

**Arizona State University**

**General Catalog 2001–2002**





**ASU** ARIZONA STATE UNIVERSITY

**General Catalog**  
2001-2002



Arizona State University





\$4.00



# Arizona State University

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2001–2002 General Catalog

All colleges, schools, divisions, and departments establish certain academic requirements that must be met before a degree is granted. Advisors, directors, department chairs, and deans are available to help the student understand these requirements, but the student is responsible for fulfilling them. At the end of a student's course of study, if requirements for graduation have not been satisfied, the degree is not granted. For this reason, it is important for all students to acquaint themselves with all regulations to be informed throughout the college careers, and to be responsible for completing requirements. Courses, programs, and requirements described in the catalog may be suspended, deleted, restricted, supplemented, or changed in any other manner at any time, at the discretion of the university and the Arizona Board of Regents. The catalog does not establish a contract relative to enrollment but summarizes the total requirements the student must currently meet before qualifying for a faculty recommendation to the Arizona Board of Regents to award a degree.

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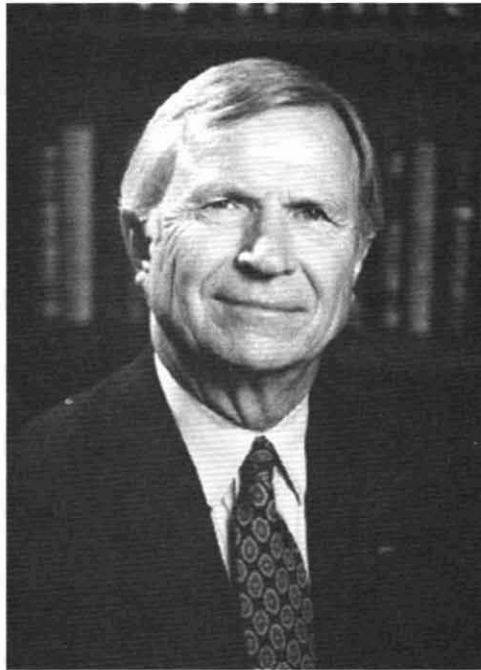
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President Lattie F. Coor

Tim Trumble photo

Dear ASU Students and Prospective Students:

It is my personal pleasure to introduce the Arizona State University 2001–2002 *General Catalog*. It is intended to put a great deal of important information at your fingertips and serve as a guide through your university experience.

The catalog compiles a rather imposing list of programs, courses, requirements, and services. We hope it is organized in a manner that makes it easy to find the information most applicable to you and your course of studies.

While the catalog will answer many of your questions, nothing will substitute for the guidance your advisor can provide. I strongly encourage you to work closely with an advisor to plan your academic program.

On behalf of Arizona State University, I wish you a challenging and fulfilling experience as you work to achieve your goals.

Sincerely,

A handwritten signature in black ink, appearing to read "Lattie F. Coor". The signature is written in a cursive, flowing style.

Lattie F. Coor  
President

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<sup>1</sup> See the *Graduate Catalog*.

<sup>2</sup> See the *ASU West Catalog*.

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<sup>1</sup> See the *Graduate Catalog*

<sup>2</sup> See the *ASU West 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 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

### 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

De E. Webb School of Construction  
**School of Engineering**  
Department of Bioengineering  
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

### 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 Biology  
Department of Chemistry and Biochemistry  
Department of Chicana and Chicano Studies  
Department of English  
Department of Exercise Science and Physical Education  
Department of Family and Human Development  
Department of Geography  
Department of Geological Sciences  
Department of History  
Department of Languages and Literatures

Department of Mathematics  
Department of Microbiology  
Department of Military Science  
Department of Philosophy  
Department of Physics and Astronomy  
Department of Plant Biology  
Department of Political Science  
Department of Psychology  
Department of Religious Studies  
Department of Sociology  
Department of Speech and Hearing Science  
Interdisciplinary Humanities Program  
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 Telecommunication

### Division of Undergraduate Academic Services

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

### Graduate College

### Herberger College of Fine Arts

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

## ASU East

### College of Extended Education

### 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 Manufacturing and Aeronautical Engineering Technology

### East College

Department of Nutrition  
Faculty of Applied Psychology  
Faculty of Business Administration  
Faculty of Elementary Education

Faculty of Exercise and Wellness  
Faculty of Multimedial Writing and Technica Communication

### Morrison School of Agribusiness and Resource Management

## ASU West

### 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

Graduate Programs  
Postbaccalaureate Programs for Teacher Certification  
Undergraduate Professional Teacher Preparation

### College of Extended 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  
Barrett Honors College  
Center for Writing Across the Curriculum  
Research Consulting Center  
University College Center

### School of Management

Accountancy  
Business Administration  
Global Business

## ASU Extended Campus

### College of Extended Education

Academic and Professional Programs  
American English and Culture Program  
Distance Learning 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. Where indicated, the approved area of study is called an "emphasis" or some other name in place of "concentration." For graduate degrees, see the "ASU Graduate Degrees" table, page 511.

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

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Aeronautical Engineering <sup>2</sup>	B.S.		East	656
Technology <sup>1</sup>				
Aeronautical Management Technology <sup>1</sup>	B.S.	Airway science flight management, airway science management	East	637
Aerospace Engineering <sup>1</sup>	B.S.E.		Main	255
African American Studies	B.A.	Humanities/arts, politics and society, social and behavioral sciences	Main	330
Agribusiness	B.S.	Agribusiness finance, e-commerce, food and agribusiness marketing, food science general agribusiness, golf and facilities management, international agribusiness, management of agribusiness, pre-veterinary medicine, professional golf management, resource management	East	608
American Indian Studies	B.S.	---	Main	471
American Studies	B.A.	Emphases: American cultures, American lives, American systems, writing	West	669
Anthropology	B.A.		Main	333
Applied Psychology	B.S.		East	622
Applied Science	B.A.S.	Aviation maintenance management technology	East	639
		Aviation management technology	East	639
		Computer systems administration	East	644
		Consumer products technology	East	614
		Digital media management	East	650
		Digital publishing	East	651
		Emergency management	East	651
		Fire service management	East	651
		Food retailing	East	614
		Instrumentation	East	644
		Microcomputer systems	East	644
		Multimedia writing and technical communication	East	628
		Municipal operations management	East	651
		Operations management	East	650
		Production technology	East	657

<sup>1</sup> This major requires more than 120 semester hours to complete.

<sup>2</sup> Applications for this program are not being accepted at this time.

<sup>3</sup> This program is administered by ASU Main.

## ASU Baccalaureate Degrees (continued)

Major	Degree	Concentration	Campus	Page
Applied Science (continued)	B.A.S.	Resource team specialist	East	614
		Semiconductor technology	East	644
		Software technology applications	East	644
		Technical graphics	East	651
		(All concentrations listed for ASU East)	Extended	—
		All minors available at ASU West, individualized concentration	West	669
Architectural Studies	B.S.D.	—	Main	122
Art	B.A.	Art history, digital arts, museum studies, studio art	Main	270
	B.F.A.	Art education, ceramics, drawing, fibers, intermedia, metals, painting, photography, printmaking, sculpture	Main	271
Asian Languages (Chinese/Japanese)	B.A.	—	Main	385
Biochemistry	B.S.	—	Main	345
Bioengineering <sup>1</sup>	B.S.E.	—	Main	215
Biology	B.S.	Biology and society	Main	340
Broadcasting	B.A.	Broadcast journalism, business/management	Main	478
Business Administration	B.S.	—	East	623
Chemical Engineering <sup>1</sup>	B.S.E.	—	Main	220
Chemistry	B.A., B.S.	—	Main	345
Chicana and Chicano Studies	B.A.	Humanities/cultural sciences, social sciences/policy	Main	351
Civil Engineering <sup>1</sup>	B.S.E.	Construction engineering, environmental engineering	Main	230
Clinical Laboratory Sciences	B.S.	—	Main	410
Communication	B.A., B.S.	—	Main	473
			Extended	683
Communication Studies	B.A., B.S.	Emphases: communication and culture; communication and organizations; communication and relationships; rhetoric, philosophy, and media studies	West	669
Computer Engineering Technology <sup>1</sup>	B.S.	Computer hardware technology, embedded systems technology, software technology	East	643
Computer Information Systems	B.S.	—	Main	157
Computer Science <sup>1</sup>	B.S.	—	Main	237
			Extended	352
Computer Systems Engineering <sup>1</sup>	B.S.E.	—	Main	238
Conservation Biology	B.S.	—	Main	340
Construction <sup>1</sup>	B.S.	General building construction, heavy construction, residential construction, specialty construction	Main	207
Dance	B.F.A.	Choreography, dance education, dance studies, performance	Main	285
Design Science <sup>2</sup>	B.S.D.	—	Main	130
Early Childhood Education	B.A.E.	—	Main	182
Economics	B.A.	—	Main	353
			Main	160
			Main	353
Electrical Engineering <sup>1</sup>	B.S.E.	—	Main	243
Electronics Engineering Technology <sup>1</sup>	B.S.	Electronic systems, microelectronics, telecommunications	East	642
Elementary Education	B.A.E.	Bilingual education/English as a second language	Main	183
			Extended	684
			East	623

<sup>1</sup> This major requires more than 120 semester hours to complete.

<sup>2</sup> Applications for this program are not being accepted at this time.

<sup>3</sup> This program is administered by ASU Main.

## ASU Baccalaureate Degrees (continued)

Major	Degree	Concentration	Campus	Page
Elementary Education (continued)	B.A.E.	Bilingual education/English as a second language Option: middle school education	West West	669 669
Engineering Interdisciplinary Studies <sup>2</sup>	B.S.	—	Main	203
Engineering Special Studies <sup>1</sup>	B.S.E.	Premedical engineering	Main	263
English	B.A.	Linguistics, literature	Main Extended West	354 685 669
Environmental Resources	B.S.	Ecology, watershed ecology, wildlife habitat management	East	612
Exercise and Wellness	B.S.	—	East	625
Exercise Science/Physical Education	B.S.	Exercise science, physical education	Main	360
Family and Human Development	B.S.	Family studies/child development	Main	364
Finance	B.S.	—	Main	163
French	B.A.	—	Main	385
Geography	B.A., B.S.	Meteorology-climatology, urban studies	Main	366
Geological Sciences	B.S.	—	Main	372
German	B.A.	—	Main	385
Global Business	B.S.	Financial management, human resources management, information systems management, international studies, marketing	West	669
Graphic Design	B.S.D.	—	Main	130
History	B.A.	—	Main West Extended	375 669 684
Housing and Urban Development	B.S.D.	—	Main Extended	139 684
Humanities	B.A.	—	Main	382
Industrial Design	B.S.D.	—	Main	130
Industrial Engineering <sup>1</sup>	B.S.E.	—	Main	250
Industrial Technology	B.S.	Environmental technology management, graphic information technology, industrial technology management	East	649
Integrated Studies	B.A., B.S.	—	Main	324
Integrative Studies	B.A.	All minors available at ASU West, individualized concentration	West Extended	669 685
Interdisciplinary Arts and Performance	B.A.	Media, music, performance studies, theater/performance, visual art	West	669
Interdisciplinary Studies	B.I.S.	See the “B.I.S. Concentrations” table, page 109.	Main East Extended	108 620 683
Interior Design <sup>1</sup>	B.S.D.	—	Main	130
Italian	B.A.	—	Main	386
Journalism	B.A.	News editorial, public relations, visual journalism	Main	478
Justice Studies	B.S.	—	Main	482
Landscape Architecture	B.S.L.A.	—	Main	140
Life Sciences	B.S.	Emphases: cell biology and physiology, ecology and organismal biology, human biology and environment	West	669
Management	B.S.	—	Main	168
Manufacturing Engineering Technology <sup>1</sup>	B.S.	Manufacturing engineering technology, mechanical engineering technology	East	656
Marketing	B.S.	—	Main	173

<sup>1</sup> This major requires more than 120 semester hours to complete.<sup>2</sup> Applications for this program are not being accepted at this time.<sup>3</sup> This program is administered by ASU Main.

## ASU Baccalaureate Degrees (continued)

Major	Degree	Concentration	Campus	Page
Materials Science and Engineering <sup>1</sup>	B.S.E.	—	Main	224
Mathematics	B.A.	—	Main	401
	B.S.	Computational mathematical sciences	Main	402
Mechanical Engineering <sup>1</sup>	B.S.E.	—	Main	257
Microbiology	B.S.	—	Main	410
Molecular Biosciences/ Biotechnology	B.S.	—	Main	415
Multimedia Writing and Technical Communication	B.S.	—	East	620
Music	B.A.	—	Main	291
Music Education	B.M.	Choral-general, instrumental, string	Main	291
Music Therapy	B.M.	—	Main	292
Nursing	B.S.N.	—	Main	457
			West <sup>3</sup>	669
Nutrition	B.S.	Dietetics, food and nutrition management, human nutrition	East	629
Performance	B.M.	Guitar, jazz, keyboard, music theatre, orchestral instrument, piano accompanying, voice	Main	293
Philosophy	B.A.	—	Main	417
Physics	B.S.	—	Main	420
		—	Main	420
Plant Biology	B.S.	Environmental science and ecology, plant biochemistry and molecular biology, urban horticulture	Main	426
Political Science	B.A.	—	Main	430
	B.S.	Public policy advocacy and lobbying, public policy analysis	Extended	685
Politics	B.A., B.S.	—	West	669
Psychology	B.A., B.S.	—	Main	437
			West	669
			Extended	685
Real Estate	B.S.	—	Main	175
Recreation	B.S.	Recreation management, tourism	Main	488
Recreation and Tourism Management	B.S.	—	West	669
Religious Studies	B.A.	—	Main	442
Russian	B.A.	—	Main	386
Secondary Education	B.A.E.	Academic specializations: biological sciences, business education, chemistry, Chinese, <sup>2</sup> economics, English, family and human development (home economics), <sup>2</sup> French, geography, German, history, Japanese, journalism, mathematics, mathematics/chemistry, mathematics/physics, physical education, physics, physics/chemistry, political science, Russian, <sup>2</sup> social studies, Spanish	Main	183
		Academic specializations: biological sciences, English, history, mathematics, social studies	West	669
		Option: middle school education	West	669
Selected Studies in Education <sup>2</sup>	B.A.E.	—	Main	185
Social and Behavioral Sciences	B.A., B.S.	Emphases: interdisciplinary behavioral sciences, interdisciplinary social sciences	West	669
Social Work	B.S.W.	—	Main	492
			West	669
			Extended	684

<sup>1</sup> This major requires more than 120 semester hours to complete.

<sup>2</sup> Applications for this program are not being accepted at this time.

<sup>3</sup> This program is administered by ASU Main.



ASU Baccalaureate Degrees (continued)

Major	Degree	Concentration	Campus	Page
Sociology	B.A.	—	Main	445
			West	669
			Extended	685
Spanish	B.S.	—	West	669
	B.A.	—	Main	386
			West	669
Special Education	B.A.E.	—	Main	184
			West	669
Speech and Hearing Science	B.S.	—	Main	449
Supply Chain Management	B.S.	—	Main	175
Theatre	B.A., B.F.A. <sup>2</sup>	—	Main	305
Theory and Composition	B.M.	Composition, theory	Main	296
Urban Planning	B.S.P.	—	Main	139
Women's Studies	B.A.	—	Main	452
			West	669
			West	669

<sup>1</sup> This major requires more than 120 semester hours to complete.

<sup>2</sup> Applications for this program are not being accepted at this time.

<sup>3</sup> This program is administered by ASU Main.



The baccalaureate degree marks the completion of one path, but can also lead to higher educational pursuits.

Tim Trumble photo

# University Calendar

## April 2001

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

## May 2001

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

## June 2001

S	M	T	W	T	F	S
					1	2
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17	18	19	20	21	22	23
24	25	26	27	28	29	30

## July 2001

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

## August 2001

S	M	T	W	T	F	S
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

## September 2001

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23	24	25	26	27	28	29
30						

## 2001

## Summer Sessions

Check the 2001 <i>Summer Sessions Bulletin</i> for details and to confirm these dates	
Mon., Feb. 5	Registration and drop add for first five week session and eight week session
Wed., May 30	
Mon., Feb. 5	Registration and drop add for second five week session
Tues., July 3	
Tues., Apr. 24	Final tuition payment deadline for all summer sessions (For students who register on or after the deadline, fees are due daily)
Mon., May 28	Memorial Day Holiday
Tues., May 29	Instruction begins for first five week session and eight week session
Tues., June 5	Unrestricted course and complete withdrawal deadline for first five week session
Tues., June 5	Unrestricted course and complete withdrawal deadline for eight week session
Fri., June 15	Restricted course withdrawal deadline for first five week session and eight week session
Fri., June 22	Restricted complete withdrawal deadline for first five week session
Fri., June 29	First five week session ends
Mon., July 2	Instruction begins for second five week session
Wed., July 4	Classes are excused for Independence Day
Fri., July 6	August graduation filing deadline must be met to have name appear in commencement program)
Mon., July 9	Unrestricted course and complete withdrawal deadline for second five week session
Fri., July 13	Restricted complete withdrawal deadline for eight week session
Fri., July 20	Eight week session ends
Fri., July 20	Restricted course withdrawal deadline for second five week session
Fri., July 27	Restricted complete withdrawal deadline for second five week session
Fri., Aug. 3	Second five week session ends
Fri., Aug. 3	Commencement

## 2001

## Fall Semester

Check the fall 2001 <i>Schedule of Classes</i> for details and to confirm these dates	
Thurs., Mar. 29	Preregistration
Fri., Apr. 6	
Mon., Apr. 23	Drop add
Sun., Aug. 26	
Wed., Apr. 25	Registration
Sun., Aug. 26	
Tues., July 31	Final tuition payment deadline for fall 2001 (For students who register on or after the deadline, fees are due daily)
Wed., Aug. 15	Residence halls open
Thurs., Aug. 16	New Faculty and Academic Professional Orientation and Reception

**October 2001**

S	M	T	W	T	F	S
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**November 2001**

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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

**December 2001**

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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**January 2002**

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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

**February 2002**

S	M	T	W	T	F	S
					1	2
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10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

**March 2002**

S	M	T	W	T	F	S
					1	2
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24	25	26	27	28	29	30
31						

Thurs., Aug. 16–	ASU Welcome Week 2001
Sun., Aug 19	
Mon., Aug 20	Instruction begins
Mon., Sept. 3	Classes are excused for Labor Day
Fri., Sept. 14	Unrestricted withdrawal deadline
Mon., Oct. 1	Winter session (College of Extended Education [CEE] ) registration begins
Mon., Oct 15	Semester midpoint
Fri., Oct. 19	
Fri., Oct. 19	December graduation filing deadline must be met to have name appear in commencement program)
Fri., Oct. 26	Restricted course withdrawal deadline
Mon., Nov. 12	Classes are excused for Veterans Day
Thurs., Nov. 22	Classes are excused for Thanksgiving recess
Fri., Nov. 23	
Wed., Nov 28	Restricted complete withdrawal deadline
Tues., Dec. 4	Instruction ends
Wed., Dec. 5	Reading day
Thurs., Dec. 6–	Final examinations
Sat., Dec. 8;	
Mon., Dec 10–	
Wed., Dec. 12	
Thurs., Dec. 13	Commencement (4 P.M.)
Fri., Dec. 14	Some residence halls close for semester break
Sat., Dec. 15	Midyear recess begins
Thurs., Dec. 27	Winter session (CEE) instruction begins
<b>2002</b>	<b>Spring Semester</b>
Check the spring 2002 <i>Schedule of Classes</i> for details and to confirm these dates	
Mon., Oct. 29	Preregistration
Tues., Nov. 6, 2001	
Mon., Nov. 19, 2001	Drop/add
Fri., Jan. 18, 2002	
Wed., Nov. 21, 2001	Registration
Fri., Jan. 18, 2002	
Tues., Dec. 18, 2001	Final tuition payment deadline for spring 2002 (For students who register on or after the deadline, fees are due daily)
Tues., Jan. 1, 2002	Winter session classes are excused for New Year's Day
Wed., Jan. 9	Residence halls open
Fri., Jan. 11	Orientation for new students
Fri., Jan. 11	Winter session (CEE) instruction ends
Mon., Jan 14	Instruction begins
Mon., Jan. 21	Classes are excused for Martin Luther King Jr. Day
Fri., Feb. 8	Unrestricted withdrawal deadline
Sun., Mar. 10–	Classes are excused for spring recess; semester midpoint
Sun., Mar 17	
Fri., Mar. 22	May graduation filing deadline (must be met to have name appear in commencement program)
Fri., Mar. 29	Restricted course withdrawal deadline

**April 2002**

S	M	T	W	T	F	S
	1	2	3	4	5	6
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

**May 2002**

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

**June 2002**

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

**July 2002**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**August 2002**

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Thurs , Apr 25

Tues., Apr. 30

Wed., May 1

Thurs , May 2

Sat., May 4:

Mon., May 6-

Wed., May 8

Thurs., May 9

Fri , May 10

**2002**Check the 2002 *Summer Sessions Bulletin* for details and to confirm these dates.

Mon., Feb 4-

Wed., May 29

Mon , Feb. 4-

Tues., July 2

Tues., Apr. 30

Mon., May 27

Tues., May 28

Tues., June 4

Fri., June 14

Fri., June 21

Fri., June 28

Mon., July 1

Thurs , July 4

Fri , July 5

Mon., July 8

Fri., July 12

Fri., July 19

Fri., July 19

Fri , July 26

Fri , Aug. 2

Fri., Aug. 2

Restricted complete withdrawal deadline

Instruction ends

Reading day

Final examinations

Commencement

Residence halls close

**Summer Sessions**

Registration and drop/add for first five week session and eight week session

Registration and drop/add for second five week session

Final tuition payment deadline for all summer sessions  
(For students who register on or after the deadline, fees are due daily)

Memorial Day Holiday

Instruction begins for first five week session and eight-week session

Unrestricted course and complete withdrawal deadline for first five-week session and eight week session

Restricted course withdrawal deadline for first five week session and eight-week session

Restricted complete withdrawal deadline for first five week session

First five-week session ends

Instruction begins for second five week session

Classes are excused for Independence Day

August graduation filing deadline (must be met to have name appear in commencement program)

Unrestricted course and complete withdrawal deadline for second five week session

Restricted complete withdrawal deadline for eight week session

Eight week session ends

Restricted course withdrawal deadline for second five-week session

Restricted complete withdrawal deadline for second five week session

Second five week session ends

Commencement

# Frequently Asked Questions

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## **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 54. 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 54. 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 and Advising," page 670. For more information, call 602/543 8203

## **What is the ASU Extended Campus?**

The ASU Extended Campus offers 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 23, and "ASU Extended Campus," page 683, or call 480 965 9696 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 64) Have you met the First Year Composition requirement? (See "First Year Composition Requirement," page 74.) If you have completed 87 or more semester hours, file a program of study or declaration of graduation (see "Declaration of Graduation," page 76, and "Program of Study Requirements," page 76)

## **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 39, and "Applicants with Disabilities," page 60 Veteran students using GI benefits, see "Veterans Services," page 36.

## **How do I get financial aid?**

In addition to applying for admission, complete the Free Application for Federal Student Aid (FAFSA) by February 15 You may obtain a paper FAFSA from any financial aid office or complete an electronic application at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). See "Student Financial Assistance," page 36, and "Financial Aid," page 48

## **How do I find a place to live and purchase a meal plan?**

Apply early (before March 1, 2001) for the best chance to live on campus beginning in fall semester 2001. Housing is not guaranteed. See "Residential Life," page 36, for information on student housing. Meal plans may be purchased in

advance for ASU Main or upon arrival on campus. For more information about Main campus options, 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 605, in the "ASU East" section, for more information on dining and housing

## **What about orientation?**

Attend ASU Main orientation, where questions regarding advising, class registration, student IDs, on campus housing, and other pertinent topics are answered. See "Orientation," page 60 Information regarding ASU East orientation can be obtained by calling 480 727 1041.

## **How do I get an ID, and what about parking?**

See "Proof of Identification," page 66, about obtaining an ASU student ID card. If you are planning to park at ASU Main, purchase a parking decal. See "Parking Decals," page 44. 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 64, and "University Testing Requirements," page 63

## **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 64 For ASU East Academic Advising, see "Advising," page 605.

## **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/regstrar](http://www.asu.edu/regstrar). Remember that you must first provide proof of measles immunity to Student Health and Wellness Center. See "Immunization Requirements," page 60.

## **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 107.

## **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, REACH 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 "The Craig and Barbara Barrett Honors College," page 112

# Academic Definitions

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**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 66.

**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 CEEB may receive university credit. See "Advanced Placement," page 61.

**AIECP.** The American English and Culture Program (AIECP) 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," pages 59 and 688.

**ASU East.** ASU East is located at the former Williams Air Force Base. See "ASU East," pages 22 and 603.

**ASU Extended Campus.** The ASU Extended Campus offers courses evenings and weekends, by television, the Internet, at on and off campus sites, and through Independent Learning. See "ASU Extended Campus," pages 23 and 683.

**ASU Main.** ASU Main is the principal campus of ASU, located in Tempe. See "ASU Main," page 22.

**ASU West.** ASU West is the Phoenix campus of ASU, established in 1984 by the Arizona Legislature to serve the educational needs of residents in western Maricopa County. See "ASU West," pages 22 and 668.

**Audit Enrollment.** A student who audits a course attends regularly scheduled class sessions but earns no credit. See "Audit Enrollment," page 68.

**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 university credit. See "College Level Examination Program (CLEP)," page 61.

**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 61.

**Concentration.** A concentration is a 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 67.

**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 by each instruction unit. 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 department. Some instruction units 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 3.40–3.59 graduates *cum laude*. See "Graduation with Academic Recognition," page 77. See also "Magna Cum Laude" and "Summa Cum Laude" in this section.

**Declaration of Graduation.** The Declaration of Graduation uses the Degree Audit 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. A student must file a Declaration of Graduation or a Program of Study within the semester the student earns his or her 87th hour. See "Declaration of Graduation," page 76.

**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 68.

**Family Educational Rights and Privacy Act.** The Family Educational Rights and Privacy Act of 1974, or 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 73.

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

**General Studies Requirement.** This is a requirement of all undergraduates. See "Meeting the General Studies Requirement," page 78.

**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 69.

**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 498.

**Graduate-Level Courses.** Courses numbered 500–799 are designed for graduate students. However, an upper division undergraduate student may enroll in graduate courses with the approval of his or her advisor, the course instructor, the department chair, and the dean of the college or school in which the course is offered. See "500–799 (Graduate Level) Courses," page 51.

**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 67.

**International Baccalaureate.** Students who have taken a higher-level examination through the International Baccalaureate program may receive university credit. See "International Baccalaureate Diploma/Certificate," page 61.

**Junior.** A student who has earned 56–86 hours is a junior.

**Lower-Division Courses.** Courses numbered 100–299 are designed primarily for freshmen and sophomores. See "100–299 Lower Division Courses," page 51.

**Magna Cum Laude.** A student with a minimum of 60 semester hours of course work at ASU and a cumulative GPA of 3.60–3.79 graduates *magna cum laude*. See "Graduation with Academic Recognition," page 77. See also "Cum Laude" and "Summa Cum Laude" in this section.

**Major.** A major is a specialized group of courses contained within the program of study. Refer to college and school sections for specific descriptions and requirements.

**Minor.** A minor is a specialized group of courses contained within the program of study available from some instruction units. See "Minors," page 102, and refer to college and school sections for specific descriptions and requirements.

**Nonresident Tuition.** This term refers to the charge assessed to nonresident students, as established in Arizona Board of Regents' Policy 4-102. See also "Resident Tuition" in this section.

**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 51.

**Pass/Fail Enrollment.** A mark of "P" (pass) or "F" (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 68.

**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 64.

**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 fails 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 72.

**Program of Study.** The complete array of courses included in the study leading to a degree make up a student's program of study. A student must file an Undergraduate Program of Study or a Declaration of Graduation with the semester the student earns his or her 87th hour. See "Program of Study Requirements," page 76.

**Resident Tuition.** This term refers to the charge assessed to resident students who register for classes at ASU. See also "Nonresident Tuition" in this section.

**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 68.

**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 68.

**Senior.** A student who has earned 87 or more hours of credit is a senior.

**Sophomore.** A student who has earned 25–55 hours of credit 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 77. 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 59, and "AECPT" 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. Official transcripts include all information shown on the official transcript, plus information concerning changes, additions, etc., to the record. See "Transcripts," page 71.

**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 68.

**Upper-Division Courses.** Courses numbered 300–499 are designed primarily for juniors, seniors, and other advanced students. See "300–499 Upper Division Courses," page 51.

# General Information

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## MISSION

Arizona State University has emerged as a leading national and international research and teaching institution with a primary focus on Maricopa County, Arizona's dominant population center. This rapidly growing, multi-campus public research university offers programs from the baccalaureate through the doctorate for approximately 49,700 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. ASU is a modern university that applies its research capabilities to the rapidly evolving needs of Maricopa County and the state.

Arizona State University's goal is to become a world-class university in a multi-campus setting, one of the very best public universities in the nation. 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. To become competitive with the very best public universities, ASU recognizes 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 awarded the prestigious Research I (now referred to as Research Extensive) university 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 595.

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, student university committees and boards, and the Associated Students serving the needs of a large institution.

## ACADEMIC ACCREDITATION AND AFFILIATION

See "Accreditation and Affiliation," page 693.

## 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 eligible 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 eligible 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, 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 the 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.



## INTERGROUP RELATIONS CENTER

The only 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, and other groups to interact with and learn about each other. Leadership 2000, an annual four-day, 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 customized 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 Website at [www.asu.edu/provost/intergroup](http://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

its 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. Swetmar 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 9, 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 renaissance 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.

On January 1, 1990, Dr. Lattie F. Coor, a native Arizonan, became 15th in the institution's succession of principals and presidents. He has highlighted undergraduate education, research, cultural diversity, and economic development as the "four pillars" of the university's agenda. He has taken steps in these areas by further defining the role of ASU West and by initiating the establishment of ASU East.

In 1996, "The University for the Next Century" initiative, involving campus and community members, developed a set of general goals to guide the university at the turn of the millennium. By making selective investments in people, programs, and new practices, ASU will be a prototype of the major metropolitan research university of the future.

In 1997, President Coor publicly launched the ASU Campaign for Leadership, a \$400 million fund-raising campaign designed to transform ASU into the model metropolitan research university for the 21st century. Funds raised through the campaign, which continues through 2001, are targeted to the areas that will most significantly impact the future of ASU: Great Teachers, Great Students, and Great Communities. Among the campaign's achievements thus far are the naming and endowing of the Barrett Honors College, the Herberger College of Fine Arts, and the Morrison School of Agriscience and Resource Management at ASU East, the creation of many new endowed faculty positions and hundreds of new scholarships and fellowships; and the enhancement of programs and facilities across the university.

