advisors to ensure proper progression through their chosen major, and to also benefit from the support services offered by the Office of Student Services. It is crucial that all applicants seeking application to the ITC program gain valuable experience with the population of students they intend to teach; the Office of Student Services can provide information on various opportunities to gain such experience. To schedule an appointment with a preprofessional advisor, call 480/965-5555.

Initial Teacher Certification Professional Program Admission

Undergraduate students are eligible for admission consideration into the Initial Teacher Certification (ITC) program if they meet the following criteria:

1. admission to ASU as a classified student. For students planning to begin the ITC program in spring semester, university admission materials should be submitted by May. For students planning to begin the ITC in fall semester, application materials must be submitted to university admissions by October. For more information on applying to ASU, access the Web site at www.asu.edu/admissions;
2. a minimum 2.50 cumulative GPA (ASU GPA and transfer GPA combined);

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

3. completion of at least 56 semester hours by the time the student begins the ITC program;
4. completion of ENG 101 and 102, the Mathematics (MA) requirement, and the Literacy and Critical Inquiry (L) requirement or the Natural Science (SQ or SG) requirement, all with a grade of "C" or higher. These courses must be completed by the time the student submits application materials;
5. demonstrated experience within the population the student plans to teach;
6. formal application to the ITC must be made by February 1 for fall admission and September 1 for spring admission.

Note: Secondary Education students must complete a portion of their academic specialization before submitting application materials.

Admission is a selective, competitive process and is not guaranteed to all that satisfy the minimum admission requirements. The ITC application is available online at coe.asu.edu/oss/admission.

Some ITC programs have additional admission requirements; consequently, students should consult with an Office of Student Services (OSS) academic advisor as they prepare to apply to the ITC program of their choice, to verify what additional requirements must be met. Students may also attend an Initial Advising Session (IAS), offered through the OSS, to learn more about the ITC application and admission process. To schedule an IAS appointment, call the OSS at 480/965-5555.

Application Deadlines

The College of Education has three admission cycles. Application deadlines for most ITC programs are February 1 for fall admission and September 1 for spring admission. An additional application deadline of June 1 applies to students seeking spring admission to the Apprentice Teacher Program (ATP) or fall admission to the Integrated Certification in Teacher Education (INCITE) postbaccalaureate program. Spring admission to INCITE follows the regular September 1 deadline. For the most updated admission dates, access the ITC admission Web site at coe.asu.edu/oss/admission.

Transfer Students

To be considered for admission to the ITC program, transfer students must first be formally admitted to ASU. For more information, see "Transfer Applicants," page 62.

Note: Once students receive notification of ASU admission, all education transfer students must attend an Initial Advising Session (IAS), as their first step in securing academic advisement from the college. These sessions are conducted by academic advisors and are provided in groups according to the student's desired degree program (early childhood, elementary, secondary, special education, multilingual/multicultural). During the IAS, students are given an overview of the various ITC programs available, application requirements are discussed, and individualized degree audits (through the Degree Audits Reporting System) are provided to each student. Course selection, degree requirements, and general education requirements are also covered during these sessions. To sign up for an IAS, call the Office of Student Services at 480/965-5555. ASU Undergraduate Admissions should receive the application for admission to ASU, transcripts, and other required information at least five months before the ITC application deadline for the desired ITC admission semester.

For students who are considering transferring to ASU and the College of Education, but who are not yet committed to ASU as their school of choice, they may schedule an appointment with the transfer recruitment specialist, by calling 480/965-5555, or e-mail specific questions to education@asu.edu.

Students should access the ASU Education Transfer guides for optimal course selection on the Web at asu.edu/provost/articulation.

Postbaccalaureate Students

Postbaccalaureate programs prepare students for certification by the state and are designed for those students who hold a bachelor's degree in an area other than education. The college offers postbaccalaureate programs in early childhood education, elementary education, multilingual/multicultural education, secondary education, and special education. (Special education students must qualify for, and be concurrently admitted to, a master's degree program in special education. For more information, call 480/965-4602). Information on postbaccalaureate programs is available through the Office of Student Services, EDB L1-13 (480/965-5555). The office provides academic advising and information regarding requirements, procedures, and deadline dates.

A student who wishes to be considered for admission to the ITC program must meet the following College of Education admission requirements for postbaccalaureate programs:

1. be admitted to ASU as a nondegree seeking graduate student;
2. have earned a bachelor's degree from an accredited institution;
3. possess a cumulative GPA of 2.50 or higher for the last 60 semester hours of credit earned; and
4. have submitted a completed application form and supporting materials by the appropriate deadline dates during the semester before admission.

Note: Secondary education program only: Students must complete an Academic Specialization Form. Visit the Office of Student Services, EDB L1-13, for this form.

Admission is competitive and not guaranteed to all who satisfy the minimum admission criteria.

Some academic units have additional requirements. Students seeking admission to K–8 or secondary education programs (7–12) should consult the Office of Student Services in the College of Education (480/965-5555) to determine if there are additional admission requirements for their teaching fields.

Information on deadline dates and applications can be downloaded via the Web at coe.asu.edu/oss/admissions.

ADVISING

All new students are required to meet with an academic advisor prior to registering for their first semester. In order to further assist and support freshmen in their first year, these students are also required to meet with an advisor before registering for their second semester. Each fall, freshmen students are notified of "Freshmen Priority Week." Freshmen should take advantage of this time to meet with their advisors. This is an opportunity to consult with advisors regarding academic difficulties, avenues for student involvement in campus activities, and preparation of spring schedules. To schedule an appointment with an advisor, call 480/965-5555, and press option 1.

DEGREES

Bachelor of Arts in Education

The College of Education offers five Bachelor of Arts in Education (B.A.E.) degree programs. See the "College of Education Baccalaureate Degrees and Majors" table, page 184, for more information on these degrees and their concentrations. Candidates for the B.A.E. degree must complete the Initial Teacher Certification program in their major as offered by the College of Education. Graduates of this program demonstrate proficiency in specified knowledge areas or skills, including the following:

1. principles and application of effective instruction;
2. classroom organization and management;
3. content or subject matter;
4. specific curriculum and teaching strategies;
5. interrelationship of culture and schooling in a multicultural society;
6. human development;
7. communication skills;
8. theories of learning and motivation;
9. assessment and evaluation; and
10. computer literacy.

Initial Teacher Certification Programs

The Initial Teacher Certification (ITC) program is the largest program in the College of Education. It consists of the following areas of academic study: early childhood education, elementary education, secondary education, multilingual/multicultural education, and special education. Within these five degree areas, multiple teacher education programs exist in order to meet the diverse interests and circumstances of students. Students apply to one of the 10 various ITC programs, based on their unique interests and needs. The ITC programs offered through the College of Education are as follows:

1. Apprentice Teacher Program (ATP) (K–8)
2. Multilingual/Multicultural Education Program (MLMC) (K–8)
3. Diné Teacher Education Program (K–8)
4. Early Childhood Interprofessional Program (ECD) (K–8: birth-third grade)
5. Elementary Education Partnership Program (EED) (K–8)
6. Secondary Education (SED) (7–12)
7. Special Education (SPE) (K–12)
8. Teaching for a Diverse Future (TDF) (K–8)
9. Integrated Certification in Teacher Education (INCITE) (secondary or elementary education—postbaccalaureate only)
10. Teacher Education for Arizona Mathematics and Science (TEAMS) (secondary education—postbaccalaureate only).

For more information about these ITC programs, contact the Office of Student Services by calling 480/965-5555 or by accessing the Web site at coe.asu.edu/oss.

Apprentice Teacher Program (ATP). ATP is a concentrated elementary education program that is completed in one calendar year, January through December, with all course work based in participating schools. The program conforms to the public school calendar, thus extending the academic year for ASU students by eight weeks. Students are engaged in K–5 classroom experiences and ASU classes from 8 a.m. to 4 p.m., Monday through Friday for 46 weeks. The theoretical premise that undergirds the ATP program might be called "practice informed by theory," as students are immersed in both "school" and "teacher" cultures throughout the program. Admission is for spring semester only, with a June 1 deadline.

Multilingual/Multicultural (MLMC) Program. The MLMC program is a four-semester sequence offered in "blocks" with focused field requirements in a professional development school and other bilingual or ESL settings. The bilingual education option prepares teachers to teach elementary students whose primary language is Spanish or a Native American language spoken in Arizona. The ESL option prepares teachers to teach elementary school students from any language background who are still acquiring English as an additional language. Methods courses are often divided into BLE or ESL sections, although some course work is planned together to promote collaboration. The program meets Arizona requirements for an elementary education teaching certificate with an endorsement in bilingual education or English as a second language.