As of fall 2000, ASU was the fourth largest university in the nation with approximately 50,000 students.

**Research Extensive Status.** ASU was named a Research I (now referred to as Research Extensive) university 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 11th 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 163,626). 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 Main offers more than 80 programs leading to bachelor's degrees and more than 140 programs leading to graduate degrees.

**ASU East.** ASU East opened at the Williams Campus in the fall of 1996 and now serves approximately 2,000 students. ASU East offers many of the features of a small residential college in a rural area while providing access to the resources of a major research university and the amenities of a large metropolitan area.

ASU East has joined with Chandler Gilbert Community College in the Partnership in Baccalaureate Education that allows students to graduate in four years with an ASU baccalaureate degree earned entirely at the Williams Campus, at some savings in tuition.

The campus offers excellent educational facilities and residential opportunities, which include a choice of traditional residence halls or two- to five-bedroom homes. A shuttle service provides transportation between ASU East and ASU Main. The 600-acre ASU East campus is easily accessible via major interstate routes.

For more information, see "ASU East" page 603.

**ASU West.** ASU West is a growing anchor campus of Arizona State University that offers primarily upper-division undergraduate and graduate degree programs, plus certificates, in diverse professional fields. Starting in fall 2001, the campus admits freshmen for the first time since its founding in 1984.

As a commuter campus, ASU West offers an array of innovative student services to help working families achieve their educational goals. A child development center, academic advising, and writing support services are just a few examples.

At ASU West, students enjoy a friendly, small-campus atmosphere while benefiting from the resources of a major research university.

The campus is located in northwest Phoenix between 43rd and 51st Avenues on West Thunderbird Road. The core campus was completed in 1991 and features a variety of state-of-the-art classroom and student service buildings,

including Fletcher Library, the Sands Classroom Building, the Computer Laboratory Classroom Building, Kiva Lecture Hall, the University Center Building, and the Faculty Administration Building.

For more information see "ASU West," page 665. For complete information and course listings, see the *ASU West Catalog*.

**ASU Extended Campus.** The ASU Extended Campus ([www.asu.edu/extended](http://www.asu.edu/extended)) 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 offers programs in partnership with the campuses and colleges of ASU, including a variety of professional continuing education programs. The ASU Downtown Center is the anchor location of the ASU Extended Campus. Lifelong learning opportunities are offered to students of all ages throughout Maricopa County and Arizona through the ASU Extended Campus.

**ASU Downtown Center.** Located in downtown Phoenix, 32 E. Monroe, the ASU Downtown Center offers a variety of daytime and evening courses of interest to employees in private businesses and government agencies and to individuals seeking personal growth and enrichment. These courses 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 ([researchpark.asu.edu](http://researchpark.asu.edu)) 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 or educate students, consult with university faculty, sponsors or 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, Cytec Fiberite, Iridium, Lakeside Technology Center, Motorola Flat Panel Display, Motorola University, National Association for Purchasing Management, PKSI Information Services, Transamerica Research Center, VLSI Technology, and Walgreens Healthcare Plaza. A 50,000 square foot multi-tenant building has been developed by Transamerica Corporation, and the Lakeside Technology Center, a 44,000 square foot multi-tenant building, has been developed by the park itself.

**Camp Tontozona.** Located in the famed Maricopa Rim country near Kehl'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 Hedopeth Hills. For more information, call 623-552-8307.

**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 ornamentals 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 LIBRARIES AND COLLECTIONS

The collections of the university's libraries comprise more than 3 million volumes, approximately 7 million electronic formats, and more than 33,000 periodical and serial subscriptions. Computer access to commercial 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 "ASU Main Directory," page 22. For more information, access the Web site at [www.asu.edu/lib](http://www.asu.edu/lib).

**Charles Trumbull Hayden Library.** The Charles T. 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 Access materials; Circulation, Current Periodicals and Microforms; Government Documents Services, Interlibrary Loan and Document Delivery Services; Library Instruction, Systems, and Technology; L.I.S.T.; Reference; Reserve; Special Collection; and Archives and Manuscripts, which includes the Arizona Collection, the Chicana Research Collection, the Benedict Vista Literacy Collection, and the Library

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.

The Special Collections department includes the Child Drama Collection, and collections of 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/hayder](http://www.asu.edu/lib/hayder).

**Architecture and Environmental Design Library.** A branch of the University Libraries, located in the College of Architecture and Environmental Design/North Building, contains collections pertinent to areas of study within the college, the Materials Resource Center, and the Architectural Drawings Collection. For more information, access the Web site at [www.asu.edu/caed/AEDLibrary](http://www.asu.edu/caed/AEDLibrary).

**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.asu.edu/lib/aht](http://www.asu.edu/lib/aht).

**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, 5,000 serial subscriptions, and 14 million microforms selected to complement ASU West course offerings.

**Law Library.** The John J. Ross William C. Blakley Law Library is located on McAlester Avenue. See "Law Building and Law Library," page 12, for more information.

**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](http://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](http://www.asu.edu/lib/noble).

**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](http://www.asu.edu/lib/archives/archives.htm).

**Video Resources.** Located in ECA 100, Video Resources supports a variety of educational media services, including reserve videotapes of all ASU courses broadcast on cable television and ITFS, video viewing study carrels, and a studio facility for students and faculty. In addition, Video Resources houses thousands of video titles in the ASU Media circulating collection that may be checked out for three days. Special Collections include the WorldFest Video Archive, Horizon, C-SPAN Booknotes, and C-SPAN I and II. Patrons with a current university ID may check out any available videotape for three days. Interlibrary loans and video booking may be scheduled by calling 480-965-7564. For more information, call 480-965-5046, or access the Web site at [www.asu.edu/lib/video](http://www.asu.edu/lib/video).

## 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. Additionally, the museum serves a public beyond the immediate area through traveling exhibitions and publications that not only document the exhibitions but also offer critical insight into the museum's areas of concentration.

Exhibitions, education programs, and publications are interdisciplinary and educational and are 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 American 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 Coc, and Enrique Chagoya. Exhibitions and collections are housed in galleries and study rooms in two facilities: the international award-winning Nelson Fine Arts Center and Matthews Center in the middle of campus.

Educational programs include art studios and dialogues with classes, a student docent program, internships and research assistantships, lectures and symposia, in-gallery materials, special curricula-based school programs, and school and public tours. For information on upcoming exhibitions and programs, call 480-965-2787.

**ASU Downtown Center Gallery and the Galleria.** The Gallery, located on the first floor of the ASU Downtown Center, is a partnership with the Joint Urban Design Program from the College of Architecture and Environmental Design. The Gallery features special rotating exhibits, including architectural models, computer imaging projects, and other unique exhibits accessible for public view. For information on upcoming exhibitions and programs, call 480-965-3046.

The Galleria, located on the second floor of the ASU Downtown Center, features work by ASU faculty, staff, students, and local artists. The Galleria is a member of Artlink First Friday's and the Phoenix Art Detour. Open Monday through Saturday, from 8 A.M. to 5 P.M., the Galleria features

new and different works each month. For information on current or upcoming exhibitions, call 480 965 3046.

**Computing Commons Gallery.** One of the few exhibit spaces of its kind, the Computing Commons Gallery features five to six changing exhibits per year: technology generated art, multimedia installations, and history of technology. For a current gallery schedule, access the Web site at [www.asu.edu/it/spotlight](http://www.asu.edu/it/spotlight).

**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.

**Drama City.** Housed in a 50 year old former church, Drama City is the primary performance venue for the Institute for Studies in the Arts. The space is a black box, 60 by 30 feet with fixed lighting positions and flexible control stations. The area can seat up to 100 and is equipped for performance or installation pieces. The facility also houses a wide range of technology for performance and presentation including video projection, automated luminaires, and a unique computerized control system for integrated media usage.

**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 production and performance facility designed to explore the possibilities of interactive stage performance. The facility includes a sprung floor, 30 dimmers and a four channel sound system, a composer workstation, workstations for designing interactive MIDI performances, and a movement sensing, image

processing workstation. All are networked together for multimedia performance and production. Resident artists and technologists provide design and logistical support for projects in the facility.

**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.

**Music Theatre.** As part of the music complex, the 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.

**J. Russell and Bonita Nelson Fine Arts Center.** Designed by Albuquerque architect Antone 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 175 persons.

**Prism Theatre.** The Prism Theatre is an alternative black box space devoted to multiethnic, experimental works and 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.

**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, visit its Web site at [www.kaet.asu.edu](http://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.

## 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 programming, statistical, graphics, and other applications for desktop computers and mainframe computing systems. University-wide electronic mail and the library's online catalog are accessible through a high-speed campus network and from off campus via the Internet.

A wide range of information on campus activities and related topics is available online at the ASU Web site [www.asu.edu](http://www.asu.edu). This site contains a wide variety of information from various colleges, departments, and organizations including approved courses, the *Search Guide to Classes*, the *General Catalog*, the *Graduate Catalog*, a telephone and electronic mail directory, the athletic calendar of events, application forms, and financial aid information.

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 225 workstation computer site, nine electronic classrooms, a Research Support Lab, the Customer Assistance Center, a computer store, and a technology-based interactive "Computing Commons Gallery," page 25.

**Computing Sites.** In addition to the Computing Commons Atrium, there are three additional computing sites located on the ASU Main Campus, available for ASU faculty, staff, and students. Site configurations and hours of operation vary; current information is available on the Web at [www.asu.edu/computingsites](http://www.asu.edu/computingsites).

**ASU Downtown Center Computer Lab.** The ASU Downtown Center offers an alternative to the computer labs at ASU Main. This facility features four Pentium II 40-MHz and 16 Pentium 30-MHz computers—all loaded with

Microsoft 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 480-965-3540, or access the Web site at [www.asu.edu/dtc/cpelab](http://www.asu.edu/dtc/cpelab).

**Computer Accounts.** Computer Accounts, located in CPCOM 150, assists customers 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 from self-subscription workstations located in a variety of on-campus locations or online (accessible from ASU addresses only) at [www.asu.edu/elts/sub](http://www.asu.edu/elts/sub). More information about Computer Accounts is available on the Web at [www.asu.edu/computing/accaccounts](http://www.asu.edu/computing/accaccounts).

**Customer Assistance Center.** The Customer Assistance Center, located in CPCOM 202, offers a library of reference materials, computing periodicals, and other information concerning computing systems and software. Self-paced training is available for various software applications running under the Windows, Macintosh, or Unix operating systems. The center also distributes communication, virus protection and other site-licensed software as well as site-specific documentation in a "print on demand" format. Print on demand is also available on the Web at [www.asu.edu/quicklook](http://www.asu.edu/quicklook). More information about the center is available from the Web site at [www.asu.edu/caccenter](http://www.asu.edu/caccenter).

**Help Desk/Consulting.** The IT Help Desk provides ASU students, faculty, and staff with centralized systems information and first-level assistance in resolving computer problems. Services are available by telephone at 480-965-6500, on the Web at [www.asu.edu/helpdesk](http://www.asu.edu/helpdesk), and in person at the Customer Assistance Center, CPCOM 202.

The IT Help Desk assists with data recovery and repair; AFS file space and permissions for Web sites; communication mail and virus protection software; and computing and equipment problem referral.

**Instruction Support (IS).** Instruction Support serves as a development center for the use of technology in the design and delivery of instruction. Staffed with students, faculty, and researchers skilled in the areas of system design, graphics, interactive software, networked delivery, and digital video, the innovation-driven group pushes the development of instruction to the limits of available 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 faculty and groups outside ASU, grant-writing teams are able to leverage support not otherwise available to a single academic unit or faculty member. Cen-

tral 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 of Research and Creative Activities to provide faculty with a wide array of instruction support services.

IT/IS offers consultation sessions 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.

More information about IT/IS is available from the Web site at [is.asu.edu](http://is.asu.edu).

**Instruction Support (IS) Lab.** The 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.

**Research Support (RS).** Research Support provides processing and operations assistance to faculty, staff and student researchers engaged in scientific and creative endeavors. Processing support involves consulting in the use of software tools and program coding directly related to projects or specific research, operations activities support the overall workflow in university computing facilities and include consulting for computation, statistics, visualization and GIS platforms in conjunction with software package installation and use, media conversion, and product evaluation.

A variety of computation facilities are provided in support of research and creative endeavors within the ASU community, ranging from individual workstations to SMP/MPP servers and mainframes. Extended computer capabilities are available through access to national computing centers. More information is available at [www.asu.edu/it/fyi/research](http://www.asu.edu/it/fyi/research) on the Web.

**Research Support (RS) Lab.** The RS Lab is located in CPCOM 235 and provides Geographic Information Systems (GIS) Services and Visualization Services. GIS services staff members provide researchers with hardware, software, and data to facilitate the creation of geographic information systems for spatial analysis, query, and display. Research is supported from various disciplines and provides additional resources to students enrolled in classes for GIS instruction, serving as a focal point for GIS users to meet and share information and technical expertise.

Visualization Services offers faculty, staff, and graduate students the hardware and application software resources and services for the high level graphics and visualization used in research. Researchers receive assistance ranging from interactive viewing of scientific data to visualization in the liberal and the performing arts and other endeavors.

## ALUMNI ASSOCIATION

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

With more than 230,000 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 ASU Alumni Association Board of Directors are elected each spring. See "Institutional Advancement," page 600. For more information about the association or its board of directors, call 1-800-ALUMNUS or 480-965-ALUM.

## 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 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](mailto:oue@asu.edu). The Office of University Evaluation's Web site is [www.asu.edu/oue](http://www.asu.edu/oue).

## RESEARCH CENTERS, INSTITUTES, AND LABORATORIES

These units serve the university's mission in research. They are overseen by eight of the colleges, the vice provost for Research, 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.

**Partnership.** 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](http://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](http://www.asu.edu/caed).

### College 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. The center's annual outlook series provides a public forum for prominent members of the real estate industry to present their perceptions of market conditions.

For more information, call 480 965 5440, access the AREC Web site at [www.cob.asu.edu/seid/arec](http://www.cob.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 of 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 5443, access the EOC Web site at [www.cob.asu.edu/seid/eoc](http://www.cob.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 the 21st century leader in business education, practice, and research that provides 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 111, call 480 965 3962, or access the CASB Web site at [www.cob.asu.edu/seid/casb](http://www.cob.asu.edu/seid/casb).

**Center for Advanced Purchasing Studies.** The Center for Advanced Purchasing Studies (CAPS) was established in November 1986 by a national affiliation agreement between the ASU College of Business and the National Association of Purchasing 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 main ASU campus. CAPS 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, or write



CENTER FOR ADVANCED PURCHASING  
STUDIES  
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 had 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 Super Bowl XXX, a study of seasonal migration to Arizona, and an analysis of the state's hospital industry. 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.cob.asu.edu/seid/cbr](http://www.cob.asu.edu/seid/cbr), or write

CENTER FOR BUSINESS RESEARCH  
PO BOX 874011  
TEMPE AZ 85287 4011

**Center for Services Marketing and Management.** The Center for Services Marketing and Management (SMM Center) is a leading university based hub devoted to the study of services marketing and management since 1985. The SMM Center 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 concepts 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 SMM Center's 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 College of Business M.B.A. program that offers a certification in Services Marketing and Management. The services track infuses strong company based experience and encourages summer internships.

For more information, visit the SMM center in BAC 440, or call 480 965 6201.

**Center for the Study of Finance.** The Center for the Study of Finance, established in 1956, serves the national financial, policy making, and academic communities through research, publications, conferences, and educational programs. The focus of such activities is on the changing nature of the domestic and international financial system with such specific areas as the interaction between financial markets, deposit insurance reform, the deregulation of financial institutions, the financing of mergers and acquisitions, and the effect of government policy on financial markets receiving recent attention.

For more information, call 480 965 5362, or write

CENTER FOR THE STUDY OF FINANCE  
PO BOX 874011  
TEMPE AZ 85287 4011

**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 College 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 College 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.cob.asu.edu/seid](http://www.cob.asu.edu/seid), or write

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

**Manufacturing Institute.** See "Manufacturing Institute," page 30, for information about this joint venture of the College of Business and the College of Engineering and Applied Sciences.

### College of Education

**Center for Bilingual Education and Research.** The Center for Bilingual Education and Research (CBER) was created in 1980 to conduct policy relevant research in bilingualism, bilingual education, and language policy in education. The center's scope of work is driven by a need to merge several related topics into a single articulated

conversation: English/Spanish biliteracy, promoting the role of public education to strengthen communities; and enabling binational collaboration among educators on both sides of the U.S. Mexico border. 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 CBER in these areas:

1. Within the broad scope of educational policy research CBER 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 CBER in ED 440, call 480 965 7134, or access the CBER Web site at [www.asu.edu/educber](http://www.asu.edu/educber)

**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 [www.asu.edu/educ/ce](http://www.asu.edu/educ/ce)

**CRESMET.** See "Center for Research on Education in Science, Mathematics, Engineering, and Technology," page 27, for information about this joint venture of the Colleges of

Education, Engineering and Applied Sciences, and Liberal Arts and Sciences.

### College of Engineering and Applied Sciences

**Center for Low-Power Electronics.** The Center for Low Power Electronics (CLPE) 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 CLPE 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 for Low Power Electronics 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 multi-chip VLSI systems

For more information, visit the center in ENGR 115, or call 480 965 8654

**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, ferroelectrics, 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 ENGR 115, call 480 965 3708, or access the CSSER Web site at [ceaspub.eas.asu.edu/csser](http://ceaspub.eas.asu.edu/csser)

**Manufacturing Institute.** The Manufacturing Institute is a joint venture of the College 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. The mission of the institute involves integrating aspects of manufacturing in the business and engineering areas, and helping to fulfill the university's goal of becoming one of the leading educational and research institutions in manufacturing enterprise and manufacturing process technology issues. 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

**Center for System Science and Engineering Research.** The Center for System Science and Engineering Research (SSERC) has established four focus areas: nonlinear dynamical systems, control theory and its applications,

mathematics, 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](http://www.eas.asu.edu/sserc)

**CRESMET.** See "Center for Research on Education in Science, Mathematics, Engineering and Technology," page 27, for information about this joint venture of the Colleges of Education, Engineering and Applied Sciences, and Liberal Arts and Sciences

**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, or call 480 965-5311, or access the center's Web site at [trc.eas.asu.edu](http://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 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. Gradu-

ate 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 Medieval and Renaissance Committee of the University of Michigan, 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/class/acmrs](http://www.asu.edu/class/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 anti-cancer 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 a graduate student colloquium and film series on Asian topics. 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 7134

**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 6511.

**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 structures 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 microstructural 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 work stations 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 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, or call 480 965 4544

**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 Provost for Research and the College of Liberal Arts and Sciences. The center consists of about 90 students, post-doctoral 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 which 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; fluorimeters; 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 the Department of Plant Biology are central components of the activities of the center.



Center for the Study of Early Events in Photosynthesis alfalfa growth project

T. Trumble photo

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 27, for information about this joint venture of the Colleges of Education, Engineering and Applied Sciences, and Liberal Arts and Sciences.

**Exercise and Sport Research Institute.** The Exercise and Sport Research Institute (ESRI) is an interdisciplinary research unit located in the Department of Exercise Science and Physical Education 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; and 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 six specialized labs. The *Exercise Metabolism Lab* focuses on how dietary nutrients influence resting and exercise metabolism, with a special emphasis on diabetes; the *Exercise Biochemistry Lab* examines subcellular systems involved in the provision and regulation of energy transfer during exercise; and 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](http://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, video tapes, 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/ihoh](http://www.asu.edu/clas/ihoh).

**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 361, or call 480/727 7691

**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 professional 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 Pontificia Universidad Católica de 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 mission of the Center for Nonprofit Leadership and Management (CNLM) is "to improve the quality of life in communities by enhancing the performance of nonprofit organizations." Varied strategies accomplish this mission and include coordination of educational offerings, selected technical assistance to nonprofits, support for research projects for faculty and students, and the convening of nonprofit leaders and managers through a variety of training opportunities. The center supports the activities of three complementary nonprofit management education programs: the ASU American Humanities Program undergraduate

certificate), the Nonprofit Management Institute (extended education certificate), and a graduate certificate in nonprofit leadership and management. For more information, call 480 965-0607, or access the Web site at [www.asu.edu/copp/nonprofit](http://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](http://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](http://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

**Institute for Studies in the Arts.** The Institute for Studies in the Arts (ISA) in the Herberger College of Fine Arts serves as a research laboratory for the development of new art forms, new ideas and concepts, and innovative technologies for artistic expression, a network for communication among creative scholars both within and outside the arts; and a resource base for the documentation, evaluation, and dissemination of research in the arts. ISA addresses the needs of a variety of populations through technical and monetary support and sponsorship for research projects, performances, exhibitions, and symposia.

ISA facilities include an experimental media performance space with an adjacent technology prototyping and applications studio in Drama City; the "Intelligent Stage," an interactive and tele performance studio with state of the art digital audio and video production and post production facilities in Matthews Center; a Technology Development Studio for the development of prototype technologies and their application to aesthetic research; and comprehensive

archives that document the history of research initiatives supported by the ISA.

ISA is open to a wide range of proposals from faculty, graduate and undergraduate students, and visiting artists, provided such proposals address the ISA mission of experimentation and innovation in the arts. For more information, visit ISA in MCENT 224, call 480/965 9438, or access the ISA Web site at [isa.asu.edu](http://isa.asu.edu)

### Vice Provost for Research

**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 [www.asu.edu/ces](http://www.asu.edu/ces).

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 [www.asu.edu/ces/CAPLTER.htm](http://www.asu.edu/ces/CAPLTER.htm).

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](http://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, contact the director, Center for Environmental Studies, Tempe Center (University and Mill), 480 965 2975, or access the center's Web site at [www.asu.edu/ces](http://www.asu.edu/ces).

### 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 1240, or access the STAR Center Web site at [www.east.asu.edu/research/star](http://www.east.asu.edu/research/star).

# Student Services

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The university is committed to the belief that an education involves more than attending class. While the assimilation of information 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 480-965-7755 or visit the Web site at [www.asu.edu/admissions](http://www.asu.edu/admissions). For more information about the ASU Parents Association, call 480-965-2602.

## STUDENT FINANCIAL ASSISTANCE

Pursuing a college education is a 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 the full time students at ASU 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/fast](http://www.asu.edu/fast).

## REGISTRAR

Management of the registration system and maintenance of academic records are the primary responsibilities of the Office of the Registrar. InTouch, the ASU touch-tone telephone system for registration and fee payment, and the online registration system, accessible at any registrar site, including one at ASU West, ease the enrollment process and make ASU a national leader in the use of computerized registration. 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 480-965-5958, or visit the Web site at [www.asu.edu/registrar](http://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 the academic programs for continued educational benefits, as stated under "Satisfactory Academic Progress" page 71. 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 145. For more information, call 480-965-7233.

## RESIDENTIAL LIFE

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

The Freshman Year Experience program (see "Student Development" page 37) 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, 2001, for the best chance to live on campus for fall semester 2001. Housing is not guaranteed. While applications are accepted at any time, assignment to a residence hall is not made until first-semester students admitted to the university. Requests for specially modified rooms for students with disabilities should be noted on the application.

ASU Main residence hall application information may be obtained at [www.asu.edu/reslife](http://www.asu.edu/reslife), by phoning the HOME Housing Options Made Easy touch-tone telephone system at 480-363-4334 by calling 480-965-3515, or writing to:

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

Information about ASU Main voluntary meal plans may be obtained by calling 480-965-3464 or writing to:



CAMPUS D N NG  
ARIZONA STATE UNIVERSITY  
PO BOX 871101  
TEMPE AZ 85287-1101

### ASU East Housing

ASU East housing includes single student residence halls equipped with kitchens, two to five bedroom houses, and a freshman residence hall that participates in ASU East's Freshman Year Experience program. For more information on see "Williams Campus Housing and Residential Life, page 65, call 480 727 7011, or access the Web site at [www.asu.edu/east/cshousing](http://www.asu.edu/east/cshousing)

### 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, organizations, leadership opportunities, and service. These programs and services, as well as those within Student Affairs, are supported by Student Development with data collection, research, and evaluation, ensuring a successful ASU experience for students.

#### 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. The Freshman Year Experience (FYE) helps freshmen achieve academic success by coordinating services and programs in settings designed just for freshmen. Services provided include freshman level classes and academic advisors in the halls, computer labs, live-in tutors with tutoring offered five nights a week, staff trained to support students in achieving academic success, and special floors for freshmen majoring in Engineering, Business, Architecture, and Environmental Sciences and Broadcasting, Communication, and Journalism (with the College of Public Programs).

ASU has designated several residence halls as FYE service sites: Manzanita, Mariposa, McClintock, Palo Verde complex, Sahuaro, and Sonora. The Off-Campus FYE Student Center is located on the first floor student lounge of McClintock Hall. A freshman can choose to live in one of the halls and have direct access to FYE programs or opt to live off campus or in another residence hall and still use FYE services. For more information, call 480 965 1512, or access the Web site at [www.asu.edu/psa/fye](http://www.asu.edu/psa/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 tutoring program is certified by the College Reading and Learning Association, a national organization of learning assistance professionals. 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 learn-

ing 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 Pine email.

For more information, call the LRC at 480 965 6254, or access the Web site at [www.asu.edu/vpsa/lrc](http://www.asu.edu/vpsa/lrc).

### Cocurricular Programs

Cocurricular Programs (CCP) works to enhance the ASU undergraduate educational experience by maximizing faculty and student interaction outside the traditional classroom setting. This is accomplished through three program components:

**Campus Wide Programming.** CCP brings students and faculty together for a variety of events, such as Student/Faculty Luncheons and Dinners and the Student/Faculty Retreat, to facilitate informal dialogue, exchange of ideas, and out-of-classroom learning experiences. The annual Last Lecture Series offers students the opportunity to recognize and honor excellent teaching by nominating outstanding faculty to present a lecture to the ASU community as though this would be their "last lecture."

**Residential Programming.** CCP supports Resident Assistants in the development of programs that promote the themes of leadership, diversity, and service/civic responsibility. Programs like the Classic Form Colloquia bring students and faculty together to explore ideas and topics that supplement and enhance their classroom learning. Other programs have included Coffee Talks and Open Mic Nights, where students and faculty have the opportunity to interact in a fun, informal setting.

**Seminar Courses.** CCP coordinates a number of small group seminar courses each semester, entitled CED 394: Special Topics in Leadership. These one-semester-hour, discussion-format courses bring together a faculty or staff member and up to 12 students to discuss and learn about a specific interest or topic. CED 394 courses are open to students of all academic levels and majors.

Faculty take an active role in the planning and development of CCP programs. Faculty Fellows serve as liaisons with their academic departments and their colleagues, further enhancing the learning experiences of students outside the traditional classroom.

For more information on upcoming programs or seminar courses, call Cocurricular Programs at 480 965 9600, or access the Web site at [www.asu.edu/vpsa/partnerships](http://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 (480 927 7377), Child Development Laboratory (480 965 7767), Child Study Laboratory (480 965 5320), and the College of Education Preschool (480 965 7510) may be obtained at CFS (by calling the program director). CFS maintains a child care referral database and coordinates workshops and discussion groups on child and elder care issues. 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. Appointments are recommended.

For more information, call 480/965 9515, or visit the Web site at [www.asu.edu/vpsa/family](http://www.asu.edu/vpsa/family).

### **Sun Devil Involvement Center**

Located on the third floor of the Memorial Union, the Sun Devil Involvement Center coordinates student involvement opportunities ranging from Greek Life to off campus volunteer services. For more information, call 480/965 2255.

### **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 the center at 480 965 2249 or the Sun Devil Involvement Center at 480 965 2255, or visit the Web site at [www.asu.edu/clubs](http://www.asu.edu/clubs).

### **Student Leadership Programs**

Student Leadership Programs serves as a resource to students interested in leadership development. Resources include a leadership library and information about the ASU Leadership Development Model and other campus, local, and national leadership programs. Staff are 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/vpsa/slp](http://www.asu.edu/vpsa/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. CED 294 ST Foundations of Leadership focuses on the basic principles of leadership and current writing on the topic, particularly on college campuses. A capstone course, CED 484 Leadership Internship, applies leadership skills through internships. In this course, students serve as facilitators for the Foundations in Leadership Discussion Section, provide service and leadership in special group projects, or serve as student government interns. For more information, access the Web site at [www.asu.edu/vpsa/slp/Classes](http://www.asu.edu/vpsa/slp/Classes).

### **Greek Life**

Involvement in a fraternity or sorority can be one of the most rewarding aspects of a student's college experience. Fifteen fraternities and 12 sororities provide opportunities for leadership development, academic success, campus involvement, community service, social interaction, brotherhood/sisterhood, and intramural participation. These organizations are governed by the Interfraternity Council and the Panhellenic Council. The National Panhellenic Council offers nine 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 two 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 life long membership, many of the fraternities and sororities have chapter houses or residence hall floors that provide a rewarding living/learning option for the members. For more information, call Greek Life at 480/965-2255, or visit the Web site at [www.asu.edu/vpsa/greeklife](http://www.asu.edu/vpsa/greeklife).

### **Community Service Program**

The Community Service Program strives to engage students, faculty, and staff in meaningful curricular service. Through the integration of academic studies with public service, the campus community is provided with intentional avenues to serve the basic and greater 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/vpsa/community](http://www.asu.edu/vpsa/community), or call 480 965 9843.

**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, post graduation 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.

### **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, work shops, community service, and student government. For more information, access the Web site at [www.asu.edu/studentlife](http://www.asu.edu/studentlife)

**Adult Reentry Program.** The Adult Reentry Program provides students age 25 and older with a variety of services designed to help them meet their goals, such as preenrollment assistance, orientation, support/networking groups, resource and referral information, peer mentoring, scholarships, and leadership development. The Adult Reentry Program is located in the Memorial Union, Room 14. For more information, call 480 965 2252.

**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, some of which include: 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.

**Danforth Chapel.** Built in 1948 as a multi-faith 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.

**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 in the southeast corner of the Matthews Center. For more information, call 480 965 1234 (voice) or 480/965 9000 (TTY), or fax 480 965 0441.

**Educational Opportunity Center.** This community outreach service focuses on 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.

**International Student Office.** The International Student Office (ISO) is responsible for the administration and coordination of ASU's international student program. The ISO's principal responsibilities and services include initial orientation, counseling and advising, administrative support, 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.

**Multicultural Student Center.** The Multicultural Student Center (MSC) provides a central location for multicultural students to receive a number of services designed to assist them in pursuing academic success. Staff actively seek to recruit and retain multicultural students through a variety of support services and programs. 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 are specialized programs within the MSC designed to increase the persistence and graduation rates of students. Summer programs such as the Asian Lead Academy, the Native American Summer Institute, the Academic Enrichment Program, and Sun Devil Welcome provide outreach to the community and assist students with their transition and adjustment to the university. The student coalitions, as well as other multicultural student organizations, provide cultural programming and academic support to African American, American Indian, Asian American, Hispanic/Latino, gay and lesbian, and women students. The MSC office is located in SSV 394. For more information, call 480/965 6060.

**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 the Office of Student Life, SSV 263. For more information, call 480/965 6547.

**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. 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.

**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.

**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.

**Veterans Upward Bound.** This program is designed for 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.

## COUNSELING AND CONSULTATION

Counseling and Consultation provides confidential counseling services to all ASU students. The psychologists, counselors, psychiatrists, and social workers on staff help students with almost any type of problem or issue related to adjusting to college life. The staff is particularly committed to helping students of color and nontraditional students adjust to campus life.



Glen Gilbertson uses equipment in the ADA area of Hayden Library.

Tim Trumble photo

Counseling and Consultation offers counseling groups for career exploration, relationship difficulties, substance abuse, stress management, depression, assertiveness, eating disorders, family problems, and other common student issues. Individual therapy and couples counseling are offered on a short-term basis. Counseling and Consultation also provides emergency counseling to students experiencing an emotional crisis.

A career interest testing program is available to both students and nonstudents. Other services available to the ASU community include consultation and outreach services to faculty and staff, academic instruction, research, a master's-level practicum training program, and an APA-approved clinical internship program for doctoral students in counseling and clinical psychology. Students may schedule an initial counseling appointment either by phone (480/965-6146 or 480/965-4726) or in person. After an initial personal consultation and three free individual sessions, full-time students are charged \$12 per session. Counseling and Consultation is located in SSV 334 or SHS A168.

**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). Also, students may select additional individual tutoring sessions for these exams. Students may get information about test preparation workshops by phone (480/965-6777) or in person. The TSS office is located in SSV 382.

## 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](http://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 opens at 9 A.M. Tuesdays and Thursdays and 8 A.M. other weekdays. It closes at 5 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 InTouch, 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.

## STUDENT MEDIA

The activities of Student Media are most visible in the *State Press*. The 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 an experienced university staff director.

The *State Press* provides students with on-the-job training in newswriting, photography, editing, advertising, and production work. The *State Press* also addresses the many informational needs of the university community, not only through stories about the campus, and local and national events, but through paid advertisements by area merchants, campus groups, and university faculty, students, and staff. *The Web Devil* is Student Media's online news center and community guide, including complete listings of restaurants, hotels, apartments, transportation, campus maps, and fun places to go within the community surrounding ASU. Access the Web site at [www.statepress.com](http://www.statepress.com).

Student Media publishes *Havden's Ferry Review* twice a year. This award-winning national literary and art magazine brings together in one publication the finest contemporary literature and art by established and emerging writers and artists. Access the Web site at [www.statepress.com/hfr](http://www.statepress.com/hfr).

Student Media provides complete prepress services to the university community. For more information call 480-965-7572.

## MEMORIAL UNION

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

Also offered in the MU is a wide variety of student employment opportunities in the following areas: building management, administrative support, computer services, event and meeting services, information desk services, maintenance, and Sparky's Den services.

The MU features a computer lab and work/study and group work areas; multiuse meeting rooms; Sparky's Den; the recreation center, with bowling, billiards, and video games; and an art gallery.

Services provided include associated food services, bank card and gift shop, catering, credit union and various ATMs, automated teller machines, event and meeting services, hair salon, music store, post office, and travel agency. For more information about any of these services or to explore employment or volunteerism, call the Information Desk at 480-965-5728, or visit [www.asu.edu/mu](http://www.asu.edu/mu) on the Web.

## 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 Development 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, resume 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 office is located in SSV 329. For more information, call 480-965-2350.

## 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. 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, child 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.

Located on the south end of Palfrey 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 gyms, 14 indoor racquetball courts and one squash court, martial arts, aerobics and sport club rooms, outdoor equipment rental, and adaptive weight room. Outdoor facilities include a lighted, multi-use complex with four fields, a 4.3 mile perimeter walking and jogging path, four sand volleyball courts, 14 tennis courts, and a 70 meter swimming pool with two non-ovable bulkheads that allow the pool to be divided into three parts for simultaneous multi-use programming.

For more information, call 480-965-5900, stop by for a tour, or visit the Web site at [www.asu.edu/src](http://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, and the Arizona Department of Health Services.

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 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 promotion 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; 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.asu.edu/aprc](http://www.asu.edu/aprc), 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 641 East Van Buren, Suite B2, in Phoenix.

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](http://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 21 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

**Dance.** The Department of Dance and Dance Arizona Repertory Theatre, a student touring outreach company, present 12 to 14 faculty and/or student directed concerts a year. Interested students should attend open auditions, held at the start of each semester. For more information, call 480-965-5029.

**Forensics.** The ASU Forensic squad, associated with Phi 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.

**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 480-965-4111.

**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 the School of Music at 480-965-3371.

**Theatre.** The University Theatre presents four to six faculty directed productions and eight to 14 student directed productions a year. Audition information is available from the Department of Theatre, GHALL 232, 480-965-5359.

# 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 reflects up to date fee amounts. The following fees apply to both 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 "2000-2001 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 Procedures and Policies," page 46.

Students registered for seven or more hours are considered full time for tuition payment purposes. See "Enrollment Verification Guidelines," page 67.

*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 for off-campus and independent learning courses, see "Distance Learning Technology," page 688.

**Summer Sessions Fees.** The 2001 registration fee per semester hour is \$119 except for law students. The registration fee per semester hour for law students is \$263. For more information, see "Summer Sessions," page 520, 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. Full time (seven or more hours) students are charged \$25 per semester. Part time students pay \$12 per semester, and summer students pay \$2 per semester hour. See the latest *Schedule of Classes* for more information.

## 2000-2001 Resident and Nonresident Tuition

Hours	Resident	Nonresident*
1	\$ 119.00	\$ 405.00
2	238.00	810.00
3	357.00	1,215.00
4	476.00	1,620.00
5	595.00	2,025.00
6	714.00	2,430.00
7	1,136.00	2,835.00
8	1,136.00	3,240.00
9	1,136.00	3,645.00
10	1,136.00	4,050.00
11	1,136.00	4,455.00
12 or more	1,136.00	4,864.00

\* Tuition is subject to change for 2002. In addition to tuition, students are charged other fees, e.g., the Student Recreation Complex fee and financial aid trustee fee.

**Financial Aid Trust Fee.** All students must pay a financial aid trust fee. Full time 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 full time students. The total summer sessions fee does not exceed the amount for a full time student. Fees collected from students are matched by the State of Arizona and used to create a 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 each semester. Any refunds for this fee are provided through the ASA Central Office.

**Late Registration.** The fee assessed on registrations on or after the first day of each session is \$35. A \$35 late 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 nonresident undergraduate admissions or readmission applications is \$40. The nonrefundable fee for graduate nondegree or readmission applications 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:

1. the student's name and former name(s);

2. the student ID number
3. the date of birth,
4. the date of attendance,
5. a return address,
6. specific address to return transcript
7. student's signature, and
8. appropriate fees as described below.

The Request for Official Transcript form may be obtained online at [www.asu.edu/registrar/forms](http://www.asu.edu/registrar/forms).

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

A fee for an official transcript for a student is \$35 for the first copy. Additional copies are \$10 each. The fee is \$10 per copy for a student enrolled for a current or future semester.

Unofficial transcripts may be requested personally at the Office of the Registrar by registering by mail to ASU 965-7795 if a student case is pending. There is no charge for an unofficial transcript.

All in-prison transcript requests require presentation of photo identification. Requests are not accepted for third parties without a written release from the student. For information on parental access to records, see "Access to Records," page 3.

**Copies of Education Records Other Than ASU Transcripts.** If a fewer than six pages, the fee is \$3 per page to six pages, the total charge is \$27. For 11 to 25 pages, the total charge is \$55. 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 for 1.

**Private Music Instruction.** The fee for one half hour of instruction weekly is \$4. The fee for one hour of instruction weekly is \$6. The fee for one to three hours of instruction weekly for music majors only is \$60.

**Musical Instrument Rental Charge.** The charge for use of university-owned musical instruments is \$75. Contact 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 incurred 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 \$10.

**Parking Decals.** A parking decal must be purchased in person by using the Park Smart to purchase phone system 48-92-PARK (7775), for motor vehicles parked on campus except in the isovhelenetd parking visitor lots are available. Photo identification is required. Annual decal cost is \$5 to \$129 for centralized access parking. Decals are sold at a first-come, first-served basis. For more details visit [www.asu.edu/dpspts](http://www.asu.edu/dpspts) or call 48-965-6124, visit the Web site at [www.asu.edu/dpspts](http://www.asu.edu/dpspts).

Each vehicle registered at ASU Park and Transit Services must comply with Arizona's universal standards. ARS

§ 15-1677G during the entire registration period. The fee for a title and license inspection is \$75 to \$35 per vehicle.

Everyone is encouraged to support travel reduction measures by using mass transit, the university shuttle bus, carpooling, bicycling, or walking 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 at Park 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" section, page 46. The vehicle of any person owing three or more unpaid parking citations or \$100 in unpaid parking citations is subject to impoundment. An \$85 impound 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 incurred if the returned check is not repaid within five days per day. Repayment of a returned check must typically be in cash.

The university may have arrangements with its bank to reimburse 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 returned by a financial institution are subject to involuntary withdrawal from the university if repayment is not made. All students involved with financial 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 1999-2000 the typical cost was \$2,750 per academic year. Meal plans are purchased separately. For more information, see "Residential Life," page 36 or call 480-965-3535.

## 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 north West Phoenix and the shuttle connects ASU Main, Mesa Community College, and ASU East in Mesa, and a Free Local Area Shuttle (FLASH) is available around the perimeter of ASU Main.

Bicycle ridership at ASU is estimated to be more than 500 students daily. Ample racks and regulations enable the parking and securing of bicycles. Bicycle use is restricted to the use of campus where pedestrian traffic is sufficiently heavy to make such use a hazard. The



Bike Cop Repair Service provides assistance with bicycle maintenance.

For more information on alternate alternatives, call 480 965 1177

**PAYMENT METHODS AND DEADLINES**

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

**Debit/Credit Cards.** ASU accepts debit cards, Visa, MasterCard, and Discover Card. Debit/credit card payments through InTouch 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.

**Financial Aid.** Students receiving financial aid may use their expected aid, except Federal Work Study to pay university charges, including fees. Students who wish to do so must follow specified procedures. See the latest *Schedule of Classes* for more information.

**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. Contact the Veterans Services Section at SSV 148, or call 480 965 7775 for information on meeting the necessary requirements. The university may deny this privilege with 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 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	50%
8 through 14 calendar days	60%
15 through 21 calendar days	40%
22 through 25 calendar days	20%
After the 26th 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 InTouch. 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 individual classes.*

**Summer Sessions Withdrawal Refunds**

Withdrawal Date	Refund
Before first day of session	100%
First and second days of session	50%
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 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 a total of \$5 or less are refunded only by specific request.

**Graduation Fee.** Overpayments by a total of \$5 or less are refunded only by specific request.

**Residence Halls.** Refunds to students departing from ASU Munroe Residence Halls before the end of the academic year are computed on the following basis:

*Charges in Deposits.* Housing payments and deposit are refunded as prescribed by the Residential Lease 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 4103B, 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 in the Accounts Receivable section of Student Business Services, located in ADM A109.

### RESIDENCY CLASSIFICATION PROCEDURES AND POLICIES

The Arizona Board of Regents is required by law to establish uniform guidelines and criteria for classifying stu-

dents' 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 immediately 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 they are 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 a domicile affidavit 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/registrat/residency](http://www.asu.edu/registrat/residency).



Orange Mall

Jean Laa-inen photo

# Financial Aid

The primary responsibility for financing a college education belongs to students and their families (see the "2000 Typical Student Budgets" table, page 49). The Student Financial Assistance Office helps students, within the limits of available funds, meet college costs. Students must complete all applications in an accurate and timely manner and notify Student Financial Assistance of any changes in circumstances that may affect eligibility, e.g., loss of parent's income or change in residency classification. 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 applications are less likely to receive federal work-study, grant, and scholarship funds due to funding limitations.

An Application Acknowledgment is sent to all applicants. This letter may indicate any additional information needed to complete applications, such as copies of federal tax returns, proof of valid visa, and proof of registration with the Selective Service. Students will receive a Financial Aid Notification letter once their file is complete. This letter informs them of the types and amounts of aid they are eligible to receive. Applicants should read carefully all correspondence received.

Students receiving aid are required to meet minimum standards for satisfactory academic progress. In addition to maintaining the minimum GPA defined for good academic standing, undergraduate 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 funds for subsequent semesters until the deficiency is satisfied.

Students can access personal information regarding financial aid through the Financial Aid Services Through Technology (FASTT) phone system at 480-968-4400 or on the FASTT Website at [www.asu.edu/fastt](http://www.asu.edu/fastt). Students can access the following information:

1. documents still needed to complete a financial aid file
2. award information and
3. financial aid forms for printing

## TYPES OF FINANCIAL AID AND MAJOR PROGRAMS

More than 420 ASU students receive financial aid resources that total more than \$255 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 to determine the appropriate process for obtaining a variety of scholarships available to entering freshmen. Other undergraduate students may contact the Scholarship Office. 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.

**Scholarship Tax Credits.** Students may be eligible for either the Hope Scholarship or the Lifetime Learning tax credits. Additional information about these tax credits is available on the Web at [sbs.asu.edu](http://sbs.asu.edu).

Consult a personal tax advisor about qualifications for the Hope Scholarship and Lifetime Learning tax credits.

**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 are generally in the value of 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

Like scholarships, grants are provided to students without repayment or service obligation. However, grants are generally calculated based on financial need. Students must complete the FAFSA.

**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 2000-2001 academic year was \$3,300.

**Federal Supplemental Educational Opportunity Grant.** SEOG is a federally funded, campus-based program. A limited amount of funds is available through the program. The amount received will depend upon a student's financial need, the amount of other assistance awarded, and the avail-

## 2000–2001 Typical Student Budgets

Item	Dependent			Independent	
	At Home	On Campus	Off Campus	On Campus	Off Campus
Room	\$ 1,000	\$ 3,240	\$ 3,900	\$ 3,700	\$ 4,950
Board	1,000	2,000	2,000	2,000	2,000
Personal/Miscellaneous	1,992	1,992	1,992	2,592	2,592
Transportation	1,000	1,000	1,000	1,200	1,200
<b>Total living<sup>1</sup></b>	<b>\$ 4,992</b>	<b>\$ 8,232</b>	<b>\$ 8,892</b>	<b>\$ 9,492</b>	<b>\$ 10,742</b>
Resident tuition	\$ 2,272	\$ 2,272	\$ 2,272	\$ 2,272	\$ 2,272
Special fees	74	74	74	74	74
Books/supplies	700	700	700	700	700
<b>Resident total</b>	<b>\$ 8,038</b>	<b>\$ 11,278</b>	<b>\$ 11,938</b>	<b>\$ 12,538</b>	<b>\$ 13,788</b>
Additional tuition for nonresidents <sup>2</sup>	\$ 7,456	\$ 7,456	\$ 7,456	\$ 7,456	\$ 7,456
<b>Nonresident total</b>	<b>\$ 15,494</b>	<b>\$ 18,734</b>	<b>\$ 19,394</b>	<b>\$ 19,994</b>	<b>\$ 21,244</b>

<sup>1</sup> Loan fees are not included in this amount.

<sup>2</sup> Amounts of nonresident tuition are shown in the "2000–2001 Resident and Nonresident Tuition" table, page 43.

ability of funds. Maximum grant awards for 2000–2001 were \$1,000.

#### Leveraging Educational Assistance Partnership

(LEAP). This program 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 2000–2001 was \$1,250.

**Student Aid Trust Grant.** Provided in partnership between ASU students and the state legislature, these funds are provided primarily to resident and undergraduate students with a high financial need. The maximum grant for 2000–2001 was \$1,500.

**University Grant.** 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 nonresident students. The maximum grant awards for 2000–2001 were \$2,000.

#### Loans

A variety of loan programs provide assistance to students and, in some cases, parents in the financing of a college education.

**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 the student to have eligibility 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.

There is a variable interest rate that is adjusted every July 1. Interest cannot exceed 8.25 percent. 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; 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 enrollment period. 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 2000–2001 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 60 days after disbursement of the loan to the parent. The PLUS approval is based on the parent's credit history. 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. 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.

### 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. The Federal Work-Study programs include community service opportunities.

**Federal Work-Study.** 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.

**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.

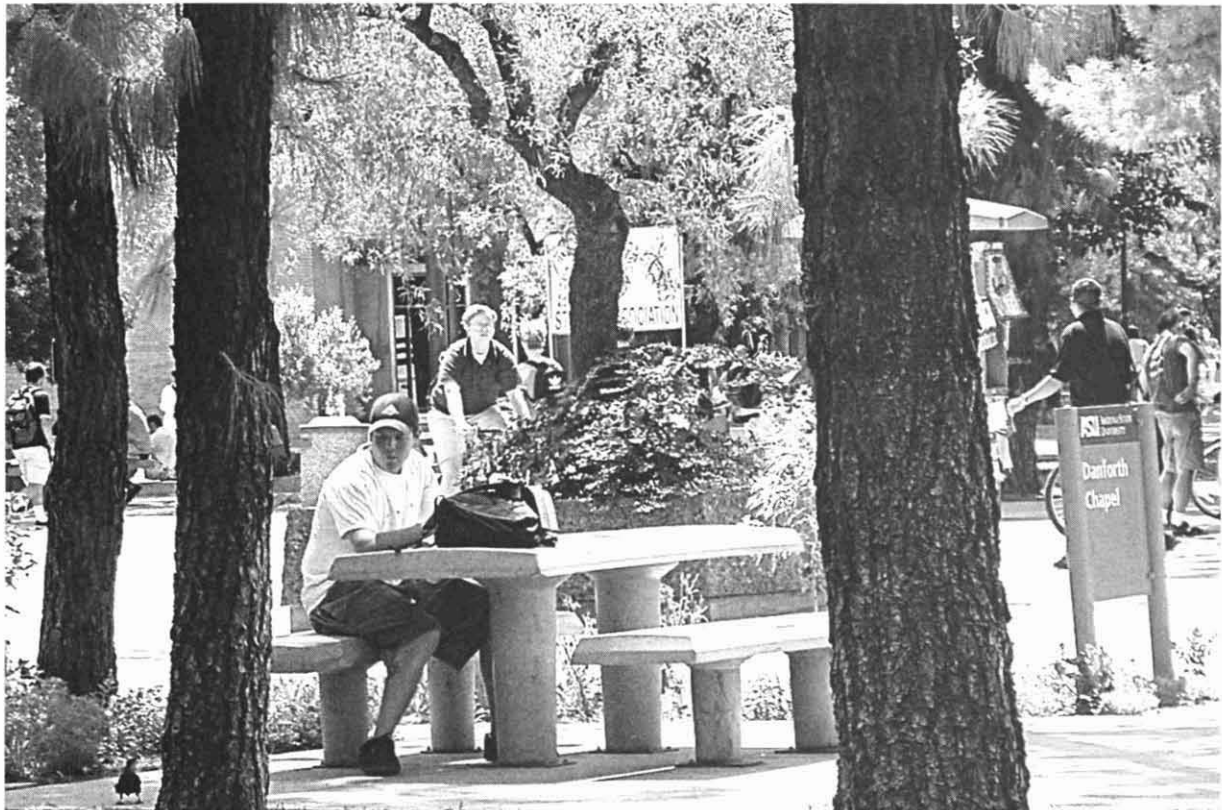
**Part-Time Off-Campus.** The university receives requests for assistance from many agencies and corporations

throughout the area to help them recruit and hire students on a part-time basis. The referral service at the university 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 from the IRS at its toll-free number 1-800-829-FORM (3676). These publications and forms can also be accessed online at [www.irs.ustreas.gov/prod/forms\\_pubs](http://www.irs.ustreas.gov/prod/forms_pubs).



The Arboretum at ASU features more than 300 diverse species and varieties of trees and plants.

Photo: Lauren Hens photo

# 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/catalog](http://www.asu.edu/catalog). 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](http://www.asu.edu/registrar/schedule).

## COURSE LISTINGS

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

**Campus Code.** Campus codes are used in the *General Catalog* and *Graduate 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, 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* for the actual course offerings.

**Prerequisites and Corequisites.** Some requirements, known as prerequisites, must be met *before* enrolling 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 78, for an explanation of the General Studies requirement, which applies to students pursuing a bachelor's degree.

## COURSE NUMBERING SYSTEM

**100–299 (Lower-Division) Courses.** Lower division courses 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.

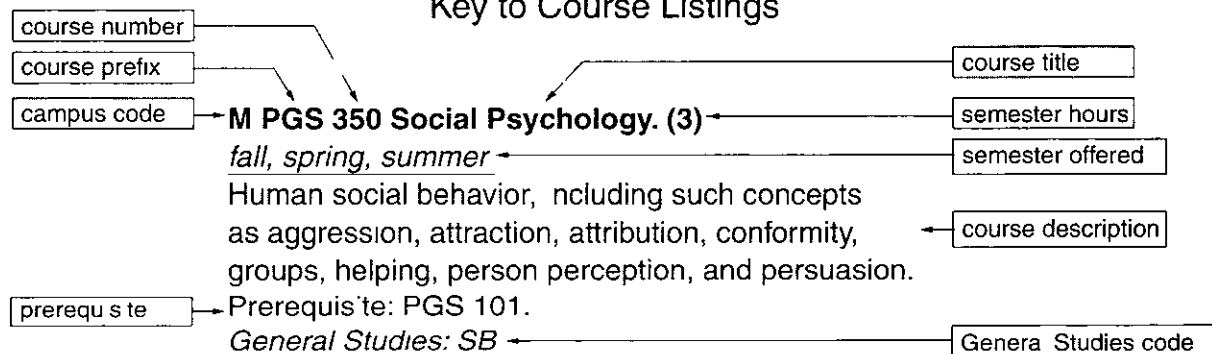
**300–499 (Upper-Division) Courses.** Upper division courses are designed primarily for juniors, seniors, and other advanced students. Prerequisites and other restrictions should be noted before registration. Courses at the 400 level apply to graduate degree requirements for some graduate programs when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

**500–799 (Graduate-Level) Courses.** Graduate level courses are designed 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 66.

## 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 the 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 in the *Graduate Catalog* for omnibus courses.

## Key to Course Listings



## 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 nonmedical or special interest to a faculty member and students.

### 484 Internship. (1 12)

Structured practical experience following a contract plan supervised by faculty and practitioners.

### 498 Pro Seminar. (1 7)

Small group study and research for advanced students within their major. Major student department or instructor approval required.

### 499 Individualized Instruction. (1 3)

Provides an opportunity for rigorous investigation in the major or field of specialization in an individual and more autonomous basis. Neither a substitute for a catalog course nor a means for taking a catalog course in an individual basis. Requires application with a letter of regular registration with the student advisor the advisor's signature and approval by both the instructor with whom the student works and the chair of the department offering the course. This course may be taken only by outstanding senior or student who have completed at least one semester residence and who have a minimum GPA of 3.0 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 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 398 and 492 Honors Directed Study, 493 Honors Thesis, 497 Honors Colloquium, and 498 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 enrollment 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 plan supervised by faculty and practitioner.

### 590, 690, 790 Reading and Conference. (1 12)

Independent study in which a student meets regularly with a faculty member to discuss assignments. Use may include such assignments as intensive reading in a specialized area, writing syntheses of literature on a specific topic, writing literature review of a topic.

### 591, 691, 791 Seminar. (1 12)

A small class emphasizing discussion on presentations by student and written research paper.

### 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 dissertation report 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 a graduate requirement is expected to fulfill.

### 594 Conference and Workshop. (1 12)

Topical instruction usually in compressed format leading to academic credit. Often offered for groups of professionals.

### 595, 695, 795 Continuing Registration. (1)

Used in situations where registration is necessary but where credits are not needed. Replaces a binary enrollment reading and conference research thesis dissertation credit by students who taking comprehensive examination defending the dissertation or fulfilling the continuing enrollment requirement for programs. Credits are not awarded and no grade assigned.

### 598 Special Topics. (1-4)

Topics reserved for registration in new courses in the catalog courses by visiting faculty course in time to complete highly specialized course reporting to unique student demand.

### 599 Thesis. (1 12)

Supervised research focused preparation of thesis during literature review research data collection and analysis and writing.

### 792 Research. (1 15)

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 dissertation report or publication. Assignments might include data collection experimental work data analysis or preparation of a manuscript.

### 799 Dissertation. (1 15)

Supervised research followed on preparation of dissertation, including literature review, research data collection and analysis and writing.

The preceding course are described in no increments of the Graduate Catalog and are all available in the respective departments. Under special circumstances, increments 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.

**Continuing Registration.** Courses numbered 595, 695 and 795, Continuing Registration, carry one semester hour of credit; however, the student receives neither credit nor grade for the course.

**Visiting Student Program.** The numbers 596, 697, and 797 in the LAW prefix have been reserved for the Visiting Student Program in the College of Law.

**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 permit an ASU education courses with other prefixes following the drop add procedure as determined by the registrar's calendar.

**Graduate College Courses.** Courses with the prefix GRD numbered 701 are reserved for doctoral students participating in the Preparation 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 experiential phase. Those accepted into the second year participatory phase enroll for one semester hour each semester.

**International Program Courses.** Courses with the prefix IPO numbered 495 and 595 are reserved for International Program's study abroad and exchange programs. For most programs, participating students register for 18 semester hours. Following completion of an international program, undergraduate students receive credit for the study completed, with a maximum of 12 semester hours and a maximum



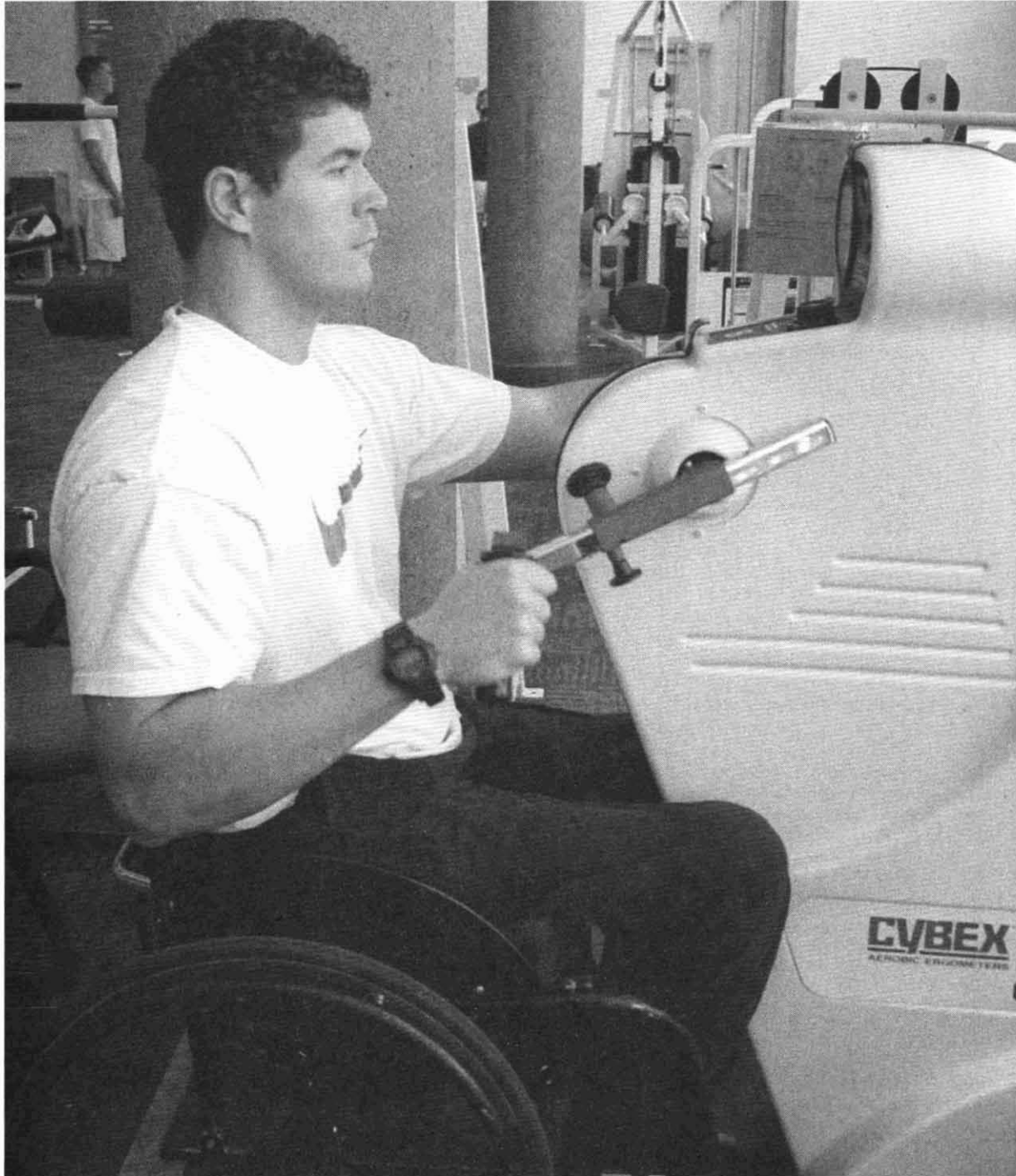
mum of 18 semester hours, graduates with a minimum of six semester hours and a maximum of 12 semester hours.

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.



Gabe Gerbic enjoys a workout.

Tom Trumbia 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. What makes this university special is its commitment 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. Any one having 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 advertently 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 outlined 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.

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 49,000 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 study, or for an advanced degree certificate. 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 5 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, socially, physically, psychologically, spiritually, and spiritually.

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

Enrollment services to students begin with recruitment, admissions, student financial assistance, on-campus housing, and reorientation programs. Student Affairs encourages students to explore the facilities, services, and human resources available. ASU Main departments guiding students in their education. Experiences include Career Services, Counseling and Consultation, the Memorial Union, Recreational Sports, Residential Life, Student Development, 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 application for admission from anyone 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](http://www.asu.edu/admissions), or write

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

With reasonable advance notice, Undergraduate Admissions arranges for a tour of ASU Main, a university information session, a classroom visit, and, if desired, a meeting with an admissions counselor. 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 59, for additional requirements: the application fee, official transcripts, and test scores.

**Application for Admission.** Prospective students must complete and submit the Application for Undergraduate

**Admission.** Like 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 the Residency Classification Office 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 enrollment and any credit earned.

**Application Fee.** All applicants applying as nonresidents or residing outside Arizona must submit a \$40 nonrefundable application fee.