Diné Teacher Education Program. The Diné Teacher Education Program is a collaborative effort between Diné College and the ASU College of Education. All course work is done at the Diné College campus (Tsaile, Arizona) and all field placements are in Navajo bilingual classrooms in Navajo schools. The program is designed to prepare Navajo Teachers to teach in Navajo communities of the Navajo Nation. This program meets the requirements for an initial teaching certificate for elementary education and an Arizona endorsement in bilingual education. For more information, call 928/724-6819.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

College of Education Baccalaureate Degrees and Majors

Major	Degree	Concentration	Administered By
Early Childhood Education	B.A.E.	—	Division of Curriculum and Instruction
Elementary Education	B.A.E.	Multilingual/multicultural education	Division of Curriculum and Instruction
Secondary Education	B.A.E.	Academic specializations: biological sciences, business, chemistry, Chicana and Chicano studies, economics, English, family and human development,* French, geography, German, history, Japanese, mathematics, physical education, physics, political science, social studies, Spanish	Division of Curriculum and Instruction
Selected Studies in Education*	B.A.E.	—	College of Education
Special Education	B.A.E.	—	Division of Curriculum and Instruction

* Applications are not being accepted at this time.

Early Childhood Interprofessional Program (ECD) (Birth–Third Grade). The early childhood program has a core focus on interprofessional education that includes cross-training. Students work with members of other disciplines and collaborate between and across community programs and university departmental structures to promote a broad-based professional preparation. Students participate in schools and community agencies that also operate cross-professionally. The early childhood faculty and its community partners work from a child-sensitive, or constructivist approach that emphasizes constructivist theory, multiple points of view, emergent learning, and a developmental, integrative approach to classroom practice. The program includes course work for a provisional English as a second language endorsement, and is a K–8 certification program.

Elementary Education Partnership Program (EED). Students in the Elementary Education Partnership Program work in three different elementary schools, one each semester, prior to their student teaching. Each semester, or block, includes methods courses that are taught on an elementary school campus through an internship of six hours each week. Students become an integral part of the life of the elementary school, and assignments link the classroom observations and experiences to the content of the methods courses. Faculty from each of the school sites coordinate assignments and activities to ensure a wide range of learning experiences; some assignments are continued across semesters. Optional course content is in place to qualify all students in this program for a provisional English as a second language endorsement.

Secondary Education (SED) (7–12). In order to integrate teacher education preparation with the secondary education requirement for an academic specialization, the College of Education maintains connections with academic departments across the university. Each program semester requires an internship in the schools, and some courses are taught in the field. Graduates are eligible for secondary certification in grades 7–12 in one of 18 academic specializations, and have the option of adding a middle school endorsement. In addition to these 18 SED programs, three additional specializations are available through the College of Fine Arts, including Music Education (choral-general or instrumental music), Art Education, and Dance Education. Fine Arts and physical education majors receive a K-12 endorsement. Students with a major in Secondary Education have two academic advisors: one in the college and department of the academic specialization and one in the Office of Student Services in the College of Education.

Special Education (SPE). The SPE leads to certification in K–12 special education for children with learning disabilities, mild mental retardation, or emotional/behavioral disorders. This program provides preparation in each of the three disability areas; however, the student only qualifies for a certificate in one area, which is determined by the area of student teaching placement. A school internship is required for each semester.

Teaching for a Diverse Future (TDF). TDF enrolls one group of students every other year in the fall semester. The program is based on premises derived from work in anthropology, language acquisition, and cognativist and social interactionist views of the development of mathematical and scientific concepts and curriculum theory. Students work in two elementary schools that honor this perspective throughout the program. Methods courses are distributed across three semesters, and each semester's field experience includes a full-time, two-week immersion. Certification options include a certificate in elementary education, an elementary certificate with an endorsement in bilingual education, or an elementary certificate with an endorsement in ESL. The program is available only in specific fall semesters.

Integrated Certification in Teacher Education (INCITE). INCITE is a flexible program that prepares working adults for teaching. This school-based program offers both secondary education and elementary education options, including an optional middle school endorsement. All course work is offered during the evening and on week-

ends except for secondary education methods courses, which may be offered only during daytime hours depending on the corresponding college's schedule. Some daytime field experience internship hours may be required. INCITE is designed for postbaccalaureate students only.

Teacher Education for Arizona Mathematics and Science (TEAMS). TEAMS is a 10 month program, with course work leading to 7–12 certification and an optional middle school endorsement. It is a combined postbaccalaureate/Master's program specializing in mathematics, science, and technology, and is based on technology, field-based experiences, internships, and course work. Students attend classes full-time during daytime hours.

UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet all university graduation requirements. For more information, see "University Graduation Requirements," page 81.

DEGREE REQUIREMENTS

A minimum of 120 semester hours is required for the Bachelor of Arts in Education (B.A.E.) degree. The B.A.E. degree consists of four areas:

1. General Studies;
2. College of Education core requirements (Elementary Education, Apprentice Teacher Program, Multilingual/Multicultural Education, Early Childhood Education, Secondary Education, and Special Education);
3. Academic specialization (Secondary Education only); and
4. Initial Teacher Certification (ITC) Program Courses.

The College of Education expects degree candidates to meet individual course assessment standards, field-experience observation criteria, courses required for teacher certification, and other proficiency standards and performance criteria required to demonstrate knowledge and skill in the areas listed under "Bachelor of Arts in Education," page 183.

The degree program also includes courses and academic content required for teacher certification by the State of Arizona. Students seeking certification in one of the fine arts must complete degree requirements in the Herberger College of Fine Arts and specified courses through the ITC program.

General Studies Requirement

All students enrolled in a baccalaureate degree program must satisfy a university requirement of a minimum of 35 hours of approved course work as described in "General Studies," page 85. Note that all three General Studies awareness areas are required. General Studies courses are listed in the "General Studies Courses," page 88, in the course descriptions, in the *Schedule of Classes*, and in the *Summer Sessions Bulletin.*

Preprofessional students should complete as many of the General Studies courses as possible before admission to the ITC program. Students are encouraged to consult with an academic advisor to ensure they comply with all necessary requirements.

College of Education Core Requirements

The Initial Teacher Certification program prepares students for teacher certification and requires students to complete semester hours selected from specific core courses pertinent to the teaching area. Courses listed under this portion of the academic major are governed by the general ASU "Guidelines for Determination of Catalog Year."

For more information, see "Guidelines for Determination of Catalog Year," page 81.

Initial Teacher Certification Program Courses

The Initial Teacher Certification (ITC) program is a sequential program consisting of 36 to 55 semester hours. Ranging from nine to 19 hours per semester, the courses for one semester must be completed before enrolling in the next semester. In other words, courses for one semester usually may not be taken at the same time as those scheduled for another semester. In addition to ITC courses, students continue completing the General Studies requirement and core requirements or academic specialization requirements through the third semester of the program (except for students applying to the Apprentice Teacher Program in Elementary Education). Courses listed under this portion of the academic major are governed under an alternative catalog year, and students should consult with their academic advisors prior to applying to the ITC program of their choice, to determine the ITC courses for their designated admission date.

Declaration of Graduation

A declaration of graduation must be filed during the first semester of enrollment in the ITC program. Preprofessional students completing 87 hours (the university limit for registering without a program of study) who have not been admitted to the ITC program must meet with an advisor to obtain a registration waiver by the College of Education. See "University Graduation Requirements," page 81.

Field Experience Requirements

In addition to course work, students admitted to the ITC program are required to participate in directed field experiences during each of the four semesters of the program. The field experiences progress from short-term observation and participation to long-term supervised practice teaching.

Students should expect these field experiences to be above and beyond the class times listed in the *Schedule of Classes* for each semester. Such field experiences typically take place in public schools throughout the greater Phoenix area. Regular attendance is required during all field experiences. Students should plan extra travel time and expect to confer with placement teachers and field facilitators before or after scheduled field experiences. To meet field experience requirements, students must plan to have their own transportation and *be available during regular school hours.*

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

Teaching is a highly demanding and extraordinarily complex profession. Students desiring to become teachers must maintain academic standards and demonstrate requisite qualifications for successful teaching, including effective interpersonal skills, basic communication skills, appropriate professional conduct, and satisfactory performance during field experience assignments.

Observation and participation assignments in the schools during first, second, and third semester field experience placements are designed to prepare students for the highly demanding performance-based student teaching during semester four.

Student Teaching. The culminating field experience, called *student teaching,* occurs in the final semester of the ITC program and is a full-day, full-semester obligation. Student teaching is normally available only during fall and spring semesters.

Student teaching is a full-time, 15 week, commitment under the supervision of a mentor teacher. To be eligible for a student teaching placement, individuals must apply by the deadline determined each semester by the Office of Professional Field Experiences. Students must complete all program requirements before beginning a student teaching assignment. Student teachers must adhere to the calendar, regulations, and philosophy of the schools in which they are placed. Beginning and ending dates for student teaching are determined by the Office of Professional Field Experiences in cooperation with the participating school. Because student teaching is on a full-day schedule, 8 A.M. to 4 P.M. Monday through Friday for 15 consecutive weeks, student teachers are strongly encouraged to avoid extra activities and outside employment that would interfere with the heavy demands placed upon them while student teaching.

For approval to student teach, ITC students must:

1. have attained a high level of professional standard in previous field experience assignments;
2. be in good standing as defined in the ITC Retention and Continuation Policy;
3. have a Fingerprint Clearance Card on file;
4. not have an incomplete grade in any ITC course;
5. complete all ITC courses (with a "C" or higher);
6. have all General Studies, College of Education, and academic specialization course work completed; and
7. have an approved Declaration of Graduation (undergraduates) or Program Agreement (postbaccalaureates) on file.