**Official Transcripts.** Applicants are responsible for requesting transcripts from each education 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.

**American College Test (ACT) or Scholastic Aptitude Test (SAT).** See "Freshman Applicants" on this page, to determine which test scores are needed. 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

AMERICAN COLLEGE TESTING PROGRAM  
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 apply and 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 56, and the "General Aptitude Requirements for Freshmen" table, page 5.

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 one calendar year of university enrollment. See "Meeting Basic Competencies," page 71, for an explanation of procedures to meet these competencies.

If the applicant is unable to meet these specific admission requirements, it is possible to file a letter of appeal 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:

### Basic Competency Requirements

High School Courses	Test Scores	College Courses
<b>English</b> Four years high school: English composition/literature based	<i>or</i> Minimum test score: ACT English 21 <sup>1</sup> <i>or</i> SAT I verbal 530 (450)	<i>or</i> One transferable three semester hour college-level course in English composition
<b>Fine Arts</b> One unit of fine arts or a combination of two semesters of fine arts	<i>or</i> NA	<i>or</i> One transferable three semester hour fine arts course
<b>Foreign Language</b> Two years of the same foreign language	<i>or</i> NA	<i>or</i> One year of transferable college study in the same foreign language
<b>Laboratory Science</b> Three years high school, one each from three of the following: biology, chemistry, earth science, integrated sciences, and physics. An advanced level course may be substituted for one subject area.	<i>or</i> Two years high school lab science (biology, chemistry, earth science, physics) plus minimum SAT II: subject test score on one of the following: <sup>2</sup> Biology Achievement 590 (550) <sup>2</sup> Chemistry Achievement—600 (575) <sup>2</sup> Physics Achievement—620 (590) <sup>2</sup> ACT Science Reasoning 20 The test score may not be from any subject from which high school credit was earned	<i>or</i> 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.
<b>Mathematics</b> Four years high school: one year Algebra I, one year Geometry, one year Algebra II, and one year advanced mathematics	<i>or</i> Minimum test score: ACT Math 24 <sup>1</sup> <i>or</i> SAT I Math 540 (500) <sup>2</sup>	<i>or</i> One transferable three-semester hour course in mathematics for which Algebra II is a prerequisite
<b>Social Science</b> 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)	<i>or</i> Minimum SAT II: subject test score on American History and Social Studies Achievement 560 (510) <sup>2</sup> Minimum SAT II: subject score on World History Achievement 580 (545) <sup>2</sup>	<i>or</i> One transferable three semester-hour college level American history course <i>or</i> One transferable three-semester hour college level social science course

The ACT scoring system has been modified. As a result, these scores are effective for tests taken in and after October of 1995. Equivalent scores for tests taken before October 1989 are in parentheses for English and SAT I Math.

<sup>2</sup> The SAT scoring system has been modified. As a result, these recentered scores are effective for tests taken on or after April 1, 1995. Equivalent scores for tests taken before April 1995 are in parentheses.

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 50 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 science, mathematics, physical or natural science, foreign languages, fine arts, or the humanities.

#### 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

General Aptitude Requirements for Freshmen

Residency Classification	Class Rank	Composite Score					
		ACT <sup>1</sup>		SAT <sup>2</sup>		GPA (4.00 = A)	
Arizona residents <sup>3</sup>	top quarter	<i>or</i>	22	<i>or</i>	1040	<i>or</i>	3.00 competency GPA <sup>4</sup>
Nonresidents <sup>5</sup>	top quarter	<i>or</i>	24	<i>or</i>	1110	<i>or</i>	3.00 competency GPA

The ACT scoring system has been modified. As a result, these scores are effective for tests taken in and after October of 1989. Equivalent scores for tests taken before October 1989 are 21 for Arizona residents and 23 for nonresidents.

<sup>2</sup> The SAT scoring system has been modified. As a result, these recentered scores are effective for tests taken on or after April 1, 1995. Equivalent scores for tests taken before April 1995 are 930 for Arizona residents and 1010 for nonresidents.

<sup>3</sup> Resident freshmen who carry a competency GPA from 2.50 to 2.99 or who rank in the top 26–50 percent of the graduating high school class may be admitted with conditions.

<sup>4</sup> A GPA calculated on courses that are used to fulfill competency requirements.

<sup>5</sup> All nonresident freshmen who believe they have had a strong high school background and who rank in the top 26–50 percent 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.

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 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);
4. credits awarded by postsecondary institutions for noncredit courses, workshops, and seminars offered by other postsecondary institutions as part of continuing education programs, and
5. credit for active service or courses that were taken through the military.

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.

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. The *Course Applicability System* addresses only the acceptability of a course, not its applicability to any specific major, thus the need to consult

### General Aptitude Requirements for College Transfers<sup>1</sup>

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 <sup>2</sup>	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

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

<sup>2</sup> 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.

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](http://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 74.

#### 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.libor.asu.edu/4special/programs/atass/student/agec.html](http://www.libor.asu.edu/4special/programs/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 with the college and major in their area of study. To complete a degree program most efficiently, students should select courses to meet the AGEC requirements that will also fulfill program requirements in the college and major they intend to pursue upon transfer.

Completion of any AGEC guarantees admission to the university provided that a GPA of 2.00 for Arizona res-

idents) 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 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., Transfer Partnership Degrees. 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.

Upon completion of the AGEC, the community college will certify achievement of the block on the official institutional transcript.

The AGEC is reviewed and monitored each academic year by the subject area articulation task forces and the General Education Articulation Task Force (GEATF). The statewide GEATF is composed of representatives from each

Arizona community college and state university. The GEATF is responsible for monitoring the AGECA and reviewing related appeals.

**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

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 Service regulations, any student who plans to attend ASU on an F-1 or J-1 visa must

1. have a minimum GPA (1300-4000 A) from secondary school coursework if a freshman applicant, or have a minimum GPA of 250-400 A from college or university coursework 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 \$40 in U.S. funds; and
6. meet all appropriate immigration standards and requirements.

**Credit from a Foreign Institution.** Transfer credits or advanced standing is granted for academic coursework 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 480-965-2685.

**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 six semester hours at ASU as a nondegree student while maintaining full-time status at their higher education institutions or the American English and Culture Program (AECPC) at ASU. Approval by the responsible office at the other institution and/or AECPC 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 the 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.

**American English and Culture Program**

The American English and Culture Program (AECPC) 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,  
DEPARTMENT 4  
ARIZONA STATE UNIVERSITY  
PO BOX 873504  
TEMPE AZ 85287-3504

Acceptance into the AIEOP is separate from admission to the university. For more information, see "American English and Culture Program," page 685.

### Applicants with Disabilities

Some classroom accommodations, such as braille, audio tapes, interpreting services, enlarged print, and lab material conversions, 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, appropriate 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](http://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 \$40 nonrefundable application fee for applicants applying as nonresidents or residing outside Arizona. 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 and changes to Undergraduate Admissions at 480 965 7758.

**Orientation.** University orientation programs for new students and their parents are provided at numerous times during the year, including the beginning of each semester. Each orientation program includes 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, 1976, must provide proof of measles, mumps, 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, mumps, 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 calling [www.asu.edu/registrar](http://www.asu.edu/registrar) 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](http://www.asu.edu/health).

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

*Student Health Insurance.* All F1 or J1 visa students must have health and accident insurance through ASU, and the cost for insurance is automatically added to their registration bill. *No private or qualified 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 7411 or visit the Student Health and Wellness Center Web site at [www.asu.edu/health](http://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's comprehensive and proficiency examinations. In these categories, only credit earned



by comprehensive examination credits 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 62.

**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 enrolling in the university for the first time in August 1975 and any student enrolling thereafter. CLEP examination credit is not given where 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 Courses" table, page 61.

**General Examinations.** To obtain credit or placement, students must receive a standard score of 50 or higher for the General Examinations, except for English Composition with Essay, on which students must receive a standard score of 610 (1978 scale) or 500 (1986 scale). *Students who have completed 60 semester hours of relevant credit will receive any credit for the CLEP General Examinations.*

**Subiect Examinations.** A standard score of 50 (except College Algebra and Spanish) or higher must be received to obtain credit for any subiect 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 change.* For more information, contact University Testing Services at 480-965-7146 or stop by EDB 301.

**International Baccalaureate 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 64.

**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.

Comprehensive examinations may not be taken in any course in which the student has been given admission credit or transfer credit from any educational institution. Credit may not be received for an examination in an elementary level of a field in which the student has earned more advanced credit nor for a prerequisite for a course already completed.

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 completes 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 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.

## Advanced Placement Credit

Examination	Score	Semester Hours	Equivalency
Art History	5 or 4	6	ARS 101, 102
	3	3	ARS 101, 102 <sup>2</sup>
Art Studio—Drawing	5	6	ART 111, 112
	4	3	ART 111
Art Studio—General	5	6	ART 111, <sup>1</sup> 112
	4	3	ART 112
Biology	5 or 4	8	BIO 181, 182
	3	4	BIO 181
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	GFR 201, 202, 311, 312
	4	11	GFR 201, 202, 311
	3	8	GFR 201, 202
German—Literature	5	15	GER 111, 201, 202, 314
	4	12	GER 111, 201, 202
	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 <sup>2</sup>
Political Science—American Government and Politics	5 or 4	3	POS 111
Political Science—Comparative Government and Politics	5 or 4	3	POS 150
Psychology	5 or 4	3	PGS 111
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 or 4	3	STP 226

<sup>1</sup> ART 115 credit may be awarded in place of ART 111 based on the School of Arts & Sciences 3D artwork submitted as part of the AP portfolio.

<sup>2</sup> Students may petition the department for additional credit and requirements based on satisfactory performance on their AP courses.

## CLEP Credit

Examinations	Semester Hours	Equivalency
<b>General</b>		
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
<b>Subject</b>		
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 (Students must score 46 or higher to receive credit.)
College Algebra and Trigonometry	3	MAT 170
College French	8	FRE 101, 102
College German	8	GER 101, 102
College Spanish	4	SPA 101 (Students must score 45 or higher to receive credit.)
College Spanish	8	SPA 101, 102 (Students must score 50 or higher to receive credit.)
College Spanish	12	SPA 101, 102, 201 (Students must score 55 or higher to receive credit.)
College Spanish	16	SPA 101, 102, 201, 202 (Students must score 60 or higher to receive credit.)
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 181, 182
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 (Students must score 75 or higher to receive credit. College of Business students may not use this credit for the ECN 111 requirement.)
Principles of Management	0	No credit
Principles of Marketing	0	No credit
Principles of Microeconomics (replaces Introductory Microeconomics)	3	ECN 112 (Students must score 75 or higher to receive credit. College of Business students may not use this credit for the ECN 112 requirement.)
Trigonometry	0	No credit
Western Civilization—Ancient Near East to 1648	6	HST 102, 103
Western Civilization—1648 to the Present	3	HST 104

**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.

## 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 181, 182
	4	4	BIO 181
Chemistry	7, 6, or 5	9	CHM 113, 115
	4	4	CHM 113
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
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

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

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 other college or university must have the course evaluated for equivalency. See "First-Year Composition Requirement," page 74, for more information.

## Placement Examinations

**English.** New students and continuing, reentry, transfer, and nondegree 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 360). 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](http://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 388, and "Special Programs for Advanced Placement and Credit," page 60.

**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 undergraduate office, in PS A211, or access the Web site at [fym.la.asu.edu/placement](http://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-quality advising, students, faculty, and staff must work to form a partnership. To ensure timely and accurate advising to their majors, each college has advisors to assist students in developing programs of study, assessing educational

## Academic Advising at ASU Main

College	Location	Telephone	Days	Hours <sup>1</sup>	Web Address
Barrett Honors College	IRISH A121	480/965-9155	Mon.–Fri.	8 A.M.–5 P.M. <sup>2</sup>	www.asu.edu/honors
College of Architecture and Environmental Design	ARCH 141	480/965-3584	Mon.–Fri.	8:30 A.M.–noon, 1–4 P.M.	www.asu.edu/caed
College of Business	BA 123	480/965-4227	Tues. Other weekdays	9 A.M.–6:30 P.M. 9 A.M.–4:30 P.M.	www.cob.asu.edu/up/ indexupo.cfm
College of Education	EDB L1-13	480/965-5555	Mon.–Fri.	8 A.M.–5 P.M.	www.asu.edu/educ/ osa
College of Engineering and Applied Sciences	ECG 100	480/965-3421	Mon.–Fri.	8:30 A.M.–noon, 1–5 P.M. <sup>2</sup>	www.eas.asu.edu
College of Law	LAW 101	480/965-1474	Mon.–Fri.	8 A.M.–5 P.M. <sup>3</sup>	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.	8:30 A.M.–5 P.M.	www.asu.edu/nursing
College of Public Programs	WILSN 203	480/965-1034	Mon.–Fri.	8:30 A.M.–noon, 1–5 P.M.	www.asu.edu/copp/ coppadv.html
Cross-College 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
Graduate College	WILSN lobby	480/965-3521	Mon.–Fri.	8 A.M.–6 P.M. <sup>2</sup>	www.asu.edu/ graduate/ fr_checklist.html
Herberger College of Fine Arts	GHALL 127	480/965-4495	Mon.–Fri.	8 A.M.–noon, 1–5 P.M.	www.asu.edu/cfa

<sup>1</sup> Arizona is on mountain standard time all year and does not observe daylight saving time.

<sup>2</sup> Walk-ins are welcome; appointments are recommended.

<sup>3</sup> Call for additional hours.

goals, and understanding rules, procedures, and curriculum requirements. In some colleges, these advisors are faculty members. In others, they are full-time, professional advisors. In most instances, students have academic and career advising available 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 have mandatory advising as a condition of registration.

An additional unit, Cross-College Advising Services (CAS), 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 majors (B.I.S. or pre-B.I.S.) also receive academic advising in CAS. In addition to guidance in the exploration or selection of a major, CAS provides general academic information and referrals to all areas of student academic support. For more information, visit CAS in UASB 129, or call 480/965-4464.

Students are strongly encouraged to seek academic advising at the earliest possible time and 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, on this page. For academic advising at ASU East, see the “Academic Advising at ASU East” table, page 605. See “Building Abbreviations,” page 720, 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 \$40 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 71, 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 74, and "Readmission to the University," page 65.

**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, and at the OASIS in the Center Building on East Campus. See the *Schedule of Classes* or refer to "Sun Card/ID Card," page 44.

**Registration Fees.** Registration fees are due and must be paid in full at the time specified each semester in the *Schedule of Classes*. If any payment tendered is unauthorized, incomplete, or received after the due date, registration fees are considered not paid.

**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](http://www.asu.edu/registrar/schedule). They list course offerings, dates, times, places, and procedures for registration, along with other important information relating to 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 two 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 *bacca a reate* 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 with 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 concern only enrollment, graduation

**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 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 assistant	2 or more hours	1 hour	
Eight week summer session	Undergraduate	6 or more hours	3-5 hours	2 or fewer hours
	Graduate	3 or more hours	3-4 hours	2 or fewer hours

requirements, and transfer of credits is required. A student may enroll in classes at other institutions if the dependent learning courses will be enrolled at ASU. However, the student is urged to seek a physician before enrollment to assure orderly progress toward a degree. If total credits exceed the maximum course load for permission, must be granted by the College Registrar's Office. See "Course Loads," page 66.

**Attendance.** The instructor has full authority to decide whether class attendance is required.

**Enrollment Verification Guidelines.** The registrar is responsible for verifying enrollment and reporting 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 the student to work and work experience credit 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 completed prescribed hours and GPA requirements.

**Rights and Privileges of Co-op Students.** During work semesters, co-op students have the rights, privileges, and protections with regard to university matters afforded 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 identified to lenders including ASU as being on loan payment status. They have an "on loan" full time enrollment status. Co-op students do not receive any financial aid or disbursement during their co-op semesters. *Each awards transfer to the semester.* The student is responsible for notifying Student Financial Assistance as soon as plans for a co-op term are made but not later than 14 days before the co-op term begins. The department or school is responsible for notifying Student Financial Assistance of students approved for co-op term.

**Traveling Scholar Program.** The Traveling Scholar Program is a cooperative program with state universities designed to enable students to take advantage of programs or special resources that are not available at their own institution.

Any undergraduate student with a GPA of at least 2.5 or graduate student with a GPA of at least 3.0 enrolled at ASU Northern Arizona University, or University of Arizona may be designated a Traveling Scholar by prior mutual agreement of the appropriate academic offices at both the sponsoring and host institutions. Contact the Registrar's Records Information Section for more information and the application form.

**Grading System**

**DEFINITIONS**

**Unit of Credit**

The Arizona Board of Regents has defined, May 26, 1994, 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. For the other disciplines, 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 function as a transcript.

They are indicated by the letters shown in the "Grades" table, page 65.

**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 in the handbook after the close of the drop/add period.*

**Incomplete**

An 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 re-register 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 re-register and pay fees. The grade for the repeated course appears on the transcript but does not replace the permanent "I."

### 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 non credit	
W	Withdrawal	
X	Audit	
Y	Satisfactory	

This grade appears on the official press ASU transcript.

### 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 36.

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 CPA.

### Pass/Fail Enrollment

A mark of "P" (pass) or "F" (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 college dean's office for detailed information and restrictions 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 non 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 deferral 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 cer-



tifies 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 abs and recitations.

**Procedure for Restricted Withdrawal.** A student seeking a restricted withdrawal needs to:

1. obtain a withdrawal form from any registrar site,
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 14 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 with draw using InTouch, or submit a signed request to the Office of the Registrar. The InTouch 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 instructor certifies 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 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 alternatives 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 non-degree 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 obligated 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.

After completing the course, the student must file a Deletion Form with the Office of the Registrar. To be eligible for the deletion of "D" or "E" grades, the course must be repeated at ASU. Students who have graduated are not eligible to delete the grade for a course taken before the award of the ASU bachelor's degree.

This policy does not apply to senior 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 required 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](http://www.asu.edu/registrar) or accessed through InTouch 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 hold is placed on a record, the following results may occur:

1. No official or unofficial transcript is issued.
2. Registration privileges are suspended.
3. Other student services may be revoked.

The hold remains effective until removed by the admitting 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:

1. the student's name and former name(s),
2. the student ID number,
3. the date of birth and
4. the dates of attendance.

The request for official transcript form is available online at [www.asu.edu/registrar/forms](http://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 for a student not enrolled is \$5 for the first copy. Additional copies ordered at the same time are \$1 each. The fee is \$1 per copy for a student enrolled for a current or future semester.

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 charge for an unofficial transcript.

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 73.

**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 below.

**Class Standing**

Student	Hours Earned
Freshman	24 or fewer hours earned
Sophomore	25-55 hours earned
Junior	56-86 hours earned
Senior	87 or more hours earned
Graduate	Bachelor's degree from accredited institution

**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 below.

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.

**Academic Good Standing**

Total Earned Hours	Minimum Cumulative GPA
24 or fewer	1.60
25-55	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 one year 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 Competencies" table, page 72.

**Appealing Basic Competencies.** A student who has not met all basic competencies at the end of one calendar year 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 the 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](http://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.

### 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 undergraduate three semester hour course offered in the Herberger College of Fine Arts
Foreign language	Student must complete through the 102, 108, 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 <ol style="list-style-type: none"> <li>1. GLG 101 and 103</li> <li>2. GLG 110 and 111</li> <li>3. GLG 105</li> <li>4. GPH 111</li> <li>5. ERS 130</li> </ol>
Life sciences	
Physics	Any one course: BIO 100, 113, 120, 181, 182, 201; PLB 108 Any numbered selection <ol style="list-style-type: none"> <li>1. AST 111 and 113</li> <li>2. AST 112 and 114</li> <li>3. PHS 110</li> <li>4. PHY 101</li> <li>5. PHY 111 and 113</li> <li>6. PHY 112 and 114</li> <li>7. PHY 121 and 122</li> <li>8. PHY 131 and 132</li> </ol>
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 two separate laboratory science areas. For example, if one laboratory science competency has been met in life sciences through high school course work, the ATP biology achievement test, or college course work, the second laboratory science course must be selected from chemistry, earth sciences, or physics.

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 or the Office of the Registrar 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.** If a student with a GPA of 2.00 or greater has been disqualified by one college and seeks to transfer to another college at ASU, the student may apply at the Readmissions Section (SSV 114) or directly to the college to which the student wishes and is qualified to transfer.

To be reinstated into an ASU college other than the disqualifying college, the student must submit an application for reinstatement to the University Undergraduate Admissions Board through the Readmissions Section of the Office of the Registrar.

To be reinstated into the same college from which the student was disqualified, the student must submit an application for reinstatement to the disqualifying college. When reinstatement includes readmission, application must be made to the Readmissions Section of the Office of the Registrar.

**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.

dent 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 educational 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 education 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, local telephone number, date and place of birth, residency status, 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 not to 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 parents 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.



Inside the Memorial Union

Tim Trumble photo

# University Graduation Requirements

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## 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 may be earned by independent learning courses and/or earned by comprehensive examination, including Advanced Placement, College Level Examination Program, and International Baccalaureate Diploma/Certificate exams, are accepted for credit toward the baccalaureate degree.

### Grade Point Requirement

A minimum cumulative grade point average of 2.0 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 75. For General Studies courses, see the "General Studies Courses" table, page 81, 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 [www.abor.asu.edu/4/special/programs/ass\\_students/agecURLs.htm](http://www.abor.asu.edu/4/special/programs/ass_students/agecURLs.htm).

### General Studies 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 scheduled 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 L 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 subsequent terms of continuous enrollment. Students may not 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

## Continuous Enrollment

Student's Activity	Semester/Year	Status
<b>Example A</b>		
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
<b>Example B</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
<b>Example C</b>		
Admitted and earned course credit at an Arizona community college	Fall 1997	Active
Nonattendance	Spring 1998	Inactive
	Fall 1998	
	Spring 1999	
Readmitted and earned course credit at an Arizona community college	Fall 1999	Active
Transferred to an Arizona university	Spring 2000	Student enrolled under 1999–2000 or any subsequent catalog
<b>Example D</b>		
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
<b>Example E</b>		
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

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 cat-

alog 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, on this page.
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 non-transferable 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 *continuously* enrollment at the community college, the university should consider *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 following the curriculum requirements of the 1990-98 or later catalog editions may be eligible to file a Declaration of Graduation 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.

A student must reevaluate his or her degree audit with the academic advisor and submit a Declaration of Graduation within the semester he or she earns the 87th semester hour. Students who have not met the above requirement are prevented from further registration.

Students following the curriculum requirements of the 1994-96 or earlier catalog editions, plus selected students following later catalogs, will follow the Program of Study requirement instead of the Declaration of Graduation. Inquiries about whether to follow the Declaration of Graduation procedure or the Program of Study procedure may be directed to the academic advisor.

### Program of Study Requirements

A student following the curriculum requirements of the 1994-96 or earlier catalog editions must file an Undergraduate Program of Study for graduation within the semester the student earns his or her 87th semester hour. The Program of Study guides the student in accomplishing successful completion of degree requirements in a timely manner. Students who have not met the above requirement are prevented from further registration.

Program of Study forms and procedural information are available from the Graduation Section at SSV 140, at my registration site, or online at [www.asu.edu/centralstar/forms](http://www.asu.edu/centralstar/forms).

### 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 14.
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 at the graduation date and eligibility to graduate is 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, LCB 20.

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.

A petition must originate with the student's advisor. Refer to the college sections of the 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, units of credit by exemption, and requirements for a second baccalaureate degree. See "Overview of Graduation Requirements," page 77, and "Second Baccalaureate Degree," page 7. 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 these requirements, see the appropriate *General Catalog* section. Students are encouraged to consult with an academic advisor to plan the 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 78.

**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 that you understand the requirements of your college.

**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 102. Some courses, while providing semester hours toward graduation, fall outside the shaded circles and are not required in your 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, on this page. 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.

### Academic Recognition

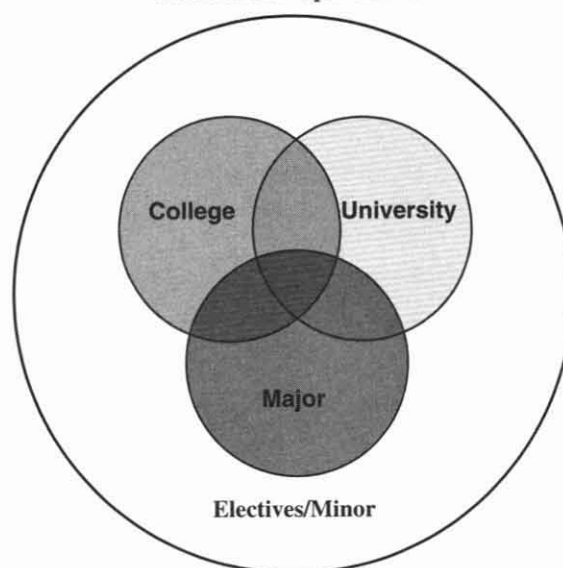
Cumulative GPA	Designation
3.40–3.59	<i>cum laude</i>
3.60–3.79	<i>magna cum laude</i>
3.80–4.00	<i>summa cum laude</i>

**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 498, and "College of Law," page 312, 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 prepare students for a particular profession or advanced study and for constructive and satisfying personal, social, and civic lives. 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 attain mastery of critical learning skills, investment in the traditional branches of knowledge, and development of 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, reviewing, 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* are postsecondary critical thinking, 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, development in 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 Campus Studies Council for ASU Main and ASU East for meeting the General Studies requirement are listed in the "General Studies Courses" table, page S1; 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 55 semester hours of approved General Studies courses. Many General Studies courses are approved cross-institutionally and

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 a 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 6. 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 and competence in written and oral discourse, critical inquiry is the careful 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-level courses, preferably in their major. Students must have completed ENG 111 (7, or 105 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 (college level) 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) apply statistical 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 mathematical work.

**MA and CS Requirement (Six Semester Hours).** This requirement has two parts: 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. a student is expected to fulfill the MA requirement within the first 18-24 semester hours of credit in residence at ASU. Any student who has more than 30 hours of residence at ASU credit and has not fulfilled the mathematics MA requirement must enroll in an MA course or an appropriate prerequisite if he or she is to do so every semester until the mathematics requirement is met. College office staff can assist in determining 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.



Cady Mall

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 areas 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 can 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 the culture 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 the Arizona community colleges, is composed of 35 semester hours of lower division general education course work. Students who complete the AGEC have completed 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 58.