Students may be provisionally approved to start the paperwork for a student teaching placement if final course work and Fingerprint Clearance Card are in progress. Provisional approval is not given if courses are outstanding (not in progress). Students may not take any courses while student teaching unless approved by the College of Education Standards Committee. For more information, contact an academic advisor in the Office of Student Services.

Academic Specializations

Academic Specialization	Page
Art education[1]	265
Biological sciences	332
Business	—
Chemistry	339
Chicana and Chicano Studies	342
Dance education[1]	279
Economics	—
English	347
Family and human development[2]	353
French	380
Geography	357
German	380
History	364
Japanese	376
Mathematics	397
Music education[3]	284
Physical education	373
Physics	413
Political science	424
Social studies	436
Spanish	380

[1] Art education and dance education concentrations are under corresponding B.F.A. majors.

[2] Applications are not being accepted at this time.

[3] Students focus on either the choral-general music or instrumental music concentration under the B.M. degree.

MAJOR REQUIREMENTS

Early Childhood Education—B.A.E.

Course Requirements. Many courses are held at local elementary schools during the regular school day. Field Experience requires a minimum commitment of six hours a week during the regular school day. Field-based courses are taken in semester blocks in sequential order. Program courses and requirements are subject to change depending on the ITC admission date.

Required

First-Year Composition	6
General Studies	35–37
Total	41–43
Electives	0–6

College of Education Requirements*

BLE 409 Language-Sensitive Content Teaching	3
ECD 310 Educational Environments: Infants/Toddlers	3
ECD 314 The Developing Child	3
EED/RDG 334 Children's Literature and Elementary School Curriculum	3
MCE 446 Understanding the Culturally Diverse Child *C*	3
MTE 180 Theory of Elementary Mathematics	3
MTE 181 Theory of Elementary Mathematics	3
SPE 311 Orientation to Education of Exceptional Children *SB*	3

Fine arts requirement 9

Total 33

* A minimum grade of "C" is required in all courses.

ITC Program Courses*

(Any Semester in Program)

BLE 335 Language Diversity in Classrooms 3
RDG 415 Teaching Phonics 3

Semester I

ECD 400 Inquiry into Teaching and Learning 3
ECD 401 Integrated Curriculum and Assessment: Social Studies and Creative Arts 3
ECD 403 Educational Environments: Preschool/ Kindergarten/Primary Grades 3
ECD 496 Field Experience 0
EDT 300 Computers in Education 1
SPF 401 Theory and Practice in Education 1

Total 11

Semester II

ECD 300 Principles of Interprofessional Collaboration 3
ECD 402 Integrated Curriculum and Assessment: Math and Science 3
ECD 496 Field Experience 0
SPE 394 ST: Quality Practices in the Collaborative Classroom .. 3

Total 9

Semester III

ECD 315 Classroom Organization and Guidance in the Early Years 2
ECD 404 Teaching Reading and Language Arts in Early Childhood 3
ECD 405 Practicum in Teaching Reading and Language Arts in Early Childhood 2
ECD 496 Field Experience 0

Total 7

Semester IV

EED 478 Student Teaching in the Elementary School 10–15

ITC program course total 43–48

* A minimum grade of "C" is required in all courses.

Elementary Education (Elementary Education Partnership Program)—B.A.E.

The Partnership program includes three semesters of field placement in classroom settings, drawing on the rich resources of the Phoenix metropolitan area. The fourth semester is a 15-week, full-time student teaching capstone experience. Optional course content is in place to qualify all students in this program for a provisional ESL certificate.

Course Requirements. Many courses are held at local elementary schools during the regular school day. Field Experience requires a minimum commitment of six hours a week during the regular school day. Field-based courses are taken in semester blocks in sequential order. Program courses and requirements are subject to change depending on the ITC admission date.

Required

First-Year Composition 6
General Studies 35–37

Total 41–43

Electives 0–7

College of Education Requirements*

EDP 303 Human Development *L* 3
or CDE 232 Human Development (3)
or ECD 314 The Developing Child (3)
or EDP 313 Childhood and Adolescence (3)
EDP 310 Educational Psychology *SB* 3
MCE 446 Understanding the Culturally Diverse Child *C* 3
MTE 180 Theory of Elementary Mathematics 3
MTE 181 Theory of Elementary Mathematics 3
SPE 311 Orientation to Education of Exceptional Children *SB* .. 3

Total 18

* A minimum grade of "C" is required in all courses.

ITC Program Courses*

Semester I

BLE 409 Language-Sensitive Content Teaching 3
EED 433 Language Arts Methods, Management, and Assessment in the Elementary School 3
EED 496 Field Experience 0
EED 498 PS: Integrated Children's Literature 1
RDG 415 Teaching Phonics 3
RDG 494 ST: Teaching Reading/Practicum Grades K–3 3
SPE 394 ST: Quality Practices in the Collaborative Classroom .. 1
SPF 401 Theory and Practice in Education 1

Total 15

Semester II

EDT 300 Computers in Education 1
EED 455 Social Studies Methods, Management, and Assessment in the Elementary School 3
EED 496 Field Experience 0
EED 498 PS: Integrated Children's Literature 1
RDG 494 ST: Teaching Reading/Practicum Grades 4–8 3
SPE 394 ST: Quality Practices in the Collaborative Classroom .. 1

Total 9

Semester III

EED 420 Science Methods, Management, and Assessment in the Elementary School 3
EED 444 Organizing the Classroom Culture 1
EED 480 Mathematics Methods, Management, and Assessment in the Elementary School 3
EED 496 Field Experience 0
SPE 394 ST: Quality Practices in the Collaborative Classroom .. 1
SPF 301 Culture and Schooling *L* 3

Total 11

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/ quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

Semester IV

EED	478	Student Teaching in the Elementary School	10–15
ITC program course total			45–50

* A minimum grade of "C" is required in all courses.

Elementary Education (Apprentice Teacher Program)—B.A.E.

Offered jointly with the local school districts, the Apprentice Teacher Program (ATP) is a concentrated, full-time, daytime certification program option that is completed in one calendar year, with all course work based in the participating schools. This full-immersion program begins each January and leads to K–8 teacher certification.

Course Requirements. The Initial Teacher Certification (ITC) program is completed in one calendar year, spring admission only. All course work (General Studies and College of Education requirements) not included in the ATP program, must be completed before beginning the program. Additionally, undergraduate students must complete 73 semester hours by the start of the program. The program schedule conforms to the public school calendar rather than the ASU calendar, thereby extending the academic year by eight weeks. The program is intense but efficient. Students are actively engaged in classroom experiences or ASU course work for at least seven hours every day (Monday–Friday) for 46 weeks. Field-based courses are taken in semester blocks in sequential order. Program courses and requirements are subject to change depending on the ITC admission date.

Required

First-Year Composition	6
General Studies	35–37
Total	41–43
Electives	9–14

College of Education Requirements*

EDP	310	Educational Psychology *SB*	3
MTE	180	Theory of Elementary Mathematics	3
MTE	181	Theory of Elementary Mathematics	3
SPE	311	Orientation to Education of Exceptional Children *SB*	3
Fine arts requirements			9
Total			21

* A minimum grade of "C" is required in all courses.

ITC Program Courses*

Semester I: Spring

DCI	498	PS: Field Experience	2
EDT	300	Computers in Education	1
EDP	303	Human Development *L*	3
EED	433	Language Arts Methods, Management, and Assessment in the Elementary School	3
RDG	414	Teaching Reading/Decoding	3
RDG	415	Teaching Phonics	3
SPE	301	Culture and Schooling *L*	3
SPE	401	Theory and Practice in Education	1
Total			19

Semester II: Summer

EED	420	Science Methods, Management, and Assessment in the Elementary School	3
EED	444	Organizing the Classroom Culture	1
EED	455	Social Studies Methods, Management, and Assessment in the Elementary School	3
EED	480	Mathematics Methods, Management, and Assessment in the Elementary School	3
EED	498	PS: Field Experience	3
SPE	394	ST: Quality Practices in the Collaborative Classroom	3
Total			16

Semester III: Fall

EED	478	Student Teaching in the Elementary School	12
ITC program course total			47

* A minimum grade of "C" is required in all courses.

Elementary Education (Multilingual/Multicultural Education Concentration)—B.A.E.

Language Proficiency. Language proficiency requirements must be met for each endorsement before completing the Initial Teacher Certification (ITC) professional program.

Bilingual endorsement for Spanish. Students are required to pass the Arizona Classroom Teacher Spanish Proficiency Exam administered through ASU's Department of Languages and Literatures. For more information, call 480/965-6281. The exam is administered at several colleges in Arizona.

Bilingual endorsement for an American Indian language. Proficiency for this endorsement must be verified in writing by an official of the appropriate tribe.

English as a Second Language. Students admitted into the Multilingual/Multicultural Program who are pursuing the English as a Second Language Endorsement must fulfill a second language proficiency requirement. Students are required to submit proof of one of the following to the Office of Student Services before an Institutional Recommendation will be provided to the student:

1. completion of six semester hours of college credits in a single second language (which may include sign language) or the equivalent, from an accredited institution. Credit must be from two different courses, and not a repeat of the same course;
2. documentation of placement by the language department of an accredited institution in a third-semester level second language;
3. documentation of a passing score on the Arizona Classroom Spanish Proficiency Examination; or
4. documentation of proficiency in an American Indian language, verified by an official designated by the appropriate tribe.

Course Requirements. Many courses are held at local elementary schools during the regular school day. Field Experience requires a minimum commitment of six hours a week during the regular school day. Field-based courses are taken in semester blocks in sequential order. Program courses and requirements are subject to change depending on the ITC admission date.

Required

First-Year Composition	6
General Studies	35–37
Total	41–43
Electives	0–7

College of Education Requirements[1]

EDP 310 Educational Psychology *SB*	3
MCE 446 Understanding the Culturally Diverse Child *C*	3
MTE 180 Theory of Elementary Mathematics	3
MTE 181 Theory of Elementary Mathematics	3
RDG/EED 334 Children's Literature and Elementary School Curriculum	3
SPE 311 Orientation to Education of Exceptional Children *SB*	3
Fine arts requirements	9
Language proficiency[2]	0–6
Total	27–33

[1] A minimum grade of "C" is required in all courses.

[2] For information on language proficiency see, "Language Proficiency," page 188.

ITC Program Courses*

Any Semester in Program

RDG 415 Teaching Phonics	3

Semester I

BLE 400 Principles of Language Minority Education	3
BLE 455 Social Studies Methods, Management, and Assessment in Elementary BLE/ESL Settings	3
BLE 496 Field Experience	0
EDT 300 Computers in Education	1
SPF 301 Culture and Schooling *L*	3
SPF 401 Theory and Practice in Education	1
Total	11

Semester II

BLE 409 Language-Sensitive Content Teaching	3
BLE 420 Science Methods, Management, and Assessment in BLE/ESL Settings	3
BLE 480 Mathematics Methods, Management, and Assessment in Elementary BLE/ESL Settings	3
BLE 496 Field Experience	0
MCE 447 Diversity in Families and Communities in Multicultural Settings	3
Total	12

Semester III

BLE 414 Reading Methods, Management, and Assessment in BLE/ESL Settings	3
BLE 433 Language Arts Methods, Management, and Assessment in Elementary BLE/ESL Settings	3
BLE 481 Reading Practicum	3
BLE 496 Field Experience	0
SPE 394 ST: Quality Practices in the Collaborative Classroom	3
Total	12

Semester IV

BLE 478 Student Teaching in Elementary School	10–15
ITC program course total	48–53

* A minimum grade of "C" is required in all courses.

Secondary Education—B.A.E.

The Secondary Education major includes two areas of study: academic specialization and Initial Teacher Certification (ITC) professional education course work and experiences.

The academic specialization or teaching major requires 30 to 60 semester hours in a discipline. The ITC program in Secondary Education is a 36–38 semester hour sequential program that consists of pedagogical and theoretical training. Refer to the pages shown in the "Academic Specializations" table, page 186.

Course Requirements. All methods courses (including SED 403) must be taken with a field experience. It is recommended that SED 403 be taken during the first semester of ITC admission. Field Experience requires a minimum commitment of six hours a week during the regular school day. Physical Education and Fine Arts areas may follow a different sequence of ITC courses. Program courses and requirements are subject to change depending on the ITC admission date.

Required

First-Year Composition	6
General Studies	35–37
Total	41–43
Electives	0–13

College of Education Requirements*

SPE 311 Orientation to Education of Exceptional Children *SB*	3

* A minimum grade of "C" is required in all courses.

Academic Specialization*

Refer to a separate "Academic Specialization" sheet for specific information about each concentration area.	30–60

* A minimum grade of "C" is required in all courses.

ITC Program Courses[1]

EDP 303 Human Development *L*	3
or EDP 313 Childhood and Adolescence Development[2](3)	
EDP 310 Educational Psychology *SB*	3
EDT 300 Computers in Education	1
RDG 301 Literacy and Instruction in the Content Area *S*	3
SED 403 Middle and Secondary School Principles, Curricula, and Methods[3]	3
SED 496 Field Experience	0
SED 496 Field Experience	0
SED 496 Field Experience	0
SED 478 Student Teaching in Secondary Schools	10–12
SPE 394 ST: Inclusion Practices at the Secondary Level	3
SPF 301 Culture and Schooling *L*	3
SPF 401 Theory and Practice in Education	1
Methods in Academic Specialization I[3]	3

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

Methods in Academic Specialization II[3]	3
ITC program course total	36–38

[1] A minimum grade of "C" is required in all courses.
[2] Students who take EDP 313 instead of EDP 303 and student teach in grades 5–9 qualify for a recommended middle grade endorsement.
[3] This course must be taken with field experience.

Special Education—B.A.E.

Course Requirements. Many courses are held at local elementary schools during the regular school day. Field Experience requires a minimum commitment of six hours a week during the regular school day. Field-based courses are taken in semester blocks in sequential order. Program courses and requirements are subject to change depending on the ITC admission date.

Required

First-Year Composition	6
General Studies	35–37
Total	41–43
Electives	7–17

College of Education Requirements[1]

MTE 180 Theory of Elementary Mathematics	3
MTE 181 Theory of Elementary Mathematics	3
Fine Arts requirement	9
Total	15

ITC Program Courses[1]

Semester I

SPE 309 Basic Special Education Curriculum[2]	3
SPE 311 Orientation to Education of Exceptional Children[2] *SB*	3
SPE 314 Introduction to Bilingual/Multicultural Special Education	3
SPE 361 Introduction to Learning Disabilities	3
SPE 496 Field Experience	0
SPF 301 Culture and Schooling *L*	3
Total	15

Semester II

EDT 300 Computers in Education	1
SPE 312 Mental Retardation	3
SPE 336 Behavioral and Emotional Problems in Children	3
SPE 412 Evaluating Exceptional Children	3
SPE 413 Methods in Language, Reading, and Arithmetic for Exceptional Children	3
SPE 496 Field Experience	0
Total	13

Semester III

SPE 411 Parent Involvement and Regulatory Issues	3
SPE 414 Methods and Strategies in Behavior Management	3
SPE 415 Social Behavioral Problems of Exceptional Children	3
SPE 494 ST: Instruction in Content Areas: Science/Social Studies	3
SPE 496 Field Experience (7.5 hours/week)	0
Total	12

Semester IV

SPE 478 Student Teaching in Special Education	10–15
ITC program course total	50–55

[1] A minimum grade of "C" is required in all courses.
[2] This course may be taken before being admitted to the ITC.

Selected Studies in Education—B.A.E.

Applications are not being accepted for the major in Selected Studies in Education at this time.

ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and beyond. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges, including the College of Education, to meet the instructional and informational needs of a diverse community.

The ASU Extended Campus goes beyond the boundaries of the university's three physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies including television, the Internet, and Independent Learning. The Extended Campus also offers a variety of professional continuing education and community outreach programs.

For more information, see "ASU Extended Campus," page 671, or access the Web site at www.asu.edu/xed.

ACADEMIC STANDARDS

Preprofessional Status

All undergraduate students admitted to the College of Education as *preprofessional students* are subject to the general standards of academic good standing of the university. However, students who maintain standards of academic good standing during their freshman and sophomore years are not necessarily guaranteed admission to the Initial Teacher Certificate (ITC) program offered by the College of Education.

Professional Program Status

Students admitted to the ITC program within the College of Education must maintain academic standards and demonstrate requisite qualifications for successful teaching, including sound physical and mental health, interpersonal skills, basic communication skills, a positive attitude, appropriate professional conduct, and satisfactory performance in field experiences. Because ITC standards are higher than those for the university, a student who is suspended from the ITC program may still be eligible to enroll in other non-ITC courses.

A copy of the Retention and Disqualification Policy which is part of the ITC handbook may be obtained from the Office of Student Services, EDB L1-13.

College of Education faculty and placement teachers will routinely review preservice teachers' professional attributes and characteristics to determine if the student is making satisfactory progress at both midterm and final. To maintain

College of Education Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Counseling	M.C.	—	Division of Psychology in Education
Counseling Psychology	Ph.D.	—	Division of Psychology in Education
Counselor Education	M.Ed.	—	Division of Psychology in Education
Curriculum and Instruction	M.A.	Bilingual education, early childhood education, elementary education, English as a second language, Indian education, language and literacy, mathematics education, science education, secondary education, social studies education	Division of Curriculum and Instruction
	M.Ed.	Bilingual education, early childhood education, elementary education, English as a second language, Indian education, language and literacy, mathematics education, professional studies, science education, secondary education, social studies education	Division of Curriculum and Instruction
	Ed.D.	Bilingual education, curriculum studies, early childhood education, elementary education,[1] English as a second language, Indian education, language and literacy, mathematics education, science education, secondary education,[1] social studies education	Division of Curriculum and Instruction
	Ph.D.[2]	Art education,[3] curriculum studies, early childhood education, elementary education, English education, exercise and wellness education,[4] language and literacy, mathematics education, music education, physical education, science education, special education	Interdisciplinary Committee on Curriculum and Instruction
Educational Administration and Supervision	M.Ed., Ed.D.	—	Division of Educational Leadership and Policy Studies
Educational Leadership and Policy Studies	Ph.D.	—	Division of Educational Leadership and Policy Studies
Educational Psychology	M.A., M.Ed.	—	Division of Psychology in Education
	Ph.D.	Learning; lifespan developmental psychology; measurement, statistics, and methodological studies; school psychology	Division of Psychology in Education
Educational Technology	M.Ed., Ph.D.	—	Division of Psychology in Education
Higher and Postsecondary Education	M.Ed., Ed.D.	Higher education	Division of Educational Leadership and Policy Studies
Social and Philosophical Foundations of Education	M.A.	—	Division of Educational Leadership and Policy Studies
Special Education	M.A.	—	Division of Curriculum and Instruction
	M.Ed.	Gifted, mildly disabled, multicultural exceptional, severely/multiply disabled	Division of Curriculum and Instruction

[1] Applications are not being accepted at this time.