### 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 may 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 81, 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 awareness 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 52. Only three semester hours may fulfill L requirement.)	L									
ACC 330 Enterprise Process Analysis and Design	L									
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
210 Introduction to Ethnic Studies in the U.S. (Cross-listed as APA 210/CCS 210)								C		
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							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	
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
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 Civilization Before 1850 (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							
250 World Food Dynamics									G	
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					
456 World Agricultural Resources									G	
AIS 180 Introduction to American Indian Studies								C		
280 American Indian 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 AFH 210/CCS 210)								C		
310 Asian Pacific American Arts and Cultures				HU				C		
315 Asian Pacific American Literature				HU				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		
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
301 World Architecture II/Eastern Cultures									G	
304 American Architecture				HU						
305 Contemporary Architecture				HU						

## General Studies Courses (continued)

		L	MA	CS	HU	SB	SQ	SG	C	G	H
	313				HU						
	314	L			HU						
	411										H
	414										H
	441				HU						
	443				HU						
	444				HU						
	446				HU						
	447				HU						
ARA	311				HU						
	488	L			HU						
ARB	201									G	
	202									G	
ARS	100				HU						
	101				HU						H
	102				HU						H
	201				HU				G		H
	202				HU				G		H
	250				HU						
	300				HU						
	302				HU				G		H
	340				HU						H
	400				HU						H
	402				HU						H
	404				HU						H
	406				HU						H
	410				HU						
	412				HU						H
	414				HU						H
	416				HU						
	418				HU						
	420				HU						H
	422				HU						
	424				HU						H
	426				HU						H
	428				HU						H
	430				HU						H
	432				HU						H
	434				HU						
	436				HU						
	438				HU						H
	439				HU						H
	442				HU						
	443				HU						
	444				HU						H
	458				HU						
	462				HU						H
	463				HU						H
	465				HU						H
	466				HU				C		H
	468				HU						
	469				HU						H
	472				HU						
	473				HU						
	475				HU						
	480										
	485	L									
ART	346			CS							
	470			CS							

## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
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 Indians 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 Civilization Before 1850 (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					
ASE 485 Engineering Statistics			CS							
ASM 101 Bones, Stones, and Human Evolution					SB					
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				
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			
181 General Biology						SQ				
182 General Biology							SG			
193 The Nature of Biological Science						SQ				

## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
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									
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									
415 Biometry			CS							
416 Professional Values in Science (Cross-listed as HPS 410)	L									
419 Research Colloquium in Biology and Society	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 (Cross-listed as STE 201)	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 AFH 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					
CEE 486 Integrated Civil Engineering Design	L									
CET 150 Digital Systems I			CS							
CHE 352 Transport Laboratories	L									
461 Process Control			CS							
CHI 201 Intermediate Chinese									G	
202 Intermediate Chinese									G	
207 Chinese for International Professions II									G	
313 Advanced Chinese									G	
314 Advanced Chinese									G	
321 Chinese Literature	L			HU						
322 Chinese Literature	L			HU					G	
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				



## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
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 Asian Pacific American Arts and Cultures				HU				C		
400 Asian Pacific Americans and Media				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 Interpretation 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							
180 Computer Literacy			CS							
181 Applied Problem Solving with Visual BASIC			CS							
183 Applied Problem Solving with FORTRAN			CS							
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		
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
340 Chicanas and Chicanos in the U.S. Economy								C		
432 Issues in Chicana and Chicano Gender								C		
DAH 100 Dance in World Cultures				HU						



## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
332 Major American Novels	L									
333 American Ethnic Literature (Cross-listed as AFH 333)	L							C		
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 History of the Drama	L			HU						
356 The Bible as Literature				HU						
357 Introduction to Folklore				HU						
359 American Indian Literatures	L			HU				C		
361 Silent Film				HU						
362 Sound Film Genres				HU						
363 Chicana and Chicano Literature (Cross-listed as CSH 363)	L			HU				C		
372 Document Production	L									
400 History of Literary Criticism				HU						
413 History of the English Language				HU						
415 Medieval Literature				HU						
416 Chaucer: <i>Canterbury Tales</i>				HU						
417 Chaucer: <i>Troilus and Criseyde</i> and the Minor Works				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 English Romanticism				HU						
426 Victorian Poetry	L			HU						
427 Restoration and Early 18th Century				HU						
428 The Later 18th Century				HU						
430 Victorian Cultural Backgrounds	L			HU						
435 19th-Century American Poetry				HU						
439 Restoration and 18th-Century Drama				HU						
440 Studies in American Literature to 1815				HU						
441 20th-Century American Drama				HU						
443 American Poetry, 1900–1945				HU						
444 Studies in American Romanticism, 1830–1860				HU						
445 Studies in American Realism, 1870–1910	L			HU						
448 20th-Century British and Irish Novel				HU						
451 The Novel to Jane Austen				HU						H
452 The 19th-Century Novel				HU						
453 The American Novel to 1900				HU						
454 The American Novel, 1900–1945				HU						
457 American Poetry Since 1945				HU						
458 American Novel Since 1945	L			HU						
460 Western American Literature	L			HU						
461 Women and Literature				HU						
462 20th-Century Women Authors				HU						
463 European Drama from Ibsen to 1914				HU						
464 European Drama from 1914 to the Present				HU						
471 Literature for Adolescents				HU						
EPE 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		
414 Electromyographic Kinesiology	L									
441 Physiology of Women in Sport	L									
443 Exercise Endocrinology	L									
448 Applied Sport Psychology	L									
452 Exercise Psychology					SB					

## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
460 Theory of Strength Training	L									
ERS 130 Introduction to Environmental Science						SQ				
246 Environmental Conservation and Ecology									G	
350 Environmental Statistics			CS							
480 Ecosystem Management and Planning	L									
ETC 100 Languages of Technology			CS							
ETM 428 International Environmental Management									G	
EXW 100 Introduction to Health and Wellness (Cross-listed as EPE 100/HES 100)					SB					
300 Foundations of Exercise and Wellness	L				SB					
442 Physical Activity in Health and Disease	L									
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	
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	



## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
471 Cartographic Design			CS							
473 Geographic Information Science II			CS							
GRA 318 History of Graphic Design				HU						
345 Design Rhetoric	L									
GRK 301 Ancient Greek Literature				HU						
302 Ancient Greek Literature				HU						
GRN 430 Multidisciplinary Approaches to Gerontology					SB					
HCR 210 Clinical Health Care Ethics				HU						
220 Health Care Organizations (Cross-listed as HSA 220)	L									
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 EPE 100/EXW 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	H
375 Science and the Modern Self	L			HU						
376 Law, Literature, and Life	L			HU						
493 Honors Thesis	L			HU						
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
410 Professional Values in Science (Cross-listed as BIO 416)	L									
HSA 220 Health Care Organizations (Cross-listed as HCR 220)	L									
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
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									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

## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	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					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
361 Witchcraft and Heresy in Europe (Cross-listed as REL 374)	L									H
362 Sex and Society in Classical and Medieval Europe					SB					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
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

## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
410					SB					H
411					SB					H
412					SB					H
414					SB					H
415					SB			C		H
416					SB			C		H
417					SB			C		H
423					SB					H
424					SB					H
426					SB					H
427					SB					H
428					SB				G	H
429					SB				G	H
430					SB					H
431					SB					H
432					SB				G	H
435					SB					H
436					SB				G	H
437				HU	SB					H
438				HU	SB				G	H
441					SB					H
442					SB					H
443					SB				G	H
445					SB				G	H
446					SB					H
447					SB					H
451					SB					H
452					SB				G	H
453					SB				G	H
455					SB				G	H
456					SB				G	H
460	L									H
493	L									
498	L									
HUM 110				HU						
200				HU						
260				HU					G	
301	L			HU						H
302	L			HU						H
310	L			HU						H
312	L			HU						H
340				HU						
401				HU						H
420				HU					G	H
440	L			HU				C		
450	L			HU						
460	L									
462	L			HU	SB					
465	L			HU						
498	L			HU						
IBS 300									G	
306					SB				G	
400								C	G	
493	L									
IDN 201									G	
202									G	
IED 410					SB			C		H
430				HU	SB			C		
444					SB					



## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
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							
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	
430 Italian Literature of the Middle Ages				HU						
441 Dante: <i>Divina Commedia</i>	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	
JPN 201 Intermediate Japanese									G	
202 Intermediate Japanese									G	
207 Japanese for International Professions II									G	
311 Japanese Conversation and Composition									G	
312 Japanese Conversation and Composition									G	
313 Advanced Japanese									G	
314 Advanced Japanese									G	
321 Japanese Literature	L			HU					G	
JRN 201 Journalism Newswriting	L									
301 Reporting	L									
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		
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									
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		



## General Studies Courses (continued)

		L	MA	CS	HU	SB	SQ	SG	C	G	H
	401										
MIS	410					SB					
	412					SB					
	414					SB					
	416					SB					
MKT	460	L									
MUE	381	L									
MUS	340				HU						H
	347				HU						
	354				HU						
	355				HU						H
	356				HU						
NTR	344	L									
	348								C		
	448	L									
NUR	362	L									
	391	L									
	461				HU						
OPM	450	L									
PGS	101					SB					
	222					SB					
	270					SB					
	300					SB				G	
	304	L									
	306					SB					
	315					SB					
	341					SB					
	350					SB					
	351	L				SB					
	365					SB					
	414	L				SB					
	427	L				SB					
	441	L				SB					
	443	L				SB					
	444	L									
	445					SB					
	446	L									
	450	L									
	451	L									
	452	L									
	461					SB					
	463	L									
	465	L									
	466					SB					
	467	L									
PHI	101				HU						
	103	L			HU						
	105				HU						
	300	L									
	301				HU						H
	302				HU						H
	304				HU						
	305				HU						
	306				HU						
	307				HU						
	308				HU						
	309				HU						
	310				HU						
	311				HU						

## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
312 Theory of Knowledge				HU						
314 Philosophy of Science				HU						
315 Philosophy of Language				HU						
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				
252 Physics III						SQ				
420 Research Paper	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)									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					
300 Contemporary Controversies in Global Politics					SB				G	





## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	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						
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	L			HU						
426 American Preachers and Preaching: The Sermon in America	L			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	
486 Modern Critics of Religion				HU						
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 Survey of Russian Literature	L			HU						H
322 Survey of Russian Literature	L			HU						
323 Survey of Literature of the Soviet Era	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						
426 Literatures of the Nationalities of the Former Soviet Union	L			HU					G	
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					
SOC 101 Introductory Sociology					SB					
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					
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 The Sociology of Mass Communication					SB					
390 Social Statistics I			CS							

## General Studies Courses (continued)

	L	MA	CS	HU	SB	SQ	SG	C	G	H
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 Demographic Methods					SB					
446 Sociology of Crime					SB					
451 Comparative Sociology					SB				G	
455 Social Movements					SB					
456 Political Sociology					SB				G	
464 Women's Roles	L				SB			C		
470 Racial and Ethnic Relations					SB			C		
474 African-Americans in Modern Society	L				SB			C		
483 History of Social Thought	L				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									
SPE 311 Orientation to Education of Exceptional Children					SB					
SPF 111 Exploration of Education					SB					
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 271 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		





# Minors, Certificates, and Interdisciplinary Studies

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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 your 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 104.

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 105; "ASU Postbaccalaureate Certificates" table, page 106, and "ASU Graduate Certificates" table, page 106. 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 "Concurrent and Dual Degrees" table, page 517, 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 108, or "Interdisciplinary Studies - B.I.S.," page 621.

**Energy Studies.** An expanding instructional and research involvement in energy matters exists through the following three curricular paths:

1. general studies, which emphasize energy as an elective beyond the scope of a chosen major (for more information, call 480 965 4548),
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, and
3. specific studies in the College of Engineering and Applied Sciences, usually for those seeking a degree in a branch of engineering.

**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 35.

**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 in 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 24 semester hours—12 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 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 687, and "Gerontology," page 500, or refer to the current *Student Handbook in Gerontology*.

**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 328, and "Department of Military Science," page 413, 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 western 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 last five years. Recipients are required to return to Arizona to practice or to repay a portion of the funds expended in their behalf.

For applications and more information, call 602/229-2500.



The Sun Devil Marching Band's flag line proudly wields the Sparky flag during the homecoming parade.

Tim Tumbler photo

## ASU Minors

Minor	Administered By	Campus	Page
African American Studies	African American Studies Program	Main	331
American Indian Studies	American Indian Studies Program	Main	471
American Studies	Department of American Studies	West	671
Anthropology	Department of Anthropology	Main	334
Art History	School of Art	Main	271
Asian Languages (Chinese/Japanese)	Department of Languages and Literatures	Main	386
Astronomy	Department of Physics and Astronomy	Main	421
Biology	Department of Biology	Main	341
Business †	College of Business	Main	150
Chemistry	Department of Chemistry and Biochemistry	Main	347
Chicana and Chicano Studies	Department of Chicana and Chicano Studies	Main	351
Communication	Hugh Downs School of Human Communication	Main	474
Communication Studies	Department of Communication Studies	West	671
Dance	Department of Dance	Main	287
Economics for Students Planning a Career in Law	Department of Economics	Main	353
English	Department of American Studies	West	671
English with a Concentration in Linguistics	Department of English	Main	354
English with a Concentration in Literature	Department of English	Main	354
Environmental Resources	Morrison School of Agribusiness and Resource Management	East	613
Ethnic Studies	Ethnic Studies Program	West	671
Exercise and Wellness	Department of Exercise and Wellness	East	626
Exercise Science/Physical Education	Department of Exercise Science and Physical Education	Main	361
Family and Human Development	Department of Family and Human Development	Main	364
Film and Video Studies	Department of Interdisciplinary Arts and Performance	West	671
Food and Nutrition Management	Department of Nutrition	East	631
French	Department of Languages and Literatures	Main	387
General Economics	Department of Economics	Main	353
Geography	Department of Geography	Main	368
Geological Sciences	Department of Geological Sciences	Main	372
German	Department of Languages and Literatures	Main	387
Gerontology	Gerontology Program	Main	102
History	Department of History	West	671
Human Nutrition	Department of American Studies	West	671
Humanities	Department of Nutrition	East	631
Interdisciplinary Arts and Performance	Interdisciplinary Humanities Program	Main	382
Interior Design History	Department of Interdisciplinary Arts and Performance	West	671
Italian	School of Design	Main	136
Justice Studies	Department of Languages and Literatures	Main	387
Landscape Studies	School of Justice Studies	Main	482
Life Sciences	School of Planning and Landscape Architecture	Main	140
Mass Communication	Department of Life Sciences	West	671
Mathematics	Walter Cronkite School of Journalism and Telecommunication	Main	479
Microbiology	Department of Integrative Studies	West	671
Music	Department of Mathematics	Main	404
Philosophy	Department of Microbiology	Main	410
Physics	School of Music	Main	297
Plant Biology	Department of Philosophy	Main	417
Political Science	Department of Integrative Studies	West	671
	Department of Physics and Astronomy	Main	421
	Department of Plant Biology	Main	428
	Department of Political Science	Main	432

\* This minor is for nonbusiness majors only.

ASU Minors (continued)

Minor	Administered By	Campus	Page
Politics	Department of Social and Behavioral Sciences	West	671
Prelaw	College of Human Services	West	671
Psychology	Department of Psychology	Main	438
	Department of Social and Behavioral Sciences	West	671
Recreation Management	Department of Recreation Management and Tourism	Main	489
Religious Studies	Department of Religious Studies	Main	442
	College of Arts and Sciences	West	671
Russian	Department of Languages and Literatures	Main	387
Small Business*	College of Business	Main	174
Social and Behavioral Sciences	Department of Social and Behavioral Sciences	West	671
Sociocultural Anthropology	Department of Social and Behavioral Sciences	West	671
Sociology	Department of Sociology	Main	446
	Department of Social and Behavioral Sciences	West	671
Spanish	Department of American Studies	West	671
	Department of Languages and Literatures	Main	387
Special Events Management	Department of Recreation and Tourism Management	West	671
Speech and Hearing Science	Department of Speech and Hearing Science	Main	449
Theatre	Department of Theatre	Main	307
Tourism	Department of Recreation Management and Tourism	Main	489
Tourism Management	Department of Recreation and Tourism Management	West	671
Urban Planning	School of Planning and Landscape Architecture	Main	140
Women's Studies	Women's Studies Program	Main	453
		West	671

\* This minor is for nonbusiness majors only.

ASU Undergraduate Certificates

Certificate	Administered By	Campus	Page
Advanced Business English Certificate*	College of Extended Education	Extended	688
African American Studies Certificate	African American Studies Program	Main	331
American Indian Studies Certificate	American Indian Studies Program	Main	470
American Public Policy Certificate	Department of Political Science	Main	431
Asian Pacific American Studies Certificate	Asian Pacific American Program	Main	472
Asian Studies Certificate	Center for Asian Studies	Main	376
Business English Certificate*	College of Extended Education	Extended	688
Civic Education Certificate	Department of Political Science	Main	432
East Asian Studies Certificate	Center for Asian Studies	Main	387
English as a Second Language Certificate*	College of Extended Education	Extended	688
Enriched College Degree Certificate	College of Liberal Arts and Sciences	Main	324
Ethics Certificate	Department of Philosophy	Main	417
Ethnic Studies Certificate	College of Arts and Sciences	West	672
Film and Video Studies Certificate	College of Arts and Sciences	West	672
Hazardous Materials and Waste Management Certificate	Department of Information and Management Technology	East	649
Health Physics Certificate	Pre-Health Professions Office	Main	325
History and Philosophy of Science Certificate	Department of Philosophy	Main	417
Human Performance Improvement Certificate*	College of Extended Education and the American Society of Training and Development	Extended	687
International Business Studies Certificate	College of Business	Main	166
International Studies Certificate	Department of Political Science	Main	432
Jewish Studies Certificate	Jewish Studies Committee	Main	326
Latin American Studies Certificate	Latin American Studies Center	Main	326
Medieval and Renaissance Studies Certificate	Arizona Center for Medieval and Renaissance Studies (ACMRS)	Main	326
Multimedia Writing and Technical Communication Certificate	East College	East	628

\* This certificate is not for academic credit

## ASU Undergraduate Certificates (continued)

Certificate	Administered By	Campus	Page
Nonprofit Management Certificate	College of Extended Education and the United Way	Extended	657
Nonprofit/Youth Agency Administration: American Humanities Certificate	Department of Recreation Management and Tourism	Main	489
Public Administration and Public Management Certificate	School of Public Affairs	Main	456
Quality Analysis Certificate	College of Business	Main	154
Russian and East European Studies Certificate	Russian and East European Studies Curriculum	Main	326
Scandinavian Studies Certificate	Department of Languages and Literatures	Main	326
Small Business and Entrepreneurship Certificate	College of Business	Main	175
Southeast Asian Studies Certificate	Program for Southeast Asian Studies	Main	327
Translation Certificate	Department of Languages and Literatures	Main	387
Women's Studies Certificate	Women's Studies Program	West	672
		Main	327
Writing Certificate	Department of American Studies	West	672
	Department of English	Main	355

in certificate syllabus are listed.

## ASU Postbaccalaureate Certificates

Certificate	Administered By	Campus	Page
Accounting, Postbaccalaureate Certificate in	School of Management	West	
Communication and Human Relations, Postbaccalaureate Certificate in	College of Human Services	West	
Gerontology Certificate	College of Human Services	West	672
Multimedia Writing and Technical Communication, Postbaccalaureate Certificate in	East College	East	628
Post Bachelor's Artist Diploma	School of Music	Main	
Professional Accountancy, Postbaccalaureate Certificate in	School of Management	West	672

## ASU Graduate Certificates

Certificate	Administered By	Campus	Page
Geographic Information Science, Interdisciplinary Certificate in	College of Liberal Arts and Sciences	Main	
Gerontology Certificate	Graduate College	Main	500
		Extended	687
Indian Law Certificate	College of Law	Main	313
Medieval Studies Certificate	Arizona Center for Medieval and Renaissance Studies (ACMRS)	Main	376
Museum Studies Certificate	Department of Anthropology	Main	
Nonprofit Leadership and Management Certificate	Center for Nonprofit Leadership and Management	Main	470
Post Master's Nurse Practitioner Certificate	College of Nursing	Main	
Renaissance Studies Certificate	ACMRS	Main	
Scholarly Publishing Certificate	Department of History	Main	
Statistics	Committee on Statistics	Main	
Translation Certificate	Department of Languages and Literatures	Main	387
Transportation Systems Certificate	Committee on Transportation Systems	Main	501

# Division of Undergraduate Academic Services

William S. Johnson, Ph.D., Executive Director

www.asu.edu/duas

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 Education Support Services, Bachelor of Interdisciplinary Studies, Advising Services, and General Studies.

## EDUCATION SUPPORT SERVICES

This unit provides university wide teaching and learning support to students and faculty in defined academic areas. For more information, call 480 965 3097.

### 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.

## ACADEMIC SUCCESS AT THE UNIVERSITY (UNI)

### UNI 100 Academic Success at the University. (3)

*fall, spring, summer*

Orientat on to campus resources, study skills, and other academic and soc a issues for co ege students. ntroduct on to an understand ng of human d vers ty, values, and perspectives as they relate to student success. Lecture, seminar, d scuss on. Prerequ s te: freshman or sophomore r transfer student.

### UNI 101 Student Success Seminar. (1)

*fall, spring, summer*

Understand ng human d vers ty, perspectives, and values as they relate to student success. Or entat n to ASU resources, study skills, and academ c and soc a issues for students. Seminar, d scuss on.

### UNI 494 Special Topics. (1-4)

*fall and spring*

Possible topics

a. Science s Mag c nternsh p 3

Presents science demonstrations to K-8 children at the r school s nterns are trained by personnel from the Center of So d State Science. Th s nternsh p does not follow the format of the others.

### Supplemental Instruction

Supplemental Instruction (SI) works to improve student performance and increase retention in historically difficult courses (those with high rates of "D," "E," and "W" grades). An SI leader attends class and offers voluntary study sessions to all students enrolled in the class. During the study sessions, students work together to learn course content and to enhance study skills.

### 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, residential program that provides a full academic curriculum in conjunction with a rich residence hall experience. The program assists participants in acclimating to campus, accessing student support programs and services, and enhancing classroom skills.

### Service Learning Program

The Service Learning Program uses community service to enhance education. The program is based on the concept of reciprocal learning. Service Learning sections of regular courses are linked to credit bearing internships where students apply what they are learning in the community to their course work.

For example, some Service Learning students contribute one on one homework tutoring, reading development, educational enrichment workshops, and learning readiness programs for children and youth for six hours a week during the semester. In turn, the tutors' community experiences and research form the basis of their classroom papers and research. Other Service Learning students lead elementary and middle school students in hands on learning activities based on the content of the linked ASU courses.

Students may enroll in the internships with previous or current enrollment in one of the following linked courses or equivalent, approved courses.

See appropriate course listings for more details.

### Linked Courses

EED 420 Science Methods, Management, and Assessment in the Elementary School	3
ENG 102 First Year Composition	3
ENG 217 Writing Reflective Essays L	3
ENG 312 English in Its Social Setting HU/SB	3

ENG 471 Literature for Adolescents <i>HL</i> . . . . .	3
SOC 332 Urban Sociology <i>SB G</i> . . . . .	3
SOC 341 Modern Social Problems <i>SB</i> . . . . .	3

**Sciences and Additional Courses**

GLG 101 Introduction to Geology I Physical <i>SQ G</i> . . . . .	3
GLG 103 Introduction to Geology I Laboratory <i>SQ</i> . . . . .	1
GPH 111 Introduction to Physical Geography <i>SQ</i> . . . . .	4
MTE 18 Theory of Elementary Mathematics . . . . .	3
PHS 235 Patterns in Nature <i>SQ</i> . . . . .	4
PLB 108 Concepts in Plant Biology <i>SQ</i> . . . . .	4

**Service Learning Internships**

ENG 484 Writing Internship . . . . .	3
GLG 484 Geology Internship . . . . .	3
GPH 484 Geography Internship . . . . .	3
MTE 484 Theory of Elementary Mathematics Internship . . . . .	3
PHS 484 Physical Science Internship . . . . .	3
P B 498 PS Plant Biology Internship . . . . .	3
SOC 454 Internship . . . . .	3
UNI 494 ST: Science is Magic Internship . . . . .	3

**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.) is a university-wide program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations and an interdisciplinary core, students in the B.I.S. are expected to take an active role in creating their educational plan and defining their vocational goals. The B.I.S. emphasizes written communication, versatility, and critical thinking skills desired in a changing workplace environment. Self-assessment and appraisal of opportunities to support academic and career goals are key elements in the core courses. For information about the B.I.S. at ASU East, see "Interdisciplinary Studies (B.I.S.," page 620.

At ASU Main, students, other than entering freshmen, must attend an informational session conducted by an academic advisor before declaring the B.I.S. major. For more information, visit Cross College Advising Services (CAS) in UASB 129 or call 480-965-4464.

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 development 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 (18 hours each). 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 <i>L</i> . . . . .	3
BIS 302 Interdisciplinary Principles . . . . .	3
BIS 401 Applied Interdisciplinary Studies . . . . .	3
BIS 402 Senior Seminar <i>L</i> . . . . .	3
<b>Total</b> . . . . .	<b>12</b>

**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:** Academic advising from CAS is required before being approved to declare the B.I.S. In addition, the following requirements must be met:

1. 45 semester hours of college credit;
2. cumulative G.P.A. of 2.00, and
3. selection of two concentrations with a minimum of two courses in each (minimum grade of "C" completed or one completed and one in progress (i.e., after the drop/add period) in each area.

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 15 semester hours, with a grade of "C" or higher. Twelve of these hours must be in upper division courses. The concentrations shown in the "B.I.S. Concentrations" table, page 109 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 CAS in UASB 129 or by accessing the B.I.S. Web site at [www.asu.edu/duas/bis](http://www.asu.edu/duas/bis)



**B.I.S. Concentrations**

Concentration	College	Campus	Page
African American studies	College of Liberal Arts and Sciences	Main	330
American Indian studies	College of Public Programs	Main	471
Anthropology	College of Liberal Arts and Sciences	Main	333
Art history	Herberger College of Fine Arts	Main	270
Asian Pacific American studies	College of Public Programs	Main	472
Asian studies	College of Liberal Arts and Sciences	Main	376
Astronomy	College of Liberal Arts and Sciences	Main	420
Biology <sup>1</sup>	College of Liberal Arts and Sciences	Main	341
Business	College of Business	Main	174
Chemistry	College of Liberal Arts and Sciences	Main	347
Chicana and Chicano studies	College of Liberal Arts and Sciences	Main	351
Chinese	College of Liberal Arts and Sciences	Main	388
Communication	College of Public Programs	Main	473
Dance	Herberger College of Fine Arts	Main	285
East Asian studies	College of Liberal Arts and Sciences	Main	442
Economics	College of Liberal Arts and Sciences	Main	353
Economics for students planning a career in law	College of Liberal Arts and Sciences	Main	353
Education	College of Education	Main	182
English with a concentration in linguistics <sup>2</sup>	College of Liberal Arts and Sciences	Main	355
English with a concentration in literature <sup>2</sup>	College of Liberal Arts and Sciences	Main	355
English writing certificate <sup>2</sup>	College of Liberal Arts and Sciences	Main	355
Environmental geography <sup>3</sup>	College of Liberal Arts and Sciences	Main	367
Environmental resources	Morrison School of Agricultural Business and Resource Management	East	612
Environmental science <sup>4</sup>	—	East	613
Exercise science/physical education	College of Liberal Arts and Sciences	Main	625
Family studies/child development	College of Liberal Arts and Sciences	Main	364
Food and nutrition management	East College	East	629
French	College of Liberal Arts and Sciences	Main	387
Geographical information science <sup>3</sup>	College of Liberal Arts and Sciences	Main	372
Geography <sup>3</sup>	College of Liberal Arts and Sciences	Main	366
Geography for business <sup>3</sup>	College of Liberal Arts and Sciences	Main	372
Geological sciences	College of Liberal Arts and Sciences	Main	372
German	College of Liberal Arts and Sciences	Main	385
Gerontology	Graduate College	Main	500
Global family <sup>4</sup>	—	East	—
Hazardous materials and waste management	College of Technology and Applied Sciences	East	649
History	College of Liberal Arts and Sciences	Main	376
History and philosophy of science	College of Liberal Arts and Sciences	Main	376
Human nutrition	East College	East	631
Humanities	College of Liberal Arts and Sciences	Main	382
Interior design history	College of Architecture and Environmental Design	Main	134
International business studies <sup>4</sup>	College of Business	Main	154
International geography <sup>3</sup>	College of Liberal Arts and Sciences	Main	366
Italian	College of Liberal Arts and Sciences	Main	386
Japanese	College of Liberal Arts and Sciences	Main	388
Jewish studies	College of Liberal Arts and Sciences	Main	376
Justice studies	College of Public Programs	Main	482
Latin American studies	College of Liberal Arts and Sciences	Main	353
Mass communication	College of Public Programs	Main	479
Mathematics	College of Liberal Arts and Sciences	Main	404
Medieval and Renaissance studies	College of Liberal Arts and Sciences	Main	376
Microbiology <sup>1</sup>	College of Liberal Arts and Sciences	Main	410

<sup>1</sup> Students may not use more than one concentration in the life sciences: biology, microbiology, and plant biology

<sup>2</sup> Students may not use more than one English concentration

<sup>3</sup> Students may not use more than one geography concentration

<sup>4</sup> The program may award a certificate upon completion

## B.I.S. Concentrations (continued)

Concentration	College	Campus	Page
Multimedia writing and technical communication	East College	East	628
Music	Herberger College of Fine Arts	Main	290
Nonprofit/youth agency development	College of Public Programs	Main	489
Organizational studies	—	—	—
Philosophy	College of Liberal Arts and Sciences	Main	417
Physics	College of Liberal Arts and Sciences	Main	421
Plant biology <sup>1</sup>	College of Liberal Arts and Sciences	Main	428
Political science	College of Liberal Arts and Sciences	Main	431
Psychology	College of Liberal Arts and Sciences	Main	438
Public administration	College of Public Programs	Main	486
Quality analysis	College of Business	Main	154
Recreation management	College of Public Programs	Main	488
Religious studies	College of Liberal Arts and Sciences	Main	442
Russian	College of Liberal Arts and Sciences	Main	387
Russian and East European studies	College of Liberal Arts and Sciences	Main	387
Scandinavian studies	College of Liberal Arts and Sciences	Main	387
Small business	College of Business	Main	174
Sociology	College of Liberal Arts and Sciences	Main	446
Southeast Asian studies—area studies option	College of Liberal Arts and Sciences	Main	376
Southeast Asian studies—language option	College of Liberal Arts and Sciences	Main	387
Spanish	College of Liberal Arts and Sciences	Main	387
Spanish for native speakers	College of Liberal Arts and Sciences	Main	387
Theatre	Herberger College of Fine Arts	Main	305
Tourism	College of Public Programs	Main	489
Urban planning	College of Architecture and Environmental Design	Main	140
Women's studies	College of Liberal Arts and Sciences	Main	454

<sup>1</sup> Students may not use more than one concentration in the life sciences: biology, microbiology, and plant biology.

<sup>2</sup> Students may not use more than one English concentration.

<sup>3</sup> Students may not use more than one geography concentration.

<sup>4</sup> The program may award a certificate upon completion.



Alumni and students cheer for their team at Sun Devil Stadium during the homecoming game of 2000.

Tim Trumble photo

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.S. major, 2.00 GPA. *General Studies: L*

#### **BIS 302 Interdisciplinary Principles. (3)**

*fall and spring*

Explores interdisciplinary nature 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 students integrate the 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*

### **ASU EXTENDED CAMPUS**

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and the region. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges 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 683, or access the Website at [www.asu.edu/ved](http://www.asu.edu/ved).

### **ADVISING SERVICES**

#### **Cross-College Advising Services**

Cross-College Advising Services (CAS) 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, and transfer students and students in transition, such as those changing majors and those without majors. In addition to guidance in the exploration or selection of a major, CAS provides general academic information and referrals to all areas of student academic support.

CAS is located in LASB 129 and can be reached by phone at 480-965-4464.

#### **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 in a matter of seconds. 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. Audits may be obtained from the student's academic advisor.

### **GENERAL STUDIES**

All students enrolled in a baccalaureate degree program must satisfy the General Studies requirement. For more information, see "University Graduation Requirements," page 74, and "General Studies," page 78.

# The Craig and Barbara Barrett Honors College

Ted Humphrey, Ph.D., Dean

[www.asu.edu/honors](http://www.asu.edu/honors)



Kimberly Jones (left) of the College of Business Honors Program helps Stephanie Cohen develop her program of study.

Doug Grouch photo

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## MISSION

The Craig and Barbara 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 enroll in the Barrett Honors College. The Colleges of Business, Engineering and Applied Sciences, Liberal Arts and Sciences, Public Programs, and Nursing offer particularly strong programs. The College of Architecture and Environmental Design and the School of Social Work developed the nation's first honors curricula in their disciplines. Students with majors in the College of Education and the Herberger College of Fine Arts can also choose from a wide range of exciting courses, especially at the lower division.

## 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 commu-

nity. 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.

### Study Abroad

Students participating in the Barrett Honors College have exclusive access to three summer study abroad programs: one in Britain, one in Paris, and one that travels to Athens, Rome, and Tunis—and to 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

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. For more information, call 480 965 2359.

### Events/Programming

Students enrolled in the Barrett Honors College participate in a range of cultural enrichment activities and are offered discounted tickets to selected performing arts events throughout Arizona, invited to monthly lunches and dinners with the dean, and given special access to important contributors to contemporary thought who 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, and essayist Susan Sontag.

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.

### 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 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 22 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 Bar-

rett Honors College receive transcript recognition of that accomplishment, as well as special acknowledgment during the 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.

The typical first year student in the college has the following profile: high school GPA of 3.80; top five percent of his or her high school graduating class; and 29 composite on the ACT or 1300 composite on the SAT.

A typical transfer or continuing student will have completed at least 12 semester hours with a 3.50 GPA or better. Community college transfer students who have graduated from their institution's honors programs are encouraged to apply.

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 9155.

### 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. less 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 may be 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 appointment with an honors advisor.

### COURSE REQUIREMENTS

Only courses in which a student earns at least a grade of "C" may be used to meet the Barrett Honors College requirements.

Freshmen and students entering the college with fewer than 45 semester hours of course work 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.

Students entering the college after completing 45 semester hours 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.

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 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. Students in the 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).



Main entrance to Hayden Library

Jason Laaninen photo

Courses *must* include HON 171 and 172 the Human Event. Courses that earn automatic honors credit, although not carrying a footnote number 19 in the *Schedule of Classes*, include ENG 105 any section and CHM 117 and 118 (any section).

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.

**Upper Division/Graduation**

To graduate from the Barrett Honors College students must

1. complete HON 171 and 172 the Human Event for continuing ASU or transfer students with less than 45 hours of credit *or* one of the 300 level honors seminar courses for continuing or transfer students with 45 or more hours of credit;
2. complete 18 additional semester hours of upper division honors course work for an earned letter grade, which must include three to six semester hours of Honors Thesis and six semester hours outside the academic major (these may include graduate courses),
3. complete ASU graduation requirements in an academic major; and
4. earn a cumulative ASU GPA greater than or equal to 3.40 (4.00 A).

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**The Craig and Barbara Barrett  
Honors College**

Ted Humphrey  
*Dean*  
(IRISH A121) 480/965-2359  
[www.asu.edu/honors](http://www.asu.edu/honors)

---

**PROFESSOR  
HUMPHREY**

**SENIOR LECTURERS  
DALTON, FAC NELL STANFORD**

**LECTURERS  
BEGGS BRUHN, BURKE, HEINDL, LYNCH McMANUS,  
PICKUS, RANERO ANTOL N, SUSSER**

**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. Environment 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)**

*fa and spring*  
Continuation of HON 171 with emphasis on the Renaissance through the modern period  
*General Studies L/HU H*

**HON 371 Freedom and Authority. (3)**

*fa 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 cultures  
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 H*

**HON 375 Science and the Modern Self. (3)**

*fa 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)**

*fa and spring*  
Multidisciplinary approach to the subject of law examining it through literature, history and philosophy  
Seminar  
*General Studies L/HU*

**HON 394 Special Topics. (3)**

*fa spring, summer*

**HON 485 Biosphere 2 Study Opportunity. (1-18)**

*fa and spring*  
For students participating in the ASU-sponsored program at Biosphere 2

**HON 493 Honors Thesis. (1-6)**

*not regularly offered*  
*General Studies L/HU*

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**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C, and H) see "General Studies," page 78. For graduation requirements see "University Graduation Requirements," page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 51.

# College of Architecture and Environmental Design

John Meunier, M.Arch., Dean

[www.asu.edu/caed](http://www.asu.edu/caed)



College of Architecture and Environmental Design/North

John MacIsaac photo

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## 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.



## 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 <sup>1</sup>	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 <sup>2</sup>	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

<sup>1</sup> Applications for this program are not being accepted at this time

<sup>2</sup> This major requires more than 120 semester hours to complete

**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.

**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 univer-

sity 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 by the faculty and the head of the academic unit. 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.

### 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.	Computer-aided design, 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.

#### MINORS

The faculty in the School of Planning and Landscape Architecture offer a minor in Urban Planning. See "Minors," page 140, for more information. The faculty in the School of Design offer a minor in Interior Design History. See "Minor," page 136, 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, on this page, 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 the region. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges 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 683, or access the Web site at [www.asu.edu/ved](http://www.asu.edu/ved)

#### 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 74.

##### 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 78. Note that all three General Studies awareness areas are required. Consult your advisor for an approved list of courses. General Studies courses are listed in the "General Studies Courses" table, page 81, 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 77.

## 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 Governance and Grievance Committee. For more information, see "Retention and Academic Standards," page 71.

**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 71.

**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 pro-

gram head (for upper division students) or a college academic advisor (for lower division students). An incomplete in an upper division course that is a prerequisite for sequential courses automatically places the student on probation and denies enrollment in subsequent courses. For more information, see "Incomplete," page 67.

**Withdrawals.** University withdrawal regulations apply to lower division 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 "Graduate System," page 67.

**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.

Exchange programs currently exist with the Stuttgart University, Germany; Wageningen Agricultural 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 in the college are required to complete an internship program during the summer, normally between the third and fourth years of study.

**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



Interior Design student Emily Chang finishes her model of a facility for autistic children and adults.

Tim Trumble photo

regarding religious holidays, see "Equal Opportunity and Affirmative Action," page 20.

**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 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 May 1 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.

**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 courses accepted in that college.

**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 three years of study following an unrelated bachelor's degree or two years following a related preprofessional 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 69.

**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 69.

**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
- College of Architecture and Environmental Design Pre-Studies Organization
- 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
- Student Chapter Society for Range Management
- Student Chapter Soil and Water Conservation Society
- Student Chapter/Wildlife Society

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## School of Architecture

Ron McCoy  
*Director*  
 (AED 162D) 480/965-3536  
[www.asu.edu/caed/architecture](http://www.asu.edu/caed/architecture)

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### REGENTS' PROFESSOR COOK

**PROFESSORS**  
 HOFFMAN MCCOY MEUNIER, OZEL ROTOND  
 SCHEATZLE, UNDERHILL, UNDERWOOD

**ASSOCIATE PROFESSORS**  
 BRYAN ELLIN, HARTMAN, KROLOFF  
 KUPPER LOOPE, VAN DUZER, ZYGAS

**ASSISTANT PROFESSORS**  
 CAICCO, HAHN, HEJDUK, LERUM, MURFF  
 PETRUCCI, SOROKA SPELLMAN

### 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 conformity 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 124. 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," on this page.

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 offices 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.

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 ASU are separate from application and admission to the upper division program);
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 vacancies occur. 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 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 Seminar* brochure from a college academic advisor. The following dates and procedures are for students applying to 2002-2003 upper division programs.

**Upper-Division Application Deadlines.** *April 26, 2002* Portfolio and application documents are due in the school office by 5 P.M.

*June 3, 2002.* If the spring 2002 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. 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, 2002.* 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.

**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) with plastic sleeves (8.5" x 11" format only). 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. The student's name should not appear on the essay.

*Page 4.* All college transcripts for both ASU and transfer work should be included through the fall 2001 semester. Copies are acceptable. An academic advisor forwards 2002 ASU transcripts. (Applicants wishing to transfer work are responsible for submitting these transcripts by June 3 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 is necessary only for those students who have been newly admitted for fall 2001 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 a portfolio requirements addendum 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 addendum for that academic year take precedence over any other printed material.

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.** Application documents (pages 1-5) 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 pre-paid postage. Portfolios may be claimed in person after July 1, 2002. 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 students is by assigned faculty advisors and administrative personnel from the School of Architecture.

**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.

Option B students who intend to pursue graduate degrees in an engineering discipline should 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 78, 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 74, and "College Degree Requirements," page 118.

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<sup>1</sup>  
First Year**

<b>Fall</b>	
APH 100 Introduction to Environmental Design <i>HU G, H</i> ... 3	
or ADE 120 Design Fundamentals I <sup>2</sup> 3)	
ENG 01 First Year Composition . . . . .	3
Approved elective . . . . .	3
Approved elective (MAT 170 Precalculus may be needed . . . . .)	3

SB elective . . . . .	3
Total . . . . .	5

**Spring**

ADE 120 Design Fundamentals I <sup>2</sup> . . . . .	3
or APH 100 Introduction to Environmental Design <i>HU G, H</i> 3)	
ENG 12 First Year Composition . . . . .	3
MAT 110 Brief Calculus <i>MA</i> . . . . .	3
Approved elective . . . . .	3
CE elective . . . . .	3
Total . . . . .	15

**Second Year**

**Fall**

ADE 221 Design Fundamentals II <sup>2</sup> . . . . .	3
ADE 223 Design Fundamentals II Lecture . . . . .	1
APH 200 Introduction to Architecture <i>HU G</i> . . . . .	3
PHY 111 General Physics <i>SQ</i> <sup>3</sup> . . . . .	3
PHY 113 General Physics Laboratory <i>SQ</i> <sup>3</sup> . . . . .	1
LElective . . . . .	3
Total . . . . .	14

**Spring**

ADE 222 Design Fundamentals III <sup>2</sup> . . . . .	3
ADE 224 Design Fundamentals III Lecture . . . . .	1
ANP 236 Introduction to Computer Modeling <i>CS</i> . . . . .	3
SB elective . . . . .	3
SG or SQ elective . . . . .	4
Total . . . . .	14
Option A lower division total . . . . .	58

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.

<sup>2</sup> Portfolio review is required for transfer studio work. Submit the portfolio to the Academic Advising Office, ARCH 141.

<sup>3</sup> Both PHY 111 and 113 must be taken to secure SQ credit.

**Architectural Studies B.S.D.  
Upper-Division Requirements  
Option A**

**Third Year**

**Fall**

ADE 321 Architectural Studio I . . . . .	5
APH 313 History of Western Architecture I <i>L/HU</i> . . . . .	3
ATE 353 Architectural Construction . . . . .	3
Approved elective* . . . . .	3
Total . . . . .	14

**Spring**

ADE 322 Architectural Studio II . . . . .	5
ANP 331 Programming for Design . . . . .	3
APH 314 History of Western Architecture II <i>L/HU</i> * . . . . .	3
ATE 366 Building Structures . . . . .	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
Approved elective* . . . . .	3



Professional elective . . . . .	3
Total . . . . .	17
<b>Spring</b>	
ADE 422 Architectural Studio IV . . . . .	5
ATE 452 Building Systems II . . . . .	3
Architectural history elective . . . . .	3
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

**Architectural Studies B.S.D.  
Lower-Division Requirements  
Option B<sup>1</sup>**

**First Year**

<b>Fall</b>	
APH 100 Introduction to Environmental Design <i>HU G H</i> . . . . .	3
ECE 100 Introduction to Engineering Design <i>CS</i> . . . . .	4
ENG 101 First Year Composition . . . . .	3
MAT 270 Calculus with Analytic Geometry I <i>MA</i> . . . . .	4
SB elective . . . . .	3
Total . . . . .	17
<b>Spring</b>	
ADE 120 Design Fundamentals I <sup>2</sup> . . . . .	3
ENG 102 First Year Composition . . . . .	3
MAT 271 Calculus with Analytic Geometry II <i>MA</i> . . . . .	4
PHY 121 University Physics I: Mechanics <i>SQ</i> <sup>3</sup> . . . . .	3
PHY 122 University Physics Laboratory I <i>SQ</i> <sup>3</sup> . . . . .	1
Total . . . . .	14

**Second Year**

<b>Fall</b>	
ADE 221 Design Fundamentals II . . . . .	3
ADE 223 Design Fundamentals II Lecture . . . . .	1
APH 200 Introduction to Architecture <i>HU G</i> . . . . .	3
ECE 210 Engineering Mechanics I: Statics . . . . .	3
MAT 272 Calculus with Analytic Geometry III <i>MA</i> . . . . .	4
PHY 131 University Physics II: Electricity and Magnetism <i>SQ</i> <sup>3</sup> . . . . .	3
PHY 132 University Physics Laboratory II <i>SQ</i> . . . . .	1
Total . . . . .	18
<b>Spring</b>	
ADE 222 Design Fundamentals III . . . . .	3
ADE 224 Design Fundamentals III Lecture . . . . .	1
ANP 236 Introduction to Computer Modeling <i>CS</i> . . . . .	3
ECE 380 Probability and Statistics for Engineering Problem Solving <i>CS</i> . . . . .	3
MAT 274 Elementary Differential Equations <i>MA</i> . . . . .	3
Total . . . . .	13
Option B lower division total . . . . .	62

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.

<sup>2</sup> Portfolio review is required for transfer studio work. Submit the portfolio to the Academic Advising Office, ARCH 141.

<sup>3</sup> Both PHY 131 and 132 must be taken to secure SQ credit.

**Architectural Studies—B.S.D.  
Upper-Division Professional Program Requirements  
Option B**

**Third Year**

<b>Fall</b>	
ADE 321 Architectural Studio I . . . . .	5
APH 313 History of Western Architecture I <i>L/HU*</i> . . . . .	3
ATE 353 Architectural Construction . . . . .	3
ECE 212 Engineering Mechanics II: Dynamics . . . . .	3
Total . . . . .	14
<b>Spring</b>	
ADE 322 Architectural Studio II . . . . .	5
ANP 331 Programming for Design . . . . .	3
APH 314 History of Western Architecture II <i>L/HU*</i> . . . . .	3
ECE 313 Introduction to Deformable Solids . . . . .	3
Total . . . . .	14

**Summer**

ARP 484 Clinical Internship . . . . .	1
Total . . . . .	1

**Fourth Year**

<b>Fall</b>	
ADE 421 Architectural Studio III . . . . .	5
ATE 451 Building Systems I . . . . .	3
ECE 300 Intermediate Engineering Design <i>L</i> . . . . .	3
ECE 351 Civil Engineering Materials . . . . .	3
Total . . . . .	14
<b>Spring</b>	
ADE 422 Architectural Studio IV . . . . .	5
ATE 452 Building Systems II . . . . .	3
ECE 384 Numerical Methods for Engineers . . . . .	4
SB and C elective* . . . . .	3
Total . . . . .	15
Option B upper division total . . . . .	58
B.S.D. option B minimum total . . . . .	120

\* These courses may be completed before admission to the upper division. If already completed, a student may request to substitute an approved elective.

**Master of Architecture  
Graduate-Level Professional Program Requirements**

**Fifth Year**

<b>Fall</b>	
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
<b>Spring</b>	
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**

<b>Fall</b>	
AAD 551 Architectural Management I . . . . .	3

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C, and H, see "General Studies" page 78. For graduation requirements see "University Graduation Requirements," page 74. For an explanation of additional omnibus courses offered but not listed in this catalog see "Classification of Courses" page 51.

ADE 621 Advanced Architectural Studio III	5
ANP 681 Project Development	3
Professional elective*	3
Total	14
<b>Spring</b>	
AAD 552 Architectural Management II	3
ADE 622 Advanced Architectural Studio IV	5
Approved elective	3
Professional elective*	3
Total	4
Graduate division total	36

\* At least one professional elective must be a CAD course.

## 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 College 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*.

### ENVIRONMENTAL DESIGN AND PLANNING (EPD)

See the *Graduate Catalog* for the EPD courses.

### ARCHITECTURAL ADMINISTRATION AND MANAGEMENT (AAD)

#### AAD 551 Architectural Management I. (3)

fa

Design delivery coordination of construction documents cost estimating bidding and negotiations construction observation, and post construction services. Case studies. Lecture/discussion. Prerequisite: graduate level standing. Corequisite: ADE 621.

#### AAD 552 Architectural Management II. (3)

spring

Organizational human performance, and market influences on architecture firms and projects. Readings case studies and analysis of managerial problems and solutions. Lecture/discussion. Prerequisites: AAD 551 ADE 621.

#### AAD 555 Architect as Developer. (3)

once a year

Development building real estate construction funding and acquisition and the sources for capital. Prerequisite: instructor approval.

#### AAD 599 Thesis. (1-12)

not regularly offered

Fee

#### AAD 681 Professional Seminar: Capstone. (3)

spring

Examination of ethical political social economic ecological and cultural issues confronting the practice of architecture. Readings and case studies. Seminar. Prerequisite: AAD 552. Corequisite: ADE 622.

### ARCHITECTURAL DESIGN AND TECHNOLOGY STUDIOS (ADE)

#### ADE 120 Design Fundamentals I. (3)

fa spring, summer

Development of visual literacy introduction to 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)

fa

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.

#### ADE 222 Design Fundamentals III. (3)

spring

Application of design fundamentals with an emphasis on architectural issues. Lecture/studio. Prerequisite: APH 200. Prerequisite with a grade of "C" or higher: ADE 221.

**ADE 223 Design Fundamentals II Lecture. (1)***fa*

Theory and applications of basic design principles history and theory of how architecture design is impacted by basic design lecture discussions Prerequisite ADE 120 Corequisite ADE 221

**ADE 224 Design Fundamentals III Lecture (1)***spring*

History and theory of design fundamentals with an emphasis on architectural aesthetics Lecture discussions Prerequisite ADE 223 Corequisite ADE 222

**ADE 321 Architectural Studio I. (5)***fa*

Introductory building design problems Emphasis on design process communication methods aesthetic construction and technology Lecture studio feedtrps Fee Prerequisite admission to upper division Corequisite A E 353

**ADE 322 Architectural Studio II. (5)***spring*

Site and building design problems Emphasis on programmatic and environmental determinants and building natural and urban contexts Lecture studio feedtrps Fee Prerequisite with a grade of C or higher ADE 321. Corequisite ANP 331

**ADE 421 Architectural Studio III. (5)***fa*

Topical design problems of intermediate complexity, including interdisciplinary problems Lecture studio feedtrps Fee Prerequisite with a grade of C or higher ADE 322

**ADE 422 Architectural Studio IV. (5)***spring*

Topical design problems of advanced complexity including interdisciplinary problems Lecture studio feedtrps Fee Prerequisite with a grade of C or higher ADE 421

**ADE 510 Foundation Architectural Studio (6)***summer*

Fundamentals of architectural design methodology visualization and representation Lecture studio feedtrps Fee Prerequisite admission to Master of Architecture degree program

**ADE 511 Core Architectural Studio I. (6)***fa*

Application of design fundamentals in architectural problems including construction technology programmatic and environmental determinants Lecture studio feedtrps Fee Prerequisites APH 200 509 Prerequisite with a grade of C or higher ADE 510

**ADE 512 Core Architectural Studio II. (6)***spring*

Application of architectural design fundamentals to increasing complexity problems including specific sites and activities Lecture studio feedtrps Fee Prerequisite with a grade of C or higher ADE 511

**ADE 521 Advanced Architectural Studio I. (5)***fa*

Design problem emphasizing the aesthetic and technical influences in architectural form Lecture studio feedtrps Fee Prerequisite admission to Master of Architecture degree program

**ADE 522 Advanced Architectural Studio II (5)***spring*

Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form Lecture studio feedtrps Fee Prerequisite with a grade of C or higher ADE 521

**ADE 621 Advanced Architectural Studio III. (5)***fa*

Design problem emphasizing the urban context planning issues and urban design the influences in architectural form. Lecture studio feedtrps Fee Prerequisite instructor approval Prerequisite with a grade of C or higher ADE 522 Corequisites AAD 551

**ADE 622 Advanced Architectural Studio IV. (5)***spring*

Individual student initiated project reflecting a cumulative synthesis of architectural ideas Studio Fee Prerequisites with a grade of C or higher ADE 621 ANP 681

**ADE 631 Building Systems Simulation Studio. (5)***fa*

Design of energy efficient medium and large commercial complexes systems to optimize performance using new and advanced algorithms Lecture lab studio Prerequisites ATE 521 550 551 582

**ADE 661 Bioclimatic Design Studio. (6)***once a year*

Sustainable architectural and site synthesis at a variety of scales emphasizing bioclimatic criteria and the use of passive and low-energy systems Prerequisite professor a degree or instructor approval Corequisite ATE 558

**ENVIRONMENTAL ANALYSIS AND PROGRAMMING (ANP)****ANP 236 Introduction to Computer Modeling. (3)***fa and spring*

Fundamentals of computer operation geographic information systems geometric modeling of three dimensional forms and rendering flight mathematical modeling of processes using spreadsheets Lab Prerequisite major or minor in School of Architecture General Studies: CS

**ANP 331 Programming for Design. (3)***spring*

Theory and methods for refracting constraints into opportunity for design excellence Corequisite ADE 322

**ANP 475 Computer Programming in Architecture. (3)***fa and spring*

Computer programming for architectural problems and applications Lecture lab Prerequisite CSE 183 or equivalent

**ANP 477 Computer Applications to Design Problems. (3)***fa*

Examination of general microcomputer software in solving architectural design problems Emphasis on the logic of problem formulation Lecture lab Prerequisite instructor approval

**ANP 500 Research Methods. (1 12)***not regularly offered*

Fee

**ANP 530 Computer Graphics in Architecture. (3)***once a year*

Fundamentals of computer graphics programming in architecture including graphics hardware device independent packages 2 and 3 dimensional transformations and data structures 2 hours lecture 3 hours lab Prerequisite ANP 475 or instructor approval

**ANP 561 Architectural Information Processing Systems. (3)***once a year*

Applications of information processing systems to architectural problems Analysis of computing tools with respect to assumptions and theories Lecture lab Prerequisites graduate standing instructor approval

**ANP 563 Methods in Architectural Design Computation. (3)***spring*

Conceptual models for research in computer aided architectural design with an emphasis on computational methods and a system framework Discussion lab Prerequisite ANP 500 or instructor approval

**ANP 590 RC: Computer Programming and Architecture. (1 12)***not regularly offered***ANP 598 Special Topics. (1-4)***not regularly offered*

Possible topics

a) Computer Aided Design Methods

**ANP 599 Thesis. (1 12)***not regularly offered*

Fee

**ANP 681 Project Development. (3)***fa*

Definition and elaboration of major ideas for implementation in ADE 622 in relation to contemporary theory and practice Seminar Prerequisite ADE 522

**NOTE:** For the General Studies requirement codes and codes such as , SQ C and H see General Studies page 78 For graduation requirements see University Graduation Requirements page 74 For an explanation of a d to a omnibus courses offered but not listed in this catalog see Classification of Courses page 51

**ARCHITECTURAL PHILOSOPHY AND HISTORY (APH)****APH 100 Introduction to Environmental Design. (3)***fa 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 awarded for only APH 100 or DSC 100 or PUP 100.

*General Studies: HU G, H***APH 200 Introduction to Architecture. (3)***fa and summer*

Survey of issues and problems affecting current architecture theory and practice. Lecture/discussion.

*General Studies: HU G***APH 300 World Architecture I/Western Cultures. (3)***fa*

Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifested in cultural history and response to environmental determinants. Prerequisite: nonmajor.

*General Studies: HU G, H***APH 301 World Architecture II/Eastern Cultures. (3)***spring*

Historical and contemporary built environments of Eastern civilizations: Middle East, Central Asia, Far East, and South Pacific as manifested in cultural history and responses to environmental determinants.

*General Studies: G***APH 304 American Architecture. (3)***not regularly offered*

Architecture in the United States from earliest colonial times to present. Prerequisite: nonmajor.

*General Studies: HU***APH 305 Contemporary Architecture. (3)***not regularly offered*

Europe and America from the foundations of the modern movement to the present. Prerequisite: nonmajor.

*General Studies: HU***APH 313 History of Western Architecture I. (3)***fa*

Representative buildings and sites with emphasis on the physical and social settings from antiquity through the Middle Ages. Prerequisite: unorthodox or instructor approval.

*General Studies: L/HU***APH 314 History of Western Architecture II. (3)***spring*

Representative examples of architecture and urban design with emphasis on the physical and historical contexts from the Middle Ages to the present. Prerequisite: APH 313.

*General Studies: L/HU***APH 411 History of Landscape Architecture. (3)***fa*

Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design. Cross-listed as PLA 310. Credit is awarded for only APH 411 or PLA 310.

*General Studies: H***APH 414 History of the City. (3)***fa*

The city from its ancient origins to the present day. Emphasis on European and American cities during the last five centuries. Cross-listed as PUP 412. Credit is awarded for only APH 414 or PUP 412.

*General Studies: H***APH 441 Ancient Architecture. (3)***not regularly offered*

Architecture of the ancient Mediterranean world with special emphasis on major historical complexes and monumental sites. Prerequisite: APH 313.

*General Studies: HU***APH 442 Preservation Planning. (3)***fa*

Principles and practices in planning for preservation, conservation and neighborhood redevelopment. Emphasis on evaluation of historic resources. Off-campus field practicum required. Prerequisite: instructor approval.

**APH 443 Renaissance Architecture. (3)***not regularly offered*

Selected examples of Renaissance architecture and urbanism with emphasis on the historical and cultural settings. Prerequisite: APH 314.

*General Studies: HU***APH 444 Baroque Architecture. (3)***not regularly offered*

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)***fa*

Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style. Prerequisite: major or nonco-ege.

*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 505 Foundation Theory Seminar. (3)***fa*

Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory. Lecture seminar. Corequisite: ADE 521.

**APH 509 Foundation Seminar. (3)***summer*

Historical, technical, theoretical, environmental, and professional issues in architecture. Lecture seminar, field trips. Prerequisite: ADE 51.

**APH 511 Energy Environment Theory. (3)***fa*

Solar and other energy sources designed and natural environments, architectural, urban and regional implications of strategies using other renewable resources.

**APH 515 Current Issues and Topics. (3)***spring*

Critical examination of current architectural issues, topics and discourse. Prerequisite: APH 55.

**APH 581 Contemporary Urban Design. (3)***spring*

Exploration of the contemporary city and urban design issues related to contemporary cities. Seminar, lecture/discussion. Prerequisite: APH 505.

**APH 681 Architectural Theory. (3)***spring*

Examination of architectural theory. Emphasis on application of theory to practice. Seminar. Prerequisite: instructor approval.

**APH 682 Architectural Criticism. (3)***fa*

Examination of architectural criticism, emphasizing specific methods of criticism and the application for aesthetic judgment. Seminar. Prerequisite: instructor approval.

**APH 683 Critical Regionalism. (3)***not regularly offered*

Critical inquiry in cultural grounding of the definition of place in architecture, theory and practice. Lecture field studies. Prerequisite: APH 446 or 447.

**ARCHITECTURE PROFESSIONAL STUDIES (ARP)****ARP 451 Architecture Field Studies. (1-6)***fa, spring, summer*

Organized field study of architecture in specified national or international locations. Credit/no credit. May be repeated with approval of director.

**ARP 484 Clinical Internship. (1-3)***summer*

Full-time internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit. Prerequisite: instructor approval.

**ARP 584 Clinical Internship. (1)***summer*

Structured practical experience following a contract or plan supervised by faculty and practitioners.

**ARP 684 Professional Internship. (2-6)***spring*

Field experience in an architectural firm specializing in an area directly related to the student's advanced study. Integration of theory and state-of-the-art practices. Credit/no credit. Prerequisite: instructor approval.

**ARCHITECTURAL TECHNOLOGY (ATE)****ATE 353 Architectural Construction. (3)***fall*

Materials and methods of construction. Aesthetic code, a/d cost considerations. Lecture, lab. Corequisite: ADE 321

**ATE 361 Building Structures I. (3)***spring*

Introduction to load distribution on structures. Static analysis of determinate beams, trusses, arches, and rigid frames. Computer applications. Lecture, lab. Prerequisite: admission to upper division.

**ATE 451 Building Systems I. (3)***fall*

Principles of solar radiation, heat and moisture transfer, and environmental control systems as functions. Energy-conscious design. Lecture, lab. Prerequisite: admission to upper division.

**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 structure systems. Lecture, lab. Prerequisite: ATE 361

**ATE 521 Building Environmental Science. (3)***fall*

Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar radiation, energy for heating, cooling, and lighting. Lecture, lab. Prerequisite: MAT 290 or its equivalent

**ATE 530 Daylighting Design. (3)***spring*

Daylight analysis, availability, design, sky measurements, modeling and simulation. Integration with passive heating, cooling, building design, and energy considerations. Lecture, lab.

**ATE 550 Passive Cooling and Heating I. (3)***spring*

Theory, analysis, and application of passive and low energy systems for thermal comfort in buildings emphasizing heating. Prerequisite: ATE 521

**ATE 551 Passive Cooling and Heating II. (3)***fall*

Theory, analysis, and application of passive and low energy heating systems for thermal comfort in buildings emphasizing cooling. Prerequisite: ATE 550

**ATE 552 Energy Parameters in Buildings. (3)***not regularly offered*

Advanced modeling. Transient and multidimensional analysis of thermal and daylight performance using variable weather data. Prerequisite: ATE 551 or instructor approval.

**ATE 553 Building Systems III. (3)***fall*

Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation. Prerequisite: admission to upper division or instructor approval.

**ATE 554 Building Energy Efficiency. (3)***spring*

Impact of building design on energy performance. Climate responsiveness, operations dynamics, and subsystems integration in thermal comfort and efficiency. Prerequisite: ATE 452

**ATE 556 Building Development. (3)***spring*

Comprehensive design development through the understanding and integration of building materials and systems. Lecture, seminar. Prerequisites: ATE 462, 553. CAD proficiency. Corequisite: ADE 522

**ATE 557 Construction Documents. (3)***spring*

Production of architectural working drawings: e.g., status, organization, layout, site survey plans, sections, elevations, details, schedules, and coordination. Lecture, lab. Prerequisite: admission to upper division.

**ATE 558 Bioclimatic Parameters. (3)***spring*

Theory, analysis, and application of energy related parameters of site, climate, human comfort, and building program for design synthesis.

**ATE 560 Building Energy Analysis. (3)***fall*

Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects. Lab. Prerequisites: ANP 475 or 477, ATE 582

**ATE 561 Energy Analysis Techniques. (3)***fall*

Mathematical models of building envelope and comfort conditioning systems as bases for optimization techniques. Prerequisite: ATE 560.

**ATE 562 Experimental Evaluation. (3)***once a year*

Instrumentation, measurement and computational techniques for analysis of building components and assessment of thermal and human performance. Fee. Prerequisite: ATE 521.

**ATE 563 Building Structures III. (3)***fall*

Analysis, design, and detailing of steel buildings and frames. Lateral analysis of simple rigid and braced frame systems. Lecture, lab. Prerequisite: ATE 462 or its equivalent.

**ATE 564 Advanced Structures: Concrete. (3)***once a year*

Analysis, design, and detailing of concrete systems, considering continuity, moment frames and shear walls and lateral analysis. Computer application. Prerequisite: ATE 563 or instructor approval.

**ATE 565 Advanced Structures: High Rise. (3)***once a year*

Developments in high rise construction. Effects of wind and seismic force. Preliminary analysis, design, and detailing considering code requirements. Lecture, lab. Prerequisite: ATE 563 or instructor approval.

**ATE 582 Environmental Control Systems. (3)***once a year*

Heating, ventilation, and air-conditioning systems. Loads, psychrometric refrigeration cycle, air-water distribution, controls, energy performance standards, and utility rates. 2 hours lecture, 3 hours lab. Fee. Prerequisite: ATE 451 or 521

**ATE 599 Thesis. (1-12)***not regularly offered*

Fee.

**ARCHITECTURAL COMMUNICATION (AVC)****AVC 161 Advanced Freehand Perspective Drawing. (2)***not regularly offered*

Introduction to color media and analytical and design drawing exercises. 4 hours studio. Prerequisite: major in the College of Architecture and Environmental Design.

**AVC 294 Special Topics. (1-4)***fall and spring*

Possible topics

(a) Drawing Module 1

**NOTE:** For the General Studies requirement courses, and codes (such as L, SQ, C, and H) see General Studies page 78. For graduation requirements, see "University Graduation Requirements" page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 51.

**AVC 301 Architecture Communication. (2)**

Communication skills for architecture studios. Emphasis on graphic design drawing convention, media, computer aided design, design of presentations and representation. Lecture studio. Corequisite: ADE 321

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## School of Design

Jacques Giard  
*Director*  
 (AED 154B) 480/965-4135  
 Fax 480/965-9717  
[www.asu.edu/caed/design](http://www.asu.edu/caed/design)

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**PROFESSORS**

BRANDT GIARD KROEL NGER

**ASSOCIATE PROFESSORS**BERNARDI, CUTLER, DETR E JOHNSON, McDERMOTT  
 PATEL RATNER SANFT, W TT**ASSISTANT PROFESSORS**BORADKAR HARMON-VAUGHAN HERR NG, McCOY,  
 N EDERHELMAN RANDALL ROTHSTE N WEED**PURPOSE**

The School of Design educates people for the professional worlds of graphic design, industrial design, and interior design. The curricula focuses 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 theoretical 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.