[2] Program is administered in collaboration with the Graduate College.

[3] This concentration is administered in collaboration with the Herberger College of Fine Arts.

[4] Doctoral courses for this interdisciplinary program administered by ASU Main are offered by ASU East.

good standing, students will need to demonstrate appropriate professional demeanor in field placements and college classes.

Students demonstrating behaviors or characteristics that make it questionable as to whether they can succeed in the teaching profession are reviewed by the director of the Office of Professional Field Experiences and the assistant dean of the Office of Student Services. If necessary, a review panel composed of faculty members who have had direct involvement with the student is convened. Following this review, the student may be referred to the Division of Curriculum and Instruction Standards and Appeals Committee. The committee's review may result in a decision to disqualify the student or the specification of conditions under which continued participation is permitted, i.e., probation.

Students who wish to appeal decisions of the Division of Curriculum and Instruction Standards and Appeals Committee may do so in writing to the dean of the college. Any exceptions to the retention and disqualification policies and procedures must be approved by the Division of Curriculum and Instruction Standards and Appeals Committee and the dean of the College of Education.

Certification for Teaching

The curricula for both the undergraduate and postbaccalaureate Initial Teacher Certification programs meet the requirements for teacher certification in the State of Arizona.

In addition to the course requirements specified in this catalog, there are other requirements for teacher certification mandated by the State of Arizona including the U.S. Constitution and Arizona Constitution requirement. Each student must pass the Arizona Educator Proficiency Assessment, which consists of professional knowledge and subject knowledge tests.

Because these requirements vary over program areas and may be changed at any time, students are encouraged to maintain close contact with the Office of Student Services regarding the most current state certification requirements.

The College of Education is approved by the Arizona Department of Education for the preparation of elementary, secondary, and special education teachers. Students who complete an approved program of study and meet all graduation requirements of the university and the college are recommended for certification to the Arizona Department of Education. The Office of Student Services maintains information about current certification requirements in Arizona and other states. (This information includes fingerprint clearance and passing the Arizona Educator Proficiency Assessment.)

Independent Learning Course Work for Credit

It is the general policy of the College of Education not to accept course credit for *courses in education* taken through Independent Learning. Exceptions to this policy may be approved if the Independent Learning course work has been approved in advance of enrollment in the course by the student's advisor, respective program coordinator, and division director. In all such cases, an appropriate rationale must be submitted with the request to enroll.

B.I.S. CONCENTRATION

A concentration in education is available under the Bachelor of Interdisciplinary Studies (B.I.S.) degree, a program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations (or one double concentration) and an interdisciplinary core, students in the B.I.S. program take active roles in creating their educational plans and defining their career goals. For more information, see "Bachelor of Interdisciplinary Studies," page 116.

GRADUATE DEGREES

The College of Education offers numerous graduate degree programs. For more information, see the "College of Education Graduate Degrees and Majors" table, page 191, and the *Graduate Catalog*.

COLLEGE OF EDUCATION (COE)

COE 501 Introduction to Research and Evaluation in Education. (3)
fall, spring, summer
Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.

COE 502 Introduction to Data Analysis. (3)
fall, spring, summer
Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software. Cross-listed as EDP 502. Credit is allowed for only COE 502 or EDP 502.

COE 503 Introduction to Qualitative Research. (3)
fall, spring, summer
Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry. Cross-listed as EDP 503. Credit is allowed for only COE 503 or EDP 503.

COE 504 Learning and Instruction. (3)
fall, spring, summer
Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice. Cross-listed as EDP 504. Credit is allowed for only COE 504 or EDP 504.

COE 505 American Education System. (3)
fall, spring, summer
Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

Division of Curriculum and Instruction

coe.asu.edu/programs
480/965-1644
ED 426

Carlos Julio Ovando, Director

Professors: Appleton, Baker, Barone, Bitter, Christie, Edelsky, Faltis, Flores, E. Garcia, Gryder, Guzzetti, Hudelson, Nelson, Ovando, Piburn, Rutherford, Searfoss, Stahl, Staley, Surbeck, Swadener, Tobin, Zucker

Associate Professors: Anijar, Arias, Benavides, Blumenfeld-Jones, Cohen, Cohn, Di Gangi, Gomez, McCoy, Middleton, Rader, Smith, Vallejo

Assistant Professors: Baek, Clark, Fischman, Lamorey, MacSwan, Manuelito, Martinez-Roldan, Rolstad, Trujillo, Young

Clinical Associate Professors: P. Garcia, Mathur

Clinical Assistant Professor: Christine

Lecturers: Atkinson, Burstein, Cocchiarella, Devitt, Gérard, Harrison, Kastre, Kortman, Rutowski, Spanias

Academic Professional Senior: Enz

Initial Teacher Certification Programs

Apprentice Teacher Program (ATP)
Diné Teacher Education Program (DTEP)
Early Childhood Interprofessional Program (ECD)
Elementary Education Partnership Program (EED)
Integrated Certification in Teacher Education (INCITE) (for postbaccalaureate students only)
Multilingual/Multicultural (MLMC) Program
Secondary Education (SED) (7–12)
Special Education (SPE)
Teacher Education for Arizona Mathematics and Science (TEAMS) (for postbaccalaureate students only)
Teaching for a Diverse Future (TDF)

Degrees: B.A.E., M.A., M.Ed., Ed.D., Ph.D.

Bachelor of Arts in Education—B.A.E.

The faculty in the Division of Curriculum and Instruction offer several undergraduate academic programs designed to prepare persons to teach effectively in bilingual education, early childhood, elementary, English as a second language, secondary, and special education settings. Programs in special education lead to Arizona teacher certification in the mentally disabled, emotionally disabled, and learning disabilities. Programs of study leading to special endorsements by the Arizona Department of Education are bilingual education, ESL, middle school education, reading, and school library science.

Graduate Programs

The faculty in the division offer graduate degrees in a number of majors. See the "College of Education Graduate Degrees and Majors" table, page 191, and the *Graduate Catalog*.

BILINGUAL EDUCATION (BLE)

BLE 335 Language Diversity in Classrooms. (3)
fall and spring
Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction, curriculum, assessment, and language policy. Lecture, discussion, lab. Corequisites: RDG 414, 481.

BLE 400 Principles of Language Minority Education. (3)
fall and spring
Overview of philosophical and theoretical foundations of bilingual education and ESL models of instruction. Other topics include significant legislative and judicial measures. Lecture, small group discussion. Prerequisite: ITC admission.

BLE 409 Language-Sensitive Content Teaching. (3)
fall and spring
For preservice students seeking K–8 certification and the endorsement in bilingual education or ESL. Lecture, discussion. Prerequisite: ITC admission.

BLE 414 Reading Methods, Management, and Assessment in BLE/ESL Settings. (3)
fall and spring
Teaching and assessing reading with emphasis on integrated curriculum and literature-based instruction for BLE/ESL learners. Strategies for decoding (phonics), vocabulary, comprehension, and content area reading. Lecture, lab, discussion. Prerequisite: ITC admission.

BLE 420 Science Methods, Management, and Assessment in BLE/ESL Settings. (3)
fall and spring
Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools. Lecture, lab, discussion. Prerequisite: ITC admission.

BLE 433 Language Arts Methods, Management, and Assessment in Elementary BLE/ESL Settings. (3)
fall and spring
Social nature of oral and written, first- and second-language acquisition and congruent teaching, management, assessment practices in BLE/ESL settings. Lecture, lab, discussion. Prerequisite: ITC admission.

BLE 455 Social Studies Methods, Management, and Assessment in Elementary BLE/ESL Settings. (3)
fall and spring
Examines methods, classroom management strategies, and assessment techniques for social studies instruction in elementary BLE/ESL classes. Lecture, lab, discussion. Prerequisite: ITC admission.

BLE 478 Student Teaching in the Elementary School. (3–15)
fall and spring
Supervised teaching in the area of specialization. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee. Prerequisite: ITC admission.

BLE 480 Mathematics Methods, Management, and Assessment in Elementary BLE/ESL Settings. (3)
fall and spring
Teaching, management, and assessment of mathematics in K–8 BLE/ESL settings. Lecture, lab, discussion. Prerequisite: ITC admission.

BLE 481 Reading Practicum. (3)
fall and spring
Applies concepts from BLE 414. Supervised school-based experiences in teaching reading to BLE/ESL students. Prerequisite: ITC admission.

BLE 496 Field Experience. (0)
fall and spring
Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. Fee. Prerequisite: ITC admission.

BLE 498 Pro-Seminar. (1–7)
fall and spring
Small-group study and research for advanced students within their majors. Prerequisites: ITC admission; major status in the department (or instructor approval).

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

BUSINESS EDUCATION (BUE)

BUE 480 Teaching Business Subjects. (3)
fall and spring
Organization and presentation of appropriate content for business subjects in the secondary school.

BUE 481 Technology in Business and Vocational Education. (3)
fall and spring
Emerging curricula and instructional technology in business and vocational education. Lecture, hands-on computer instruction.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

CURRICULUM AND INSTRUCTION (DCI)

DCI 302 Principles and Applications of Effective Instruction. (3)
fall and spring
Principles of teaching identified by research on teaching effectiveness. Application of principles to classroom practice. Prerequisites: EDP 303; education major.

DCI 396 Field Experience I. (0)
fall and spring
First-semester ITC. Observation and limited participation in a school setting. Focus on observation of development, learning, management, instruction, assessment, and motivation. Requires 4 hours per week. Fee. Corequisite: semester I of the ITC.

DCI 397 Field Experience II. (0)
fall
Second-semester ITC. Observation and limited participation in a school setting. Focus on observation of development, learning, management, instruction, assessment, and motivation. Requires 6 hours per week. Fee. Corequisite: semester II of the ITC.

DCI 484 Service Learning Internship. (1–12)
fall, spring, summer
Fee.

DCI 498 Pro-Seminar. (1–7)
selected semesters
Topics may include the following:
- Field Experience. (2)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

EARLY CHILDHOOD EDUCATION (ECD)

ECD 300 Principles of Interprofessional Collaboration. (3)
fall and spring
Focuses on the dispositions, experiences, knowledge, and skills necessary for interprofessional collaboration designed for young children and their families. Prerequisite: ITC admission.

ECD 310 Educational Environments: Infants/Toddlers. (3)
fall, spring, summer
Organizing, planning, and implementing developmentally appropriate educational practices to provide optimal learning environments for infants and toddlers in group settings.

ECD 314 The Developing Child. (3)
fall, spring, summer
Examines all aspects of development of children, birth through age 8, with implications for teachers and parents. Requires classroom observation and participation.

ECD 315 Classroom Organization and Guidance in the Early Years. (2)
fall and spring
Develops understanding and application of classroom organization and management principles, strategies, and procedures. Prerequisite: ITC admission.

ECD 322 Communication Arts in Early Childhood Education. (3)
fall
Factors affecting language development. Setting conditions for learning in listening, speaking, reading, and writing. Prerequisites: ENG 213 (or its equivalent); postbaccalaureate certification program admission.

ECD 378 Practicum in Early Childhood Development. (3)
fall and spring
Provides a field-based experience in selected early childhood settings (outside the public schools before student teaching). Prerequisite: ECD 314.

ECD 400 Inquiry into Teaching and Learning. (3)
fall and spring
Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings. Prerequisite: ITC admission.

ECD 401 Integrated Curriculum and Assessment: Social Studies and Creative Arts. (3)
fall and spring
Presents materials, techniques, and resources for a balanced program of social studies and aesthetic expression appropriate for children in preschool through 3rd grade, with emphasis on the integrated curriculum. Prerequisite: ITC admission.

ECD 402 Integrated Curriculum and Assessment: Math and Science. (3)
fall and spring
Emphasizes developmentally appropriate educational strategies and instructional techniques in teaching mathematics and science to children in preschool through 3rd grade, within an integrated curriculum approach. Prerequisite: ITC admission.

ECD 403 Educational Environments: Preschool/Kindergarten/Primary Grades. (3)
fall and spring
Focuses on interactions between young learners and the physical and social environments encountered in preschool, kindergarten, and primary settings. Prerequisite: ITC admission.

ECD 404 Teaching Reading and Language Arts in Early Childhood. (3)
fall and spring
Development of oral and written language from birth to age 8. Describes developmentally appropriate educational strategies for promoting growth in speaking, listening, reading, and writing. Prerequisite: ITC admission.

ECD 405 Practicum in Teaching Reading and Language Arts in Early Childhood. (2)
fall and spring
Supervised experience teaching reading and language arts at the preschool, kindergarten, and primary-grade (1–3) levels. Developmentally appropriate strategies to promote young children's speaking, listening, reading, and writing abilities. Prerequisite: ITC admission.

ECD 414 Interprofessional Practicum. (3)
fall and spring
Investigates services and agencies available in the local community to parents of children with special needs. Practical experiences with an intermittent seminar format. Dispositions, knowledge, experiences, and skills necessary for interprofessional collaboration across multiple agencies and programs. Prerequisite: ITC admission.

ECD 496 Field Experience. (0)
fall and spring
Applies course content in a preschool through 3rd grade setting. Emphasizes observation, focus on child-centered curriculum, planning and delivering instruction, and assessment. Fee. Corequisite: ECD 404.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

ELEMENTARY EDUCATION (EED)

EED 334 Children's Literature and Elementary School Curriculum. (3)
fall and spring
Selecting and using children's literature in various curriculum areas in elementary school classrooms with diverse student populations. Lecture, discussion, lab. Cross-listed as RDG 334. Credit is allowed for only EED 334 or RDG 334. Prerequisite: professional program admission. Corequisite: DCI 396 or EED 496.

EED 420 Science Methods, Management, and Assessment in the Elementary School. (3)
fall and spring
Examines philosophies of science and how these relate to the implementation, management, and assessment of science teaching. Lecture, discussion, lab. Fee. Prerequisite: ITC admission.

EED 433 Language Arts Methods, Management, and Assessment in the Elementary School. (3)
fall and spring
Theory on the social nature of oral and written language and congruent teaching, management, and assessment practices. Lecture, discussion, lab. Corequisite: EED 455.

EED 444 Organizing the Classroom Culture. (1)
fall and spring
Examines how teachers can create and maintain a classroom learning community within the context of an elementary school program. Discussion, workshop, lab. Prerequisite: ITC admission.

EED 455 Social Studies Methods, Management, and Assessment in the Elementary School. (3)
fall and spring
Teaching methods, classroom management strategies, and assessment techniques for social studies instruction in the elementary grades. Lecture, discussion, lab. Prerequisite: ITC admission.

EED 478 Student Teaching in the Elementary School. (3–15)
fall and spring
Supervised teaching in the area of specialization. Synthesized experience in curriculum, instruction, and classroom management. Fee. Prerequisite: ITC admission.

EED 480 Mathematics Methods, Management, and Assessment in the Elementary School. (3)
fall and spring
Beginning course in the teaching, management, and assessment of mathematics in grades K–8. Lecture, discussion, lab. Prerequisite: ITC admission.

EED 496 Field Experience. (0)
fall and spring
Applies course content in a K–8 school classroom. Emphasizes observation, pupil management, planning and delivery of instruction, and assessment. Fee.

EED 498 Pro-Seminar. (1–7)
selected semesters
Topics may include the following:
- Field Experience. (3)
- Integrated Children's Literature. (1)
- Language and Learning. (3)
  General Studies: L

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

INDIAN EDUCATION (IED)

IED 401 Navajo Language and Culture I. (3)
fall
History and culture are added components to the introduction of language reading, writing, and speaking. Emphasizes basic communication and appreciation of history and culture. Lecture, discussion.

IED 403 Navajo Language and Culture II. (3)
spring
Emphasizes communication, grammar, and sentence structures. Translations, reading, writing, and discussions of proper and slang language. Includes cultural activities. Lecture, discussion. Prerequisite: IED 401.

IED 410 History of American Indian Education. (3)
fall and spring
Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 410 or 510.
General Studies: SB, C, H

IED 422 Methods of Teaching Indian Students. (3)
spring
Philosophies, methodologies, and materials used in Indian education. Examines local and tribal classroom materials. Experimentation with new teaching concepts. Prerequisite: IED 410.

IED 430 Issues in Language and Literacy of Indigenous Peoples. (3)
spring
Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 430 or 530.
General Studies: HU/SB, C

IED 433 Counseling the Indian Student. (3)
fall
Techniques and methods used in counseling, with emphasis on understanding Indian cultures and values. Experimentation with new counseling concepts. Prerequisite: IED 410.