More information about the School of Design may be obtained via the Web address provided or by sending electronic mail to [caed\\_adv\\_sinc@asu.edu](mailto:caed_adv_sinc@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

**Graphic Design.** The Graphic Design program educates and develops students for both the graphic design profession and 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 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. 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 designer as a member of a team. Third year students perform internships in a large 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.

**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.

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," on this page.

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.

## GRADUATE PROGRAMS

The School of Design offers a Master of Science in Design 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*.

## 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 Seminar* brochure from a college academic advisor. The following dates and procedures are for students applying to 2002-2003 upper division programs.

**Upper-Division Application Deadlines.** The following dates and procedures apply to Industrial and Interior Design portfolio submission only. Information regarding portfolio submission for Graphic Design is listed separately.

*April 15, 2002.* Portfolio and application documents are due in the school office by 5 P.M.

*June 3, 2002.* If the spring 2002 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. Applications are 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, 2002.* Acceptance notices are mailed no later than July 1.

*March 15, 2002.* The application deadline for Graphic Design is March 15, 2002. In addition to the portfolio submission, Graphic Design requires an aptitude test, which is part of the application packet. Application packets can be obtained from the Academic Advising Office one month before the due date. Students may obtain their application results by contacting the academic coordinator for Graphic Design at the end of the first week of April. Acceptance notices are mailed to admitted students.

**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.

**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) with plastic sleeves (8.5" x 11" format only). The student's name must be affixed to the outside. Items must appear in the following order:

**NOTE:** For the General Studies requirement courses and codes (such as L, SQ, C, and H) see "General Studies" page 78. For graduation requirements see "University Graduation Requirements" page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses" page 51.

*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 2001 semester. Copies are acceptable. An academic advisor forwards 2002 ASU transcripts. Applicants wishing to transfer spring semester 2002 work are responsible for submitting these transcripts by June 3 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 2001 and who are applying directly into an upper division program. The certificate is not required for students currently attending ASU.

*Following Pages (Usual 5 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 a portfolio requirements addendum 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 addendum 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. A lexamples 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, 2001. 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 pre-professional (first year) and a professional program (second, third, and fourth years).

Preprofessional program . . . . .	30
Professional program . . . . .	90
Total . . . . .	120

The lower-division curriculum balances a foundation in academic subjects such as English, numeracy, and computer technology 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 core 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 78, 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 74, and "College Degree Requirements," page 118.

**Graphic Design—B.S.D.  
Preprofessional Program Requirements**

**First Year**

<b>Fall</b>	
DSC 101 Design Awareness (HU/G) . . . . .	3
DSC 121 Design Principles . . . . .	3
ENG 101 First Year Composition . . . . .	3
or ENG 105 Advanced First Year Composition 3)	
if qualified	
MA elective . . . . .	3
CS elective . . . . .	3
Total . . . . .	15
<b>Spring</b>	
DSC 120 Design Drawing . . . . .	3
DSC 122 Design Principles II . . . . .	3
ENG 102 First Year Composition . . . . .	3



Approved elective	3
Upper division approved elective	3
Total	12
Professional program (11)	9
B.S.D. minimum total	17

Most studio courses and lecture courses are sequential. They must be taken in order and may be offered only during the semester indicated.

All courses that fulfill approved electives are available from the college academic advisor.

**Industrial Design**

The curriculum in Industrial Design is divided into a pre-professional (first and second years) and a professional program (third and fourth years).

Professional program	61
Professional program	5
Total	20

The preprofessional curriculum balances a foundation in academic subjects such as English, algebra and trigonometry, computing, and physics with departmental 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, 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 products and systems. Studio projects also emphasize the designers' 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. 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 8, 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 74, and "College Degree Requirements," page 118.

**NOTE:** For the General Studies requirement courses and codes such as SO, C and H see General Studies page 78. For graduation requirements see University Graduation Requirements page 74. For an explanation of additional common bus courses offered but not listed in this catalog see Catalog of Courses page 51.

Approved elective	3
Upper division approved elective	3
Total	15
Professional program (11)	9
B.S.D. minimum total	30

Transfer credits for the better division program must be equivalent in both content and level of learning. Samples of studio work to be accepted for credit must be submitted for evaluation through the college's Academic Advancing Office, ARCH 14. A list of courses that fulfill approved electives is available from the college academic advisor.

**Graphic Design B.S.D.**

**Professional Program Requirements**

**Second Year**

DSC 494 ST Foundation Purpose, Survival in Design	3
GRA 283 Letterform I	3
GRA 284 Visual Communication I	3
Lecture	3
SB elective	3
Total	15

GRA 286 Visual Communication II	3
GRA 287 Letterform II	3
Design elective	3
HL, H elect	3
SQ, SG elective with laboratory I	4
Total	16

**Third Year**

GRA 345 Design Rhetoric I	3
GRA 383 Typography I	3
GRA 386 Visual Communication III	3
Approved electives	6
Total	15

DSC 453 Preinternship Seminar	1
GRA 318 History of Graphic Design HL	3
GRA 385 Typography II	3
GRA 387 Visual Communication IV	3
Upper division design elective	3
Total	6
DSC 494 Internship	3
Total	3

**Fourth Year**

GRA 481 Visual Communication V	3
GRA 494 ST Graphic Design	3
SQ, SG elective with laboratory II	4
Upper division design elective	3
Total	13
GRA 494 ST Graphic Design	3
Total	3

**Industrial Design B.S.D.  
Preprofessional Program Requirements**

**First Year**

**Fall**

DSC 101	Design Awareness	HU, G	3
DSC 121	Design Principles I		3
ENG 101	First Year Composition		3
	or ENG 105 Advanced First Year Composition		3
		if qualified	
MAT 170	Precalculus	MA	3
PGS 111	Introduction to Psychology	SB	3
<b>Total</b>			<b>15</b>

**Spring**

DSC 20	Design Drawing		3
DSC 22	Design Principles II		3
ECN 112	Microeconomic Principles	SB	3
ENG 105	First Year Composition		3
PHY 11	General Physics	SQ <sup>3</sup>	3
PHY 113	General Physics Laboratory	SQ <sup>3</sup>	1
<b>Total</b>			<b>16</b>

**Second Year**

**Fall**

DSC 236	Introduction to Computer Modeling	CS	3
IND 227	Visual Methods for Problem Solving		3
IND 247	Materials and Design		3
IND 260	Industrial Design I		3
IND 316	20th Century Design I	HU, H	3
<b>Total</b>			<b>5</b>

**Spring**

COM 225	Public Speaking	L	3
	or approved program elective		3
IND 228	Imaging and Visualization		3
IND 243	Process and Design		3
IND 261	Industrial Design II		3
IND 317	21st Century Design II	HU, H	3
<b>Total</b>			<b>15</b>
<b>Preprofessional program total</b>			<b>61</b>

Transfer credits for the lower division program must be equivalent in both content and level of offering. Samples of studio work must be provided for evaluation. See a college academic advisor for an appointment.

TGECC satisfied.

<sup>3</sup> Both PHY 11 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
<b>Total</b>			<b>14</b>

**Spring**

IND 328	Graphics for Industrial Design		3
IND 361	Industrial Design IV		5
MKT 300	Principles of Marketing		3
SQ, SG	elective with approved laboratory		4
<b>Total</b>			<b>15</b>

**Summer**

DSC 484	Internship		2
<b>Total</b>			<b>2</b>

**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
	Approved HU, SB elective		3
<b>Total</b>			<b>14</b>

**Spring**

IND 461	Design Project II		5
IND 474	Design Seminar		3
C	elective*		3
Elective			3
<b>Total</b>			<b>14</b>
<b>Professional program total</b>			<b>59</b>
<b>B.S.D. minimum total</b>			<b>121</b>

\* A list of courses that fulfill approved program electives is available from the college academic advisor.

**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	56
Professional program	94
<b>Total</b>	<b>50</b>

The preprofessional curriculum balances a foundation in academic subjects such as English, algebra and trigonometry, computer technology, and physics with departmental 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 offer greater enrichment in studio disciplines and which contribute to the possibility for postsecondary level academic appointments, giving the recipients highly sought after academic credentials.

**General Studies Requirement.** The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all

three General Studies awareness areas are required. Consult with your 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 74, and "College Degree Requirements," page 118.

**Interior Design B.S.D. Preprofessional Program Requirements<sup>1</sup>**

**Fall**

DSC 101	Design Awareness <i>HU, G</i>	3
DSC 121	Design Principles I	3
ENG 101	First Year Composition	3
ENG 101	First Year Composition	3
ENG 101	First Year Composition	3
ENG 105	Advanced First Year Composition 3) or ENG 105 Advanced First Year Composition 3) if qualified	3
MAT 170	Precalculus <i>MA</i>	3
SB, C	elective	3
Total		15

**Spring**

ARS 102	Art of the Western World II <i>HU, H</i>	3
DSC 120	Design Drawing	3
DSC 122	Design Principles II	3
ENG 102	First Year Composition	3
ENG 102	First Year Composition	3
ENG 102	First Year Composition	3
PHY 111	General Physics 5Q <sup>2</sup>	3
PHY 113	General Physics Laboratory 5Q	3
Total		16

**Second Year**

**Fall**

DSC 236	Introduction to Computer Modeling CS	3
INT 194	ST: Drafting for Interior Design	3
INT 223	Interior Design Issues and Theories <i>HL</i>	3
INT 235	User Needs and Behavior in Interior Design	3
Total		12

**Spring**

COM 225	Public Speaking L	3
INT 220	Media for Design Development	3
INT 231	Concepts for Interior Design	3
SB or SG	elective with laboratory	4
Total		13
Professional program total		94
Preprofessional program total		56

Transfer credits for the lower division program must be equivalent in both content and level of offering. Samples of studio work must be provided for evaluation. See a college academic advisor for an appointment.

- 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 <i>HU, H</i>	3
INT 340	Interior Codes, Public Welfare and Safety	3
INT 364	Interior Design Studio I	5

INT 366	Constructive Methods in Interior Design	3
Total		17

**Spring**

DSC 483	Internship Senior	1
INT 311	History of Interior Design II <i>HL, H</i>	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**

ENG 301	Writing for the Professions L	3
INT 412	History of Decorative Arts in Interiors <i>HU</i>	3
INT 442	Specifications and Documents for Interiors L	3
INT 457	Acoustics for Interior Design	3
INT 464	Interior Design Studio III	5
Total		17

**Spring**

INT 413	History of Textiles in Interior Design	3
INT 458	Lighting for Interior Design	3
INT 465	Interior Design Studio IV	5
SB	elective	3
Total		14

**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
Approved degree project 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
Approved degree project elective		3
Total		14

\* See "Fifth Year" on this page

Professional program total	94
B.S.D. minimum total	150

**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. It should be noted that the fifth year studio sequence is designed to draw majors from the upper division programs of industrial design, graphic design, and architecture, thus furthering a real life interdisciplinary problem solving experience.

**NOTE:** For the General Studies requirement courses, and codes (such as L, SQ, C, and H) see "General Studies" page 78. For graduation requirements see "University Graduation Requirements" page 74. For an explanation of additional non-business courses offered but not listed in this catalog see "Catalog of Courses" page 51.

**MINOR****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. The only exception to this rule is INT 223.

**Required Courses**

DSC 101 Design Awareness <i>HU, G</i> .....	3
INT 223 Interior Design Issues and Theories <i>HU</i> .....	3
INT 311 History of Interior Design I <i>HU, H</i> .....	3
INT 311 History of Interior Design II <i>HU, H</i> .....	3
INT 412 History of Decorative Arts in Interiors <i>HU</i> .....	3
INT 413 History of Textiles in Interior Design .....	3
<b>Total</b> .....	<b>18</b>

The minor in Interior Design History is open to students majoring in Architectural Studies, Art, Communication, Psychology, or Sociology and students in any College of Business major or the Bachelor of Interdisciplinary Studies program. All other majors are considered on an individual basis and approved by the coordinators 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.

**DESIGN (DSC)****DSC 100 Introduction to Environmental Design. (3)**

*fa 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)**

*fa*  
Survey of cultural, global, and historical context for the design professions.  
*General Studies: HU, G*

**DSC 120 Design Drawing. (3)**

*spring*  
Drawing as a language to explore and communicate ideas. Development of drawing aptitude as a language and process for design thinking. 1-hour lecture, 5-hour studio.

**DSC 121 Design Principles I. (3)**

*fa*  
Design as a language and process for creative thinking and realization. 1-hour lecture, 5-hour studio. Prerequisite: major in the College of Architecture and Environmental Design.

**DSC 122 Design Principles II. (3)**

*spring*  
Continued exploration of design as a language and process for creative thinking and realization. 1-hour lecture, 5-hour studio. Prerequisite: DSC 121.

**DSC 236 Introduction to Computer Modeling. (3)**

*fa and spring*  
Computers in design including software concepts, specific package and problem solving, illustration, typography, modeling, and animation. Lab. Prerequisite: Design major.  
*General Studies: CS*

**DSC 344 Human Factors in Design. (3)**

*fa*  
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 material 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*  
Possible topics:  
a) Finding Purpose: Surviving in Design (3)

**DSC 500 Research Methods. (1-12)**

*not regularly offered*  
Fee

**DSC 520 Contemporary Design Issues. (3)**

*fa and spring*  
Projected applications in design, production, planning, and decision-making processes. Lecture/seminar. Prerequisites: INT 310 and 311 (or the equivalents).

**DSC 524 Illumination and Acoustics. (3)**

*not regularly offered*  
Research and laboratory investigation of advanced illumination and acoustics issues of facility design. Emphasis on human factors and performance aspects. Prerequisites: INT 457 and 458 (or the equivalents).

**DSC 525 Design Methodologies. (3)**

*fa*  
Practical exercises and studies in problem-solving strategies, problem definition, and supporting theory for the designer. Lecture, seminar, lab. Fee. Prerequisite: senior or graduate standing.

**DSC 527 Modern Design Theory. (3)**

*spring*  
Aesthetic, political, economic, and social theories that have shaped modern design, theory as the basis for design philosophies. Lecture/seminar. Prerequisite: DSC 525 (or its equivalent).

**DSC 529 Design Criticism. (3)**

*fall*  
Critical methods applied to design as material culture and human expression. Evaluation of achievement versus intention. Lecture/seminar. Prerequisite: DSC 527 (or its equivalent).

**DSC 544 Human Factors Systems and Documentation. (3)**

*fa*  
Advanced topics associated with theory and methods of human factors in design. Individual projects stress problem organization, evaluation, and documentation. Lecture, seminar, lab. Prerequisite: DSC 344 (or its equivalent).

**DSC 552 Computer Simulation in Design. (3)**

*fa*  
Use of computer graphics as a medium to develop and present images of the environment for analysis and perception. Lecture/lab. Prerequisite: senior or graduate standing.

**DSC 553 Computer Imaging and Visual Perception. (3)**

*spring*  
Issues and applications of computer simulation as a tool for describing and testing human interface with the environment. Lecture/lab. Prerequisite: senior or graduate standing.

**DSC 558 Daylighting. (3)**

*not regularly offered*  
Daylighting as a design determinant: concepts, techniques, methodology, experiments, and case studies. Lecture, studio. Prerequisite: senior or graduate standing.

**DSC 580 Practicum: Methods of Teaching Design. (3)***fa*

Background and development of design education theories. Concepts of student teaching methods. Comprehensive student project development and evaluation on methods. Prerequisite: graduate standing

**DSC 593 Applied Project. (1-12)**

*not regularly offered*  
Fee.

**DSC 598 Special Topics. (1-4)***not regularly offered*

Possible topics

(a) Fall/Pannngl

Fee

**DSC 599 Thesis. (1-12)***not regularly offered*

Fee.

**GRAPHIC DESIGN (GRA)****GRA 283 Letterform I. (3)***fa*

Drawing of letterforms with focus on proportion and structure. Introduction to letterform nomenclature and classifications. 6 hours a week. Fee. Prerequisites: DSC 122, acceptance into Graphic Design program

**GRA 284 Visual Communication I. (3)***fa*

Theoretical and applied studies in shape, drawing, and color. 6 hours a week. Fee. Prerequisite: GRA 283

**GRA 286 Visual Communication II. (3)***spring*

Transition from theoretical to applied problems. Emphasis on refinement of visual skills. 6 hours a week. Fee. Prerequisites: GRA 284, acceptance into Graphic Design program. Corequisite: GRA 287

**GRA 287 Letterform II. (3)***spring*

Continuation of GRA 283 with emphasis on lowercase letters, baselines of pen writing and font design. 6 hours per week. Fee. Prerequisites: GRA 284, acceptance into Graphic Design program. Corequisite: GRA 286

**GRA 318 History of Graphic Design. (3)***spring*

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)***fa*

Developmental 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)***fa*

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)***fa*

Theoretical exercises in spatial and textural qualities of type. Problems in text on activation and balance. Exercises in simple typography application. 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 for mats, 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)***fa*

Problems in specific design applications such as poster, packaging, publications. Emphasis on development of concepts in visual communication. 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)***fa*

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 cumulative in an exhibit. 6 hours a week. Fee. Prerequisite: GRA 481

**GRA 485 Graphic Design Workshop. (3)***fa / spring / summer*

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)***fa / and / spring*

Possible topics:

a) Graphic Design 3

**INDUSTRIAL DESIGN (IND)****IND 194 Special Topics. (1-4)***spring*

Possible topics:

a) Drafting for Industrial Design 3

Applied mechanical drafting knowledge and skills. Manual drafting principles and techniques with transition to computer-aided industrial design

**IND 227 Visual Methods for Problem Solving. (3)***fa*

Introduction to 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: DSC 122.

**IND 228 Imaging and Visualization. (3)***spring*

Design activities stressing graphic language abstract on practiced for presentation. Discusses structure of criticism, nomenclature, description, interpretation, and evaluation. Seminar, studio. Prerequisite: IND 227

**IND 242 Materials and Design. (3)***fa*

Material application in design. Introduction to characteristics and properties of metals and organic materials including past and nonorganic materials

**IND 243 Process and Design. (3)***spring*

Influences of industrial processing on design. Introduction to basic material processing and post-forming processes. Emphasis on appearance enhancement and design constraints of material processing. Prerequisite: IND 242

**IND 260 Industrial Design I. (3)***fa*

Introduction to the method and process of the industrial designer. Determinants necessary in small product design. 1-hour lecture, 2-hour studio. Prerequisite: DSC 122

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C, and H see "General Studies, page 78. For graduation requirement see "University Graduation Requirements" page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses" page 51.

**IND 261 Industrial Design II. (3)***spring*

Issue 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. Emphasis on 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. Emphasis on 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: IND 228.

**IND 328 Graphics for Industrial Design. (3)***spring*

Investigates and applies packaging applications and planning to the development of an identity for a product, one 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 355 Plastics Design. (3)***spring*

Mod design for part requirements: molded hoses, threads, inserts, fastening, and joining; decorative; reinforced plastics.

**IND 360 Industrial Design III. (5)***fall*

Methods of visual thinking, conceptualization, and design related to building skill level in professional design presentation techniques. 10 hours studio. Fee. Prerequisite: school approval.

**IND 361 Industrial Design IV. (5)***spring*

Emphasis on developing design 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. Emphasis on 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. Cumulative nature of design process and technique. Encourages individual project direction. 10 hours studio. Fee. Prerequisite: IND 361.

**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*

Manufacturers' liability statutes, regulations, and common law rules; role of expert witnesses; insurance and product safety programs.

Seminar. Prerequisite: senior standing.

**IND 494 Special Topics. (3)***not regularly offered*

Applies mechanical drafting knowledge and skills. Manual drafting principles and techniques with transition to computer-aided industrial design.

**INTERIOR DESIGN (INT)****INT 194 Special Topics. (1-4)***fall*

Possible topics:

a. Drafting for Interior Design 3

**INT 220 Media for Design Development. (3)***spring*

Graphic representation methods used to describe and analyze space. Emphasis on quick presentation techniques. 6 hours studio. Prerequisite: DSC 122.

**INT 223 Interior Design Issues and Theories. (3)***fall*

Interiors issues, theories, and philosophies. Emphasis on 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. Prerequisite: DSC 122.

**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, 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 spaces 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: NT 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: NT 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. May include field trips. Prerequisite: NT 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 methodology. Uses engineering based software programs. Prerequisite: senior or standing.

**INT 423 Facilities Planning and Management II. (3)***spring*

Format of facilities processes, procedures, and standards. Facilities database, space allocations, and management process. Evaluation of programming criteria. Prerequisites: NT 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 or furniture and millwork. 1 hour lecture, 4 hours studio.

**INT 455 Environmental Control Systems. (3)***spring*

Survey of environmental control systems and the application in the design of buildings. Lecture, field trips. Prerequisites: MAT 117, 170, PHY 111, 113, junior or standing.

**INT 457 Acoustics for Interior Design. (3)***fall*

Physical properties of sound. Studies pertaining to sound absorption, materials, construction, 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, NT 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: school approval.

**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: school approval.

**INT 472 Professional Practice for Interior Design. (3)***spring*

Business procedures, project control, fee structures, and professional product abilities.

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## School of Planning and Landscape Architecture

Frederick Steiner

*Director*

(AED 158A) 480/965-7167

www.asu.edu/caed/planning

**PROFESSORS**

K. HL, LAI, MUSHKATEL, P. JAWKA, STEINER

**ASSOCIATE PROFESSORS**

CAMERON, COOK, GUHATHAKURTA, KIM, McSHERRY, SAN MARTIN, YABES

**ASSISTANT PROFESSORS**

CREWE, EWAN, FISH, EWAN, LARSEN, MUSACCHIO

**FACULTY ASSOCIATE**

DOLLN

**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,

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**NOTE:** For the General Studies requirement courses, and codes such as L, SQ, C, and H, see "General Studies" page 78. For graduation requirements, see "University Graduation Requirements," page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses" page 51.

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. 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**

For more information, call 480/965-7167.

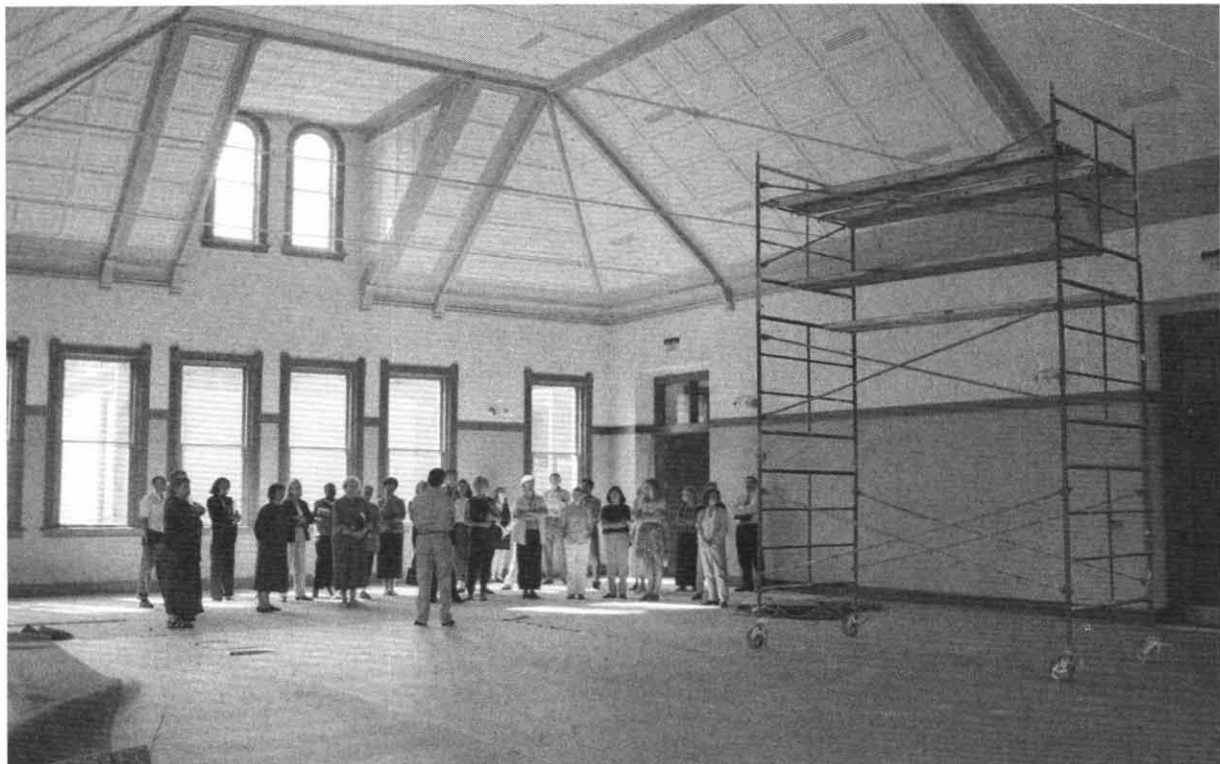
**Urban Planning**

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 with broad appeal.

All students must complete a minimum of 15 semester hours from the following courses:

PUP 200	The Planned Environment <i>HU, H</i>	3
PUP 301	Introduction to Urban Planning <i>L*</i>	3
PUP 412	History of the City <i>H</i>	3
PUP 420	Theory of Urban Design <i>HU</i>	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.



Touring the ballroom during the restoration of Old Main

Tom Trumble photo



The minor is automatically open to students from the following majors: Architectural Studies, Civil Engineering, Environmental Resources, Geography, Housing and Urban Development, Landscape Architecture and Real Estate. Students pursuing other majors will be considered on an individual basis. To pursue a minor in Urban Planning, students must have a minimum cumulative GPA of 3.00. These students must submit a letter of application to the School of Planning and Landscape Architecture seeking approval to enter the minor program.

## 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. The following dates

and procedures are for students applying to 2002-2003 upper division programs in Housing and Urban Development. Applicants to the upper division programs in Landscape Architecture and Urban Planning follow different procedures and have different deadline dates; see an advisor in the advising office for more information.

**Upper-Division Application Deadlines.** *April 15, 2002* Portfolio and application documents are due in the school office by 5 P.M.

*June 3, 2002.* If the spring 2002 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. 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, 2002.* 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. Alternatives 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.

**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. 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 a portfolio requirements addendum for their major from the college's Academic Advising Office, ARCH 141, at the beginning of the academic year in

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**NOTE:** For the General Studies requirement, courses, and codes such as L, SQ, C, and H, see "General Studies," page 78. For graduation requirements, see "University Graduation Requirements," page 74. For an explanation of additional non-business courses offered but not listed in this catalog, see "Classification of Courses," page 51.

which they intend to apply to the upper division program. Requirements or instructions indicated in the addendum 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 August 15, 2002. 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 director and faculty advisors.

**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	57
Internship	2
<b>Total</b>	<b>120</b>

**General Studies Requirement.** The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult your 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 74, and "College Degree Requirements," page 118.

**Bachelor of Science in Planning,  
Major in Urban Planning  
Preprofessional Program Requirements**

**First Year**

<b>Fall</b>	
ENG 101 First Year Composition	3
or ENG 105 Advanced First Year Composition 3 if qualified	
ERS 30 Introduction to Environmental Science SQ	4
or any SQ/SG elective	
MAT 117 College Algebra MA	3
or approved more advanced MA elective (3)	
PUP 100 Introduction to Environmental Design HU/G/H	3
PUP 61 Graphic Communication	3
<b>Total</b>	<b>16</b>

**Spring**

ECN 112 Microeconomic Principles SB	3
or economics elective SB	
ENG 102 First Year Composition	3
HU elective if ENG 105 is taken 3	
GPH 111 Introduction to Physical Geography SQ	4
or any SQ/SG elective	
CElective	3
Elective	3
<b>Total</b>	<b>16</b>

**Second Year**

**Fall**

PLA 101 Landscape and Society-HU/G	3
or any HU or SB elective	
PUP 261 Urban Planning I <sup>1</sup>	4
PLP 301 Introduction to Urban Planning L	3
Approved elective	3
SB elective	3
<b>Total</b>	<b>16</b>

**Spring**

PUP 262 Urban Planning II <sup>2</sup>	4
PUP 322 Computers in Planning	3
PUP 363 History of Planning	3
Approved HU elective	3
Approved statistics elective or quantitative reasoning elective	3
<b>Total</b>	<b>16</b>
Preprofessional program total	64

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.

<sup>2</sup> Portfolio review is required for transfer studio work. See a college academic advisor for an appointment.

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 I	4
PUP 452 Ethics and Theory in Planning	3
Approved elective	3
<b>Minimum total</b>	<b>14</b>

**Spring**

PUP 362 Urban Planning IV	4
PUP 436 City Structure and Planning	3
PUP 510 Citizen Participation	3
Elective	3
<b>Total</b>	<b>13</b>

**Summer**

PUP 484 Internship or Study Abroad (use elective credit)	3
or approved elective (3)	
<b>Total</b>	<b>3</b>

**Fourth Year**

<b>Fall</b>		
PUP 432 Planning and Development Control Law	3	
PUP 442 Environmental Planning	3	
PUP 461 Urban Planning V	4	
Elective	3	
<b>Total</b>		13

<b>Spring</b>		
PUP 420 Theory of Urban Design HU	3	
PUP 434 Urban Land Economics or elective (3)	3	
PUP 462 Urban Planning VI	4	
Elective	3	
<b>Total</b>		13

Select a minimum of nine semester hours from approved SPLA elective list.  
 Professional program total 56  
 B.S.P. minimum total 120

**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
<b>Total</b>	120

**General Studies Requirement.** The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult your 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 74, and "College Degree Requirements," page 118

**Bachelor of Science in Landscape Architecture  
Preprofessional Requirements**

**First Year**

<b>Fall</b>		
ENG 101 First Year Composition or ENG 105 Advanced First Year Composition	3	
MAT 11 College Algebra MA	3	
PLA 101 Landscape and Society HU G	3	
PLA 161 Graphic Communication	3	
PUP 00 Introduction to Environmental Design HU G H	3	
<b>Total</b>		15

<b>Spring</b>		
ADE 120 Design Fundamentals I	3	
ARS 101 Art of the Western World I HU H	3	
ENG 102 First Year Composition	3	
GPH 111 Introduction to Physical Geography SQ	4	
HST 102 Western Civilization SB H	3	
<b>Total</b>		16

**Second Year**

<b>Fall</b>		
PLA 240 Landscape Survey Techniques	3	
PLA 261 Landscape Architecture I	4	
PLA 310 History of Landscape Architecture H	3	
PLA 494 ST Plant Materials	3	
PUP 301 Introduction to Urban Planning L	3	
<b>Total</b>		16
Preprofessional program total		47

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

Portfolio reviews required for transfer student work. See college academic advisor for an appointment

**Bachelor of Science in Landscape Architecture  
Professional Program Requirements**

**Second Year**

<b>Spring</b>		
PLA 222 Computers in Landscape Architecture CS	3	
PLA 242 Landscape Construction I	4	
PLA 262 Landscape Architecture II	4	
SQ or SQ Elective with laboratory	4	
<b>Total</b>		15

**Third Year**

<b>Fall</b>		
PLA 311 Contemporary Landscape Architecture	3	
PLA 344 Landscape Construction II	4	
PLA 361 Landscape Architecture III	4	
C elective	3	
Elective	3	
<b>Total</b>		17

<b>Spring</b>		
PLA 345 Professional Practice Seminar	1	
PLA 362 Landscape Architecture IV	4	
PLA 363 Landscape Planting Design	4	
PUP 421 Theory of Urban Design HU	3	
Electives	3	
<b>Minimum total</b>		15

<b>Summer</b>		
PLA 484 Internship (optional) or PLA 485 International Field Studies in Planning and Landscape Architecture (6 optional)	3	

**Fourth Year**

<b>Fall</b>		
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	
<b>Total</b>		13
<b>Spring</b>		
PLA 411 Landscape Architecture Theory and Criticism L	3	
PLA 462 Landscape Architecture VI	4	

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C and H, see General Studies page 78. For graduation requirements see "University Graduation Requirements" page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Catalog of Courses" page 51.