IED 444 The Role of Governments in Native Education Policy and Administration. (3)
fall
Examines the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty as they have shaped American Indian education. Analyzes administrative practices and personnel, program and fiscal management, and resources as they reflect the historic and present influence of this triad of factors. Credit is allowed for only IED 444 or 544. Lecture, seminar.
General Studies: SB

IED 460 Yaqui History and Culture. (3)
fall
Yaqui history and culture ranging from precontact to the present. Larger themes of Yaqui identity, belief systems, family, traditions, community, resistance, dispersion, and survival. Credit is allowed for only IED 460 or 560.
General Studies: HU/SB, C, H

IED 498 Pro-Seminar. (1–7)
fall and spring
Topics may include the following:
- Navajo Language. (3)
  Designed for Navajo and non-Navajo-speaking students who have little or no knowledge of the Navajo language in its written form. Emphasizes development of reading, writing, and speaking skills.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

LIBRARY SCIENCE (LIS)

LIS 410 Children's Literature. (3)
fall, spring, summer
Selects, analyzes, and utilizes modern and classic literature with young readers.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

MULTICULTURAL EDUCATION (MCE)

MCE 446 Understanding the Culturally Diverse Child. (3)
fall and spring
Survey of cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.
General Studies: C

MCE 447 Diversity in Families and Communities in Multicultural Settings. (3)
fall and spring
Diversity and the changing role of schools in a multiethnic society. Lecture, simulation activities, discussion.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

READING EDUCATION (RDG)

RDG 301 Literacy and Instruction in the Content Areas. (3)
fall, spring, summer
Required course for all Secondary Education candidates. Introduces theory and instructional strategies for learning written and oral texts across academic disciplines. Prerequisite: ITC admission.

RDG 334 Children's Literature and Elementary School Curriculum. (3)
fall and spring
Selecting and using children's literature in various curriculum areas in elementary school classrooms with diverse student populations. Lecture, discussion, lab. Cross-listed as EED 334. Credit is allowed for only EED 334 or RDG 334. Prerequisite: professional program admission. Corequisite: DCI 396 or EED 496.

RDG 414 Teaching Reading/Decoding. (3)
fall and spring
Emphasizes teaching reading as part of an integrated classroom curriculum. Includes strategies and skills for teaching decoding (phonics), vocabulary, comprehension, study skills, and content area reading. Prerequisite: ITC admission.

RDG 415 Teaching Phonics. (3)
fall, spring, summer
Provides training in research-based systematic phonics instruction as specified in HB2130 with the study of related research. Lecture, discussion.

RDG 481 Reading Practicum. (3)
fall and spring
Applies concepts from RDG 414 in classroom settings. Students demonstrate teaching strategies under supervision. Required for Elementary Education candidates. Prerequisite: ITC admission.

RDG 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Reading/Decoding. (3)
- Teaching Reading/Practicum Grades K–3. (3)
- Teaching Reading/Practicum Grades 4–8. (3)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

SECONDARY EDUCATION (SED)

SED 400 Principles of Effective Instruction in Secondary Education. (3)
fall, spring, summer
Examines different models of education. Develops and applies appropriate teaching practices for each model to secondary school classrooms. Lecture, discussion. Prerequisite: ITC admission.

SED 403 Middle and Secondary School Principles, Curricula, and Methods. (3)
fall, spring, summer
Advanced level of development of knowledge and skills of instructional planning and methods of teaching and evaluating in the middle and secondary schools. Requires observation/participation. Prerequisite: ITC admission.

SED 478 Student Teaching in Secondary Schools. (3–15)
fall and spring
Practice of teaching. Relationship of theory and practice in teaching. Fee. Prerequisite: ITC admission.

SED 480 Special Methods of Teaching Social Studies. (3)
fall and spring
Interdisciplinary approaches; production and collection of materials. Prerequisite: ITC admission.

SED 496 Field Experience. (0)
fall and spring
Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. Fee. Corequisite: SED 403.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

SPECIAL EDUCATION (SPE)

SPE 294 Special Topics. (1–4)
selected semesters

SPE 309 Basic Special Education Curriculum. (3)
fall, spring, summer
Introduces curricular practices used in inclusion classrooms.

SPE 311 Orientation to Education of Exceptional Children. (3)
fall, spring, summer
Includes gifted, mildly handicapped, severely handicapped, and the bilingual/multicultural exceptional child.
General Studies: SB

SPE 312 Mental Retardation. (3)
fall, spring, summer
Characteristics and assessment specific to mental retardation. Emphasizes terminology, development, educational programming, and therapeutic procedures. Prerequisite: ITC admission.

SPE 314 Introduction to Bilingual/Multicultural Special Education. (3)
fall, spring, summer
Theoretical background and practical application of general issues regarding the education of bilingual/multicultural handicapped children. Prerequisite: ITC admission.

SPE 336 Behavioral and Emotional Problems in Children. (3)
fall, spring, summer
Characteristics and assessment specific to emotionally and behaviorally disturbed children. Emphasizes terminology, development, and educational programming. Prerequisite: ITC admission.

SPE 361 Introduction to Learning Disabilities. (3)
fall, spring, summer
Characteristics and assessment specific to learning disabilities. Emphasizes terminology, development, and educational programming. Prerequisite: ITC admission.

SPE 394 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Basic Special Education Curriculum
- Inclusion Practices at the Secondary Level
- Quality Practices in the Collaborative Classroom

Prerequisite: ITC admission.

SPE 411 Parent Involvement and Regulatory Issues. (3)
fall and spring
Emphasizes parent and school relations through effective communication and state and federal regulations impacting services for the handicapped. Prerequisite: ITC admission.

SPE 412 Evaluating Exceptional Children. (3)
fall and spring
Normative and criterion-referenced diagnostic techniques, including formative evaluation. Emphasizes application. Requires daily practicum. Prerequisite: ITC admission.

SPE 413 Methods in Language, Reading, and Arithmetic for Exceptional Children. (3)
fall and spring
Methods, techniques, and materials for use in prescriptive teaching. Requires daily practicum. Prerequisite: ITC admission.

SPE 414 Methods and Strategies in Behavior Management. (3)
fall and spring
Organization and delivery of instruction, including formative evaluation techniques. Techniques of behavior management. Requires daily practicum. Prerequisite: ITC admission.

SPE 415 Social Behavior Problems of Exceptional Children. (3)
fall and spring
Analysis and intervention into social behavior problems of exceptional populations. Requires daily practicum. Prerequisite: ITC admission.

SPE 455 Early Childhood and the Handicapped. (3)
fall
Early childhood education as it applies to the handicapped child.

SPE 478 Student Teaching in Special Education. (3–15)
fall and spring
"Y" grade only. Fee. Prerequisite: ITC admission.

SPE 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Instruction in Content Areas: Science/Social Studies. (3)

Prerequisite: ITC admission.

SPE 496 Field Experience. (0)
selected semesters
Applies course content in a special education setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. Fee. Prerequisite: ITC admission.

SPE 498 Pro-Seminar. (1–7)
fall and spring
Small-group study and research for advanced students within their majors. Fee.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

Division of Educational Leadership and Policy Studies

coe.asu.edu/programs
480/965-6357
ED 120

Terrence G. Wiley, Director

Regents' Professor: Berliner

Professors: Appleton, Barone, Fenske, Glass, González, Hanson, Molnar, Norton, Smith, Tobin, Turner, Valverde, Webb, Wiley

Associate Professors: Danzig, Hunnicutt, Margolis, Rund, Wilkinson

Assistant Professors: Moses, Powers, Read

Clinical Associate Professor: Macey

Research Professor: de los Santos

Program Areas

Educational Administration and Supervision
Educational Policy Studies
Higher and Postsecondary Education
Social and Philosophical Foundations

Degrees: M.A., M.Ed., Ed.D., Ph.D.

Graduate Programs

The faculty in the division offer several graduate degrees in a number of majors. For more information, see the "College of Education Graduate Degrees and Majors" table, page 191, and the *Graduate Catalog*.

EDUCATIONAL ADMINISTRATION AND SUPERVISION (EDA)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

L literacy and critical inquiry / **MA** mathematics / **CS** computer/statistics/quantitative applications / **HU** humanities and fine arts / **SB** social and behavioral sciences / **SG** natural science—general core courses / **SQ** natural science—quantitative / **C** cultural diversity in the United States / **G** global / **H** historical / See "General Studies," page 85.

HIGHER AND POSTSECONDARY EDUCATION (HED)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

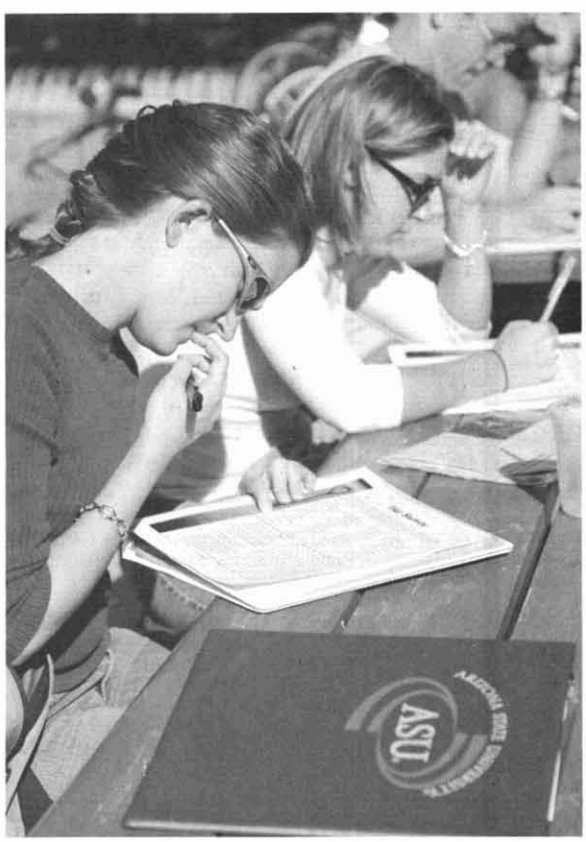
SOCIAL AND PHILOSOPHICAL FOUNDATIONS (SPF)

SPF 301 Culture and Schooling. (3)
fall and spring
For the professional teacher preparation program. Overview of the cultural, social, and political milieus in which formal schooling takes place in the United States. Lecture, recitation. Prerequisite: education major.
General Studies: L

SPF 401 Theory and Practice in Education. (1–2)
fall and spring
For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science, and law. Prerequisite: education major.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.