Electives	6
Total	13
Professional program total	73
B.S.L.A. minimum total	120

\* PLA 484 or 487 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	63
Professional program courses core	56
Internship	1
Total	120

**General Studies Requirements**

The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult your 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 74, and "College Degree Requirements," page 118.

**Bachelor of Science in Design,  
Major in Housing and Urban Development  
Preprofessional Program Requirements**

**First Year**

**Fall**

ECN 112 Microeconomic Principles SB	3
ENG 101 First Year Composition	3
GPH 111 Introduction to Physical Geography SQ	4
HUD 161 Graphic Communication	3
PUP 100 Introduction to Environmental Design HU, G, H	3
Total	16

**Spring**

ECN 111 Macroeconomic Principles SB	3
or any SB elective (3)	
ENG 102 First Year Composition	3
HUD 201 Introduction to Housing and Urban Development	3
MAT 111 College Algebra MA	3
or MAT 170 Precalculus MA (3)	
or MAT 210 Brief Calculus MA (3)	
CS elective in computers	3
Total	15

**Second Year**

**Fall**

APH 200 Introduction to Architecture HU, G	3
or any CAED history course listed below (3)	
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
PUP 301 Introduction to Urban Planning L	3
Natural science with lab	4
REA elective	3
Upper division HU elective	3
Total	16
Preprofessional program total	63

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

See "CAED History Courses," on this page

**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 Western Architecture I L/HU	3
APH 446 21st Century Architecture I HU	3
DSC 101 Design Awareness HU, G	3
GRA 309 History of Graphic Design HU	3
IND 316 20th Century Design I 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
or CON 477 Residential Construction Business Practices (3)	
HUD 36 Housing and Urban Development Studio I: Residential Design and Development	2
HUD 363 Housing and Urban Development Seminar I: Residential Design and Development	3
MKT 394 ST Marketing and Selling	3
or approved business elective	
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
Total	14

**Summer**

HUD 484 Internship	1
PUP 485 International Field Studies in Planning and Landscape Architecture (optional)	1-12
Minimum total	1

**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 or PUP 432 Planning and Development Control Laws	3
Approved elective in computers	3
Total	14
Professional program total	5
B.S.D. HUD minimum total	20

\* CON 251 Microcomputer Applications for Construction is suggested

**INQUIRIES**

For more information, contact a college academic advisor:

COLLEGE OF ARCHITECTURE AND ENVIRONMENTAL DESIGN  
ARIZONA STATE UNIVERSITY  
PO BOX 871605  
TEMPE AZ 85287 1605

**HOUSING AND URBAN DEVELOPMENT (HUD)**

**HUD 161 Graphic Communication. (3)**

*fa and spring*

Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professionals. Studio. Cross-listed as PLA 161 PUP 161. Credit 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 interested community faculty and private, public and nonprofit practitioners.

**HUD 301 Housing and Community Design and Development. (3)**

*fa*

Sing and multifamily housing, residential neighborhoods and planned communities. Affordability in owner-occupied and rental housing. First-time move-up and adult markets.

**HUD 302 Housing Production Process. (3)**

*spring*

Development feasibility analysis, finance, contracts and 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)**

*fa*

Affordable residential design, development and production process. Studio. Prerequisite: 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. Prerequisite: HUD 301 361 363 364; upper-division HUD major.

**HUD 363 Housing and Urban Development Seminar I: Residential Design and Development. (3)**

*fa*

Affordable residential design, development and production process. Seminar. Prerequisite: 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. Prerequisite: HUD 301 361, 362 363; upper division HUD major.

**HUD 401 Assisted Housing. (3)**

*fa*

Publicly subsidized and non-profit housing. Policy implementation, and administrative. FHA Section 8, FmHA projects and states, 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)**

*fa 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)**

*fa*

Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management and marketing. Studio. Prerequisite: 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 neighborhood empowerment enterprise zoning, code enforcement, citizen participation, etc. Studio. Prerequisite: HUD 401 402 464; upper division HUD major.

**HUD 463 Housing and Urban Development Seminar III: Comprehensive Housing Development Process. (3)**

*fa*

Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management and marketing. Seminar. Prerequisite: 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 neighborhood empowerment enterprise zoning, code enforcement, citizen participation, etc. Seminar. Prerequisite: HUD 401, 402, 462; upper division HUD major.

**HUD 484 Internship. (1)**

*summer*

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C and H, see "General Studies" page 78. For graduation requirements, see "University Graduation Requirements" page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses" page 51.

**LANDSCAPE ARCHITECTURE (PLA)****PLA 101 Landscape and Society. (3)***fa*

Examines interrelationships between society and the landscape with emphasis on human involvement in shaping the landscape  
*General Studies: HU G*

**PLA 161 Graphic Communication. (3)***fa and spring*

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 awarded for only HUD 161 or PLA 161 or PUP 161.

**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)***fa*

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 focus on landform transformation. Topics include landform analysis, grading and earthwork. Studio. Prerequisite: admission to professional program.

**PLA 261 Landscape Architecture I. (4)***fa*

Landscape communication: communication techniques for urban planning and landscape architecture. 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)***fa*

Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design. Cross-listed as APH 411. Credit is awarded for only APH 411 or PLA 310.  
*General Studies: H*

**PLA 311 Contemporary Landscape Architecture. (3)***fa*

Explores concerns, projects and movements in landscape architecture of late 20th-century, understanding social, ecological, regional and historical influences.

**PLA 322 Computers in Planning. (3)***spring*

Planning methods using database, word processors, spreadsheets, CAD and mapping packages on microcomputers. Lecture/lab. Cross-listed as PUP 322. Credit is awarded for only PLA 322 or PUP 322.

**PLA 344 Landscape Construction II. (4)***fa*

Characteristics of materials and methods used in landscape architecture construction. Studio. Prerequisite: PLA 242. 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)***fa*

Site planning analysis of natural and cultural features, site systems and impact for planning 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 landscape design. Explores design philosophy through planting design problems. Studio. Prerequisite: admission to professional program.

**PLA 410 Social Factors in Landscape and Urban Planning. (3)***fa*

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. Prerequisite: PLA 310, 361, 362, 420, 461.

*General Studies: L***PLA 412 Landscape Ecology and Planning. (3)***spring*

Reviews the evolution of landscape ecology and landscape planning and examines use and value.

**PLA 413 Southwest Landscape Interpretation. (3)***spring*

Explores methods and implications of landscape interpretation with 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: understanding.

*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)***fa*

Landscape ecology: 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)***fa, spring, summer session 1*

Full-time internship under the supervision of practitioners in the Phoenix area or other areas. Credit/no credit. Prerequisite: school major instructor approval.

**PLA 485 International Field Studies in Planning and Landscape Architecture. (1-12)***fa, spring, summer*

Organized field study of planning and landscape architecture in specific international locations. May be repeated for credit with school approval. Study abroad. Cross-listed as PUP 485. Credit is awarded for only PLA 485 or PUP 485.

*General Studies: G***PLA 494 Special Topics. (1-4)***fa and spring*

Possible topics:

a. Pat Materials 3

**PLA 498 Pro-Seminar. (1-7)***spring*

Possible topics:

a. Professional Senior Seminar 1

**URBAN AND ENVIRONMENTAL PLANNING (PUP)****PUP 100 Introduction to Environmental Design. (3)***fa 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 awarded for only APH 100 or DSC 100 or PUP 100.

*General Studies: HU G H***PUP 161 Graphic Communication. (3)***fall and spring*

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 awarded for only HUD 161 or PLA 161 or PUP 161.

**PUP 200 The Planned Environment. (3)***fa*

Environmental aesthetic, social, economic, political and other factors influencing urban development.

*General Studies: HU H***PUP 236 Introduction to Computer Modeling. (3)***fa 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)***fa*

Planning, communication, communication techniques for urban planning and landscape architecture. Prerequisites: ADE 120, PLA 261 or PUP 262.

**PUP 262 Urban Planning II. (4)***spring*

Reading the landscape, observing, experiencing and graphically expressing the symbolic and aesthetic significance of natural and man-made landscapes. Studio. Prerequisites: ADE 120, GPH 111.

**PUP 301 Introduction to Urban Planning. (3)***fa, spring, summer*

Theoretical and practical aspects of city planning: territorial plans among physical planning, environment, government and society.

*General Studies***PUP 322 Computers in Planning. (3)***spring*

Planning methods using database, word processors, spreadsheets, CAD, and mapping packages on microcomputers. Lecture/lab. Cross-listed as PLA 322. Credit is awarded for only PLA 322 or PUP 322.

**PUP 361 Urban Planning III. (4)***fa*

Site planning analysis of natural and cultural features, site systems and implications for planning and design. Studio. Fee. Prerequisite: school major or instructor approval.

**PUP 362 Urban Planning IV. (4)***spring*

Neighborhood planning, local community planning, 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)***fa*

The city from its ancient origins to the present day. Emphasis on European and American cities during the last five centuries. Cross-listed as APH 414. Credit is awarded 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)***fa*

Tools useful for urban planning research: emphasis on research design and survey methods. Studio. Prerequisite: PUP 301 or instructor approval.

**PUP 425 Urban Housing Analysis. (3)***fa*

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 or standing or instructor approval.

**PUP 432 Planning and Development Control Law. (3)***fa*

Case studies on police power, eminent domain, zoning subdivisions, control, excision, preservation, urban redevelopment and aesthetic and design regulation.

**PUP 433 Zoning Ordinances, Subdivision Regulations, and Building Codes. (3)***fa and spring*

Analyzes zoning ordinances, subdivisions, regulations, building codes and other planning implementation techniques relative to local development.

**PUP 434 Urban Land Economics. (3)***spring*

Interaction between space and economic behavior. Examines the use and value of land through economic theories.

**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)***fa*

Environmental planning problems: including food, air, water, quality and quantity, solid and hazardous waste, air quality, lands, design and noise. Field trips. Prerequisite: PUP 301 or instructor approval.

**PUP 444 Preservation Planning. (3)***spring*

History, theory and principles of historic preservation. Emphasis on legal framework and methods practiced. Lecture/off-campus field study. Prerequisite: instructor approval.

**PUP 445 Women and Environments. (3)***fa*

Examines the role of women in shaping the built environment: ways in which natural forms affect women's lives. Focuses on contemporary U.S. examples. Prerequisite: upper division or graduate status.

*General Studies: C***PUP 450 Environmental Planning Economics. (3)***fa*

Introductory course in the applications and implications of economics in environmental planning and policy making. Emphasizes applications rather than theoretical details. The importance of ecological knowledge.

**PUP 452 Ethics and Theory in Planning. (3)***fa*

Ethics and the theory of professional planning practice in urban and regional communities. Prerequisite: upper division standing or instructor approval.

*General Studies: L*

**NOTE:** For the General Studies requirement courses, and courses such as L, SQ, C and H see General Studies page 78. For graduation requirements see University Graduation Requirement page 74. For an explanation of additional non-business courses offered but not listed in this catalog, see "Classification of Courses," page 51.

**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. 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***PUP 494 Special Topics. (1–4)***fall and spring*

Possible topics:

- (a) Environmental Planning Economics. (3)

**PUP 498 Pro-Seminar. (1–7)***fall*

Possible topics:

- (a) Senior Pro-Seminar. (1)

**PUP 501 The Idea of Planning. (3)***fall*

Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.

**PUP 510 Citizen Participation. (3)***spring*

Theory and practice of citizen participation in planning. Examines and critiques participation techniques and roles of planners. Prerequisite: instructor approval.

**PUP 520 Planning Theories and Processes. (3)***fall*

Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners. Prerequisite: instructor approval.

**PUP 524 Planning Methods I: Planning Research Methods. (3)***fall*

Tools useful for urban planning research; emphasis on research design and survey methods. Prerequisite: PUP 301 or instructor approval.

**PUP 525 Urban Housing Analysis. (3)***fall*

Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.

**PUP 531 Planning and Development Control Law. (3)***spring*

Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.

**PUP 532 Advanced Urban Planning Law. (3)***spring*

Advanced study on selected issues in planning law, such as urban design controls, exclusionary practices, compensable regulation, and tax policy. Prerequisite: PUP 432 or instructor approval.

**PUP 542 Environmental Administration and Planning. (3)***spring*

Environmental administration of policies and their relationship to environmental planning practices. Prerequisite: PUP 442.

**PUP 544 Urban Land Use Planning. (3)***spring*

Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans. Prerequisite: PUP 301 or instructor approval.

**PUP 546 Urban Design Policy. (3)***not regularly offered*

Advanced study of local, state, and federal urban design policy. Prerequisite: PLA 420 or PUP 420.

**PUP 550 Environmental Planning Economics. (3)***fall*

Introductory course in the applications and limitations of economics in environmental planning and policy making. Emphasizes applications rather than theoretical details, the importance of ecological knowledge.

**PUP 561 Urban Design Studio. (4)***not regularly offered*

Current urban form and urban landscape design problems within the Phoenix-centered region. Studio. Prerequisite: PLA 420 or PUP 420 or instructor approval.

**PUP 572 Planning Studio I: Data Inventory and Analysis. (4)***fall*

Comprehensive planning workshop dealing with real community problems. Focuses on the data gathering and analysis steps of the planning process. Fee. Prerequisite: Master of Environmental Planning major or instructor approval.

**PUP 574 Planning Studio II: Options and Implementation. (4)***spring*

Comprehensive planning workshop dealing with real community problems. Focuses on the development of options, plan making, and plan implementation. Studio. Fee. Prerequisite: PUP 572 or instructor approval.

**PUP 575 Environmental Impact Assessment. (3)***spring*

Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.

**PUP 576 GIS Studio. (3)***spring*

GIS as a tool to address large, multifaceted planning problems. Prerequisites: a combination of GPH 373 (or 598) and PAF 591 and PUP 322 or only instructor approval.

**PUP 584 Internship. (3)***fall, spring, summer session 1*

Internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit.

**PUP 599 Thesis. (1–12)***not regularly offered*

Fee.

**PUP 622 Planning Methods II: Quantitative Planning Analysis. (3)***spring*

Methods and models used as the basic quantitative techniques of urban, regional, and environmental planning and policy analysis. Prerequisites: PUP 424; statistics; instructor approval.

**PUP 642 Land Economics. (3)***fall*

Land use and locational impact of economic activity and the urban real property market. Prerequisite: instructor approval.

**PUP 644 Public Sector Planning. (3)***spring*

Urban fiscal problems and public goods provision in state and local governments. Prerequisites: 1 course in microeconomics; instructor approval.



# College of Business

Larry E. Penley, Ph.D., Dean

[www.cob.asu.edu](http://www.cob.asu.edu)



Students on the plaza outside the Business Administration building

Tim Trumble photo

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## PURPOSE

The mission of the College 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 college 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 college is a member of AACSB—the International Association for Management Education, 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 college is host to a chapter of Beta Gamma Sigma, a national society that recognizes high academic achievement in AACSB-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 college 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 college 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 college. Through the various divisions of the L. William Seidman Research Institute, the college reaches out to the business community through research and executive education. For more information, access the college's Web site at [www.cob.asu.edu](http://www.cob.asu.edu).

**ORGANIZATION**

The courses offered by the College 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
- 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 College 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 303	Uses of Accounting Information I	3	3
ACC 304	Uses of Accounting Information II	3	3
CIS 300	Computer Applications and Information Technology CS	3	3
ECN 111	Macroeconomic Principles SB	3	3
ECN 112	Microeconomic Principles SB	3	3
Choices between the course combinations below: 6 or 3			
	ENG 101 First Year Composition 3		
	ENG 102 First Year Composition 3		
	ENG 105 Advanced First Year Composition 3		
	ENG 107 English for Foreign Students 3		
	ENG 108 English for Foreign Students 3		
MAT 110	Finite Mathematics MA	3	3
MAT 210	Brief Calculus MA	3	3
QBA 220	Statistical Analysis CS	3	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 156 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 College 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 123, 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.cob.asu.edu/up/index.cfm](http://www.cob.asu.edu/up/index.cfm). All applicants must be admitted to ASU by the time they submit their professional program application. Students are also encouraged 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.

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 College of Business participates in the Bachelor of Interdisciplinary Studies degree. For details, refer to "Bachelor of Interdisciplinary Studies," page 108.

**Minors.** Two minors are available to nonbusiness students: a minor in Business and a minor in Small Business. To complete either of the minors, students must obtain the requirements from the Undergraduate Programs Office in the College of Business and complete the specified business courses with a grade of "C" or higher. 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 36 hours who are in good standing (a 2.00 ASU GPA or better). For details on the minor in Small Business, see "Small Business Programs," page 174.

**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 and (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.

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" section, page 151, 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.cob.asu.edu/up/index.upo.cfm](http://www.cob.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
<b>Total</b>	<b>15</b>

**Second Semester**

COM 100 Introduction to Human Communication SB	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
<b>Total</b>	<b>16</b>

**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
<b>Total</b>	<b>16</b>

**Fourth Semester**

ACC 240 Uses of Accounting Information II	3
CIS 200 Computer Applications and Information Technology CS	3
General Studies	9
<b>Total</b>	<b>15</b>
<b>Prebusiness program total</b>	<b>62</b>

Accountancy and Computer Information Systems majors should refer to their specific course requirements under the "School of Accountancy and Information Management," page 156, which lists course requirement variations.

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 and COB 301 during their first semester in the professional program.

**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 colleges 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-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 College of Business with out 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 College 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](http://www.asu.edu/provost/articulation).

**DEGREES**

The faculty in the College of Business offer the B.S. degree in Accountancy, 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 "College of Business Baccalaureate Degrees and Majors" table, page 152. Each major is administered by the academic unit indicated.

**GRADUATE PROGRAMS**

The faculty in the College of Business offer graduate degrees as shown in the "College of Business Graduate Degrees and Majors" table, page 153. Students have the opportunity to obtain dual degrees in two years with several master's degree programs in the College of Business, including these examples.

**NOTE:** For the General Studies requirement courses and codes (such as L, SQ, C, and H) see General Studies, page 78. For graduation requirements see University Graduation Requirements, page 74. For an explanation of additional omnibus courses offered but not listed in this catalog see "Classification of Courses," page 51.

### College of Business Baccalaureate Degrees and Majors

Major	Degree	Concentration	Administered By
Accountancy	B.S.		School of Accountancy and Information Management
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 Science, as well.

M.B.A. M.H.S.A.

M.B.A. M.S.I.M.

M.B.A. M.A.I.S.

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./Master of Architecture

M.B.A./M.I.M. with American Graduate School of International Management (Thunderbird), Glendale, AZ; ESAN, Lima, Peru; Groupe Ecole Supérieure de Commerce (ESC), Toulouse, France; ITESM CEM, Mexico City, Mexico; and Universidad Carlos III de Madrid, Madrid, Spain.

M.S. Nursing/M.H.S.A.

In addition to the full-time M.B.A. program, the evening M.B.A. program offers a high technology M.B.A. at ASU Research Park and an evening M.B.A. at the ASU Downtown Center.

The Executive M.B.A. program is available to those with significant work experience.

For more information about M.B.A. programs, 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 the region. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges 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 683, or access the Web site at [www.asu.edu/ved](http://www.asu.edu/ved).

### UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet a university graduation requirements.

For more information, see "University Graduation Requirements," page 4.

### 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 76. Note that all three General Studies awareness areas are required.

General Studies courses are listed in the "General Studies Courses" table, page 81, 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.

### COLLEGE DEGREE REQUIREMENTS

College degree requirements supplement the General Studies requirement with additional course work from the approved university general studies list or the College of Business Policy statement. Business courses may not be used to fulfill college 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 college 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 college degree requirement:

**Social and Behavioral Sciences.** College 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.** College 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.

**Communication.** All students in the College of Business, except Accountancy majors, must complete COM 100, 230, or 259. Accountancy majors must complete COM 230 (or 100 and 259).

**Additional Courses.** Additional courses, as needed to complete 60 hours (54 hours for Accountancy majors), may be

## College 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. Ph.D.	Accountancy, finance, health services research, <sup>1</sup> computer information systems, management, marketing, supply chain management	College of Business College 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	M.P.H. <sup>3</sup>	Health administration and policy	School of Health Administration and Policy
Statistics	M.S. <sup>2</sup>		Committee on Statistics
Taxation	M.Tax.	—	School of Accountancy and Information Management

<sup>1</sup> Applications are not being accepted at this time.

<sup>2</sup> This program is administered by the Graduate College.

<sup>3</sup> This collaborative program is offered by the three state universities.

selected from the General Studies areas (see "General Studies," page 78) or from the College 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 College 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 5 semester hours in traditional courses designed primarily for junior or senior students and 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 College 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 College of Business must satisfactorily complete a curriculum of 120 semester hours.

A major consists of a pattern of from 18 to 24 semester hours in related courses falling primarily within a given subject field. Available majors are shown in the "College of Business Baccalaureate Degrees and Majors" table, page 152.

**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.

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C, and H, see "General Studies," page 78. For graduation requirements see "University Graduation Requirement," page 74. For an explanation of additional non-business courses offered but not listed in this catalog, see "Classification of Courses," page 51.

### Business Core Requirements

To obtain an understanding of the fundamentals of business operation and to develop a broad business background every student seeking a B.S. degree in the College of Business must complete the following courses:

#### 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

#### Upper-Division Business Core

BUS 301	Fundamentals of Management Communication I (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 301	Management and Organization Behavior	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 and Computer Information Systems majors should refer to their specific requirements under the "School of Accountancy and Information Management," page 156, 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 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 attend an Academic Success Workshop.

**Disqualification.** 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 their 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 with a GPA of 2.00 to avoid disqualification.

Students who have been academically disqualified are not permitted to enroll in upper division business courses during summer sessions.

**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 College 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 College 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 help the underrepresented and first generation college student populations of the College of Business successfully navigate the college's rigorous academic demands. To that end, the office manages a number of programs to assist students, including these:

- Academic advising
- Advising ethnic student business organizations
- Mentoring
- Ongoing seminar and workshop series on study, work issues, and strategies
- Referring students to other campus support offices
- Teaching academic success courses COB 194 and 294
- Tutoring

For more information, visit BA 122, call 480 965 4066, or access the AAP Web site at [www.cob.asu.edu/up/aap](http://www.cob.asu.edu/up/aap). You may also send faxes to 480 965 8259.

**Asian Studies.** Students in the College of Business may pursue a program with an emphasis in Asian studies as part of the B.S. degree requirements in business. After completing the prerequisite of two years of course work (or the equivalent) in an East Asian language, at least 30 semester hours of the program must be in Asian studies content courses. The Asian studies content program must be approved by the Center for Asian Studies (see "Asian Studies," page 324). Fulfillment of the requirements is recognized on the transcript as a bachelor's degree with a designation of the Asian studies discipline. It is possible to complete the certificate program in International Business Studies and the Asian studies emphasis concurrently. For more information, visit the Center for Asian Studies, in WHALL 105, or call 480 965 7184.

**Certificate in Small Business and Entrepreneurship.** A curriculum in small business and entrepreneurship is available to business majors at ASU. See "Small Business Programs," page 174.

**Certificate in International Business Studies.** See "Certificate in International Business Studies," page 166, 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 bachelor's degree from any of the major fields of study at ASU and 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 371 Applied Quality Analysis I L. . . . . 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

**Honors Program.** College of Business students who have been admitted to the Barrett Honors College and the professional program 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 into 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,
3. be admitted into the college's professional program, and
4. 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 . . . . . 3  
 493 Honors Thesis\* . . . . . 3

\* See "Honors Courses," page 52, 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 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, and professional seminars and panel discussions. 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.

For more information, see "The Craig and Barbara Barrett Honors College," page 112, call 480 965 8710, or stop by the Business Honors Program Office located in BA 114. You may also send faxes to 480 965-7277. More information may be obtained by accessing the Business Honors Program Web site at [www.cob.asu.edu/hon](http://www.cob.asu.edu/hon).

**Internships.** The college 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 college 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 College 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 college 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.

For more information, visit the Director of Career Planning and Corporate Relations in BA 122 480 965 4066, faculty advisors in the departments or Career Services, or access the College of Business Web site at [www.cob.asu.edu/up/internship.ctm](http://www.cob.asu.edu/up/internship.ctm)

**Latin American Studies Center.** Students in the College 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 College 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

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C and H, see General Studies, page 78. For graduation requirements, see "University Graduation Requirements," page 74. For an explanation of additional non-business courses offered but not listed in this catalog, see "Classification of Courses," page 51.

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 College of Business. Within the College 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 College of Business has eight research centers operating under the umbrella of the L. William Seidman Research Institute. The following 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
- ASU Manufacturing Institute
- Bank One Economic Outlook Center
- Center for Advanced Purchasing Studies
- Center for the Advancement of Small Business
- Center for Business Research
- Center for Services Marketing and Management
- Center for the Study of Finance

The Seidman Research Institute's mission is to encourage and support applied business research by serving as a public access point to the College 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.

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

### COLLEGE OF BUSINESS (COB)

#### COB 294 Special Topics. (1-4)

*fa and spring*

#### COB 301 Business Forum. (1)

*fa spring summer*

Provides professional program business students with information on careers, interviewing, job hunting and resume 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)

*fa, spring, summer*

Develops leadership skills needed to form, lead and operate a small business. Emphasizes on 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)

*fa 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)

*fa and spring*

Building and maintaining customers, developing a market identity and analyzing 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)

*fa spring summer*

Addresses communication and the people in a business—clients, employees, suppliers, competitors, government, 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)

*fa spring summer*

Planning and executing plans: the what, when, where, how, and who from product/service project, debt payback or competition. Team teaching, collaborative learning. Prerequisites: COB 380, 2.00 GPA, 56 hours, non-business major.

#### COB 394 Special Topics. (1-4)

*fa and spring*

#### COB 492 Honors Directed Study. (2)

*fa and spring*

#### COB 494 Special Topics. (1-4)

*fa and spring*

Post topics  
a. Honors Research 1

## School of Accountancy and Information Management

Philip M.J. Reckers

*Director*

(BA 223) 480/965-3631

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[www.cob.asu.edu/acct](http://www.cob.asu.edu/acct)

### PROFESSORS

J.R. BOATSMAN, BOYD GOUL, JOHNSON KAPLAN, PANY, PE, PHILIPPAKIS, RECKERS, RENEAU, ROY, SCHULTZ, SMITH, STEINBART, VONZE, WYNDELTS

### ASSOCIATE PROFESSORS

C. CHRISTIAN, GOLEN, GUPTA, HWANG, KEIM, KULKARNI, MOECKEL, O'DELL, O'LEARY, REGIER, ST. LOUIS, WHITECOTTON

### ASSISTANT PROFESSORS

BHATTACHERJEE, CHEN, CHENOWETH, COMPTON, DAVID, DOWLING, IYER, O'DONNELL, ROBINSON, SANTANAM, SHAO, WEISS

### SENIOR LECTURERS

MACCRACKEN, SHREDNICK

### LECTURERS

BALOGH, J.L. BOATSMAN, D. CHRISTIAN, GERGER, HAYES, TAYLOR, 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.cob.asu.edu/acc1](http://www.cob.asu.edu/acc1)

**ADMISSIONS**

The School of Accountancy and Information Management follows the College 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 College of Business admission requirements, have a grade of "B" or higher in both ACC 230 and 240 or their equivalents, and have a grade of "C" or higher in an introductory computer science course as specified by the school. CIS 220 or its equivalent can be taken in place of CIS 200.

To be considered for admission to the Computer Information Systems major, a student must meet the College of Business admission requirements and have a grade of "C" or higher in an introductory computer science course as specified by the school, in place of CIS 200.

Due to resource limitations, admission to all of the school's programs is very competitive. Approximately one 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 College 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 consulting,
3. planning to operate their own businesses; or
4. planning to pursue a graduate degree to fulfill the profession's 150-hour requirement

The major in Accountancy consists of the following courses

ACC 330 Enterprise Process Analysis and Design L	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
<b>Total</b>	<b>24</b>

As part of the requirements, all Accountancy majors must complete the following courses:

ACC 250 Introductory Accounting Lab	1
COM 10 Introduction to Human Communication <sup>1</sup> SB	3
or COM 230 Small Group Communication SB (3	
COM 259 Communication in Business and the Professions	3
ECN 306 Survey of International Economics SB G <sup>2</sup>	3
ENG 30 Writing for the Professions L <sup>3</sup>	3
Three approved CIS courses <sup>4</sup>	9
<b>Total</b>	<b>22</b>

<sup>1</sup> See the school for a list of approved courses

<sup>2</sup> COM 230 is recommended over COM 100

<sup>3</sup> ECN 306 is counted in the business core in place of the international business course.

<sup>4</sup> ENG 30 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 Programming Concepts for Accountancy Majors, which may be used in 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 L	4
CIS 335 Visual Paradigms for Information Systems Development	3
CIS 410 Object Oriented Modeling and Programming	3
CIS 420 Business Database Concepts	3
CIS 430 Networks and Distributed Systems	3
CIS 440 Systems Design and Electronic Commerce L	3
<b>Total</b>	<b>19</b>

All Computer Information Systems majors must complete an introductory computer science course as specified by the school, which may be used as a college requirement, and CIS 235 Business Information Systems Development, which is used in the business core.

**MAJOR PROFICIENCY REQUIREMENTS**

In addition to college 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.

**NOTE:** For the General Studies requirement courses, and codes such as L, SQ, C, and H, see General Studies page 78. For graduation requirements, see University Graduation Requirements, page 74. For an explanation of additional non-business courses offered but not listed in this catalog, see Classification of Courses page 51.

## GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 74 and "College Degree Requirements," page 152.

### ACCOUNTANCY (ACC