The Phoenix area's pleasant climate allows students to study outside most days of the year. Tim Trumble photo

Division of Psychology in Education

coe.asu.edu/psyched
480/965-3384
EDB 302

Elsie G. J. Moore, Director

Regents' Professor: Berliner

Professors: Barona, Bernstein, Bitter, Blanchard, Claiborn, Glass, Green, Hackett, Horan, Kerr, Kinnier, Klein, Krus, McWhirter, Nelsen, Robinson Kurpius, Santos de Barona, Strom, Sullivan, Tracey

Associate Professors: Arciniega, Arredondo, Behrens, Brown, Hood, Moore, Savenye, Stafford, Wodrich

Assistant Professors: Atkinson, Brem, Gorin, Husman, Julian, Ladd, Nakagawa, Rayle, Thompson

Clinical Associate Professor: Homer

Clinical Assistant Professors: Glidden-Tracey, Igoe, Stamm

Program Areas

Counseling
Counseling Psychology
Counselor Education
Educational Psychology
  Learning
  Lifespan Developmental Psychology
  Measurement, Statistics, and Methodological Studies
  School Psychology
Educational Technology

Degrees: M.A., M.C., M.Ed., Ph.D.

Graduate Programs

The faculty in the Division of Psychology in Education offer graduate degrees in a number of majors. For more information, see the "College of Education Graduate Degrees and Majors" table, page 191, and the *Graduate Catalog*.

COUNSELOR EDUCATION (CED)

CED 111 Exploration of Education. (3)
fall and spring
Education as an instrument in the development of the individual and society, and its significance as an American institution.
General Studies: SB

CED 250 Career Development. (3)
fall, spring, summer
Covers models of the individual, the world of work, and decision making with emphasis on individual application. Lecture, discussion.
General Studies: L

CED 294 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Career Development. (1–3)
- Foundations of Leadership. (1–3)
- Leadership Colloquium. (1–3)
- Trio. (1–3)

CED 394 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Special Topics in Leadership. (1)
  Courses bring together a faculty member with no more than 12 students to discuss and learn about a specific interest or topic. Topics designed to engage students in intellectual dialogue on one of the themes of leadership, diversity, and service/civic responsibility. Pass/fail elective; taught in the classroom of McClintock Residence Hall. Open to freshmen through senior undergraduates; all majors welcome.

CED 484 Internship. (1–12)
fall and spring
Topics may include the following:
- Leadership Internship
- Leadership Internship and Capstone

CED 493 Honors Thesis. (1–6)
fall and spring

CED 494 Special Topics. (1–4)
fall and spring
Topics may include the following:
- Paraprofessional Training. (3)

CED 498 Pro-Seminar. (1–7)
fall and spring
Topics may include the following:
- Resident Assistant Experience. (2)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

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COUNSELING PSYCHOLOGY (CPY)

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

EDUCATIONAL PSYCHOLOGY (EDP)

EDP 301 Learning and Motivation in Education. (2)
fall and spring
Applies learning and motivation principles to education contexts, using a case format. Prerequisite: education major.

EDP 302 Assessment and Evaluation in Education. (1)
fall and spring
Applies assessment and evaluation principles to education contexts, using a case format. Prerequisite: education major.

EDP 303 Human Development. (3)
fall and spring
Selected aspects of child and adolescent development. Emphasizes possibilities for influence by teachers and parents. Prerequisites: CDE 232 (or its equivalent); education major.
General Studies: L

EDP 310 Educational Psychology. (1–6)
fall, spring, summer
Presents human behavior in educational situations through instructional modules. May be repeated for credit for total of 6 hours.
General Studies: SB

EDP 313 Childhood and Adolescence. (3)
fall, spring, summer
Principles underlying total development of pre- and early-adolescent children. Emphasizes physical, intellectual, social, and emotional development with practical implications for teachers grades 5–9. Prerequisite: EDP 303 or admission to College of Education postbaccalaureate program.

EDP 454 Statistical Data Analysis in Education. (3)
fall, spring, summer
Role of data analysis in research and decision making. Elements of exploratory data analysis, descriptive indexes, and statistical inference. Lecture, lab. Prerequisite: MAT 117.
General Studies: CS

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

Graduate-Level Courses. For information about courses numbered from 500 to 799, see the *Graduate Catalog*, or access www.asu.edu/aad/catalogs on the Web. In some situations, undergraduate students may be eligible to take these courses; for more information, see "Graduate-Level Courses," page 56.

EDUCATIONAL TECHNOLOGY (EDT)

EDT 300 Computers in Education. (1)
fall, spring, summer
Introduces general computer applications, teacher utility programs, World Wide Web, and evaluation of educational software. Required for majors in the College of Education.

EDT 321 Computer Literacy. (3)
fall, spring, summer
Survey of the role of computers in business and education. Laboratory experience in using word processing, database, and spreadsheet software. 2 hours lecture, 2 hours lab.
General Studies: CS

EDT 323 Computer Applications. (3)
fall, spring, summer
Introduces computer applications such as HyperCard, telecommunications, authoring Languages, and expert systems. Lecture, lab.
General Studies: CS

EDT 405 Presentation Technology for Multimedia. (3)
fall
Explores multimedia hardware and software used in creating presentations for educational, corporate, and commercial applications.

EDT 406 Computer Graphics and Animation. (3)
spring
Studies and applies design and animation techniques for use in video or computer-based presentations.

EDT 455 Authoring Tools. (3)
fall, spring, summer
Use of current authoring tools to design and deliver computer-based instructional materials.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

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College of Engineering and Applied Sciences

www.eas.asu.edu **Peter E. Crouch, Ph.D., Dean**

Del E. Webb School of Construction 206
School of Engineering 210
Harrington Department of Bioengineering 215
Department of Chemical and Materials Engineering 219
Department of Civil and Environmental Engineering 227
Department of Computer Science and Engineering 233
Department of Electrical Engineering 239
Department of Industrial Engineering 244
Department of Mechanical and Aerospace Engineering 247
Programs in Engineering Special Studies 255

PURPOSE

The purpose of the College of Engineering and Applied Sciences is to provide students with a range of educational opportunities by which they may achieve competence in the major branches of engineering, in computer science, and construction. Considerable effort is spent on the development and delivery of well-rounded programs that enhance student preparation for professional careers, lifelong learning, and responsible participation as a member of society.

For more information, access the college's Web site at www.eas.asu.edu.

ORGANIZATION

The College of Engineering and Applied Sciences is composed of the following academic and service units, with seven departments making up the School of Engineering:

Del E. Webb School of Construction

School of Engineering
Department of Chemical and Materials Engineering
Department of Civil and Environmental Engineering
Department of Computer Science and Engineering
Department of Electrical Engineering
Department of Industrial Engineering
Department of Mechanical and Aerospace Engineering
Harrington Department of Bioengineering

Research Centers. The college is committed to the development of research programs of national prominence and to the concept that research is an important part of its educational role. The college encourages the participation of qualified undergraduate students and graduate students in various research activities. Most of the faculty are involved in government or industry-sponsored research programs in a wide variety of topics. A partial list of these topics includes aerodynamics, biotechnology, computer design, computer-integrated manufacturing, environmental fluid dynamics, innovative engineering education, microelectronics manufacturing, power systems, semiconductor materials and devices, signal processing, solar energy, solid-state electronic devices, structural dynamics, telecommunications, thermosciences, and transportation systems. This research is carried out in the departments and schools listed above and in the following interdisciplinary research centers:

Center for Low Power Electronics
Center for Research on Education in Science, Mathematics, Engineering, and Technology
Center for Solid State Electronics Research
Center for Systems Science and Engineering Research
Institute for Manufacturing Enterprise Systems
Telecommunications Research Center

Center for Professional Development and Distance Education. The Center for Professional Development and Distance Education, often in cooperation with the college's academic units and research centers, provides a variety of technical conferences, seminars, short courses, and televised and satellite-transmitted programs to enable engineers, scientists, and managers to continue the lifelong learning that is so necessary in a constantly changing world. Programs may be conducted on campus, at various off-campus locations, or at company sites upon request. For more information, call 480/965-1740, or access the center's Web site at www.eas.asu.edu/cpd.

ADMISSION

Individuals wishing to be admitted to freshman standing in the College of Engineering and Applied Sciences should have completed certain secondary-school units. These units are identified in the requirements for each of the two schools in the college. If these conditions are not met, additional university course work, possibly unacceptable for degree credit, may be required.

Entrance requirements of this college may differ from those of other ASU academic units. Students may be admitted under one of two different classifications, professional or preprofessional.

Professional Status. For admission to professional status, Arizona residents and nonresidents must meet one of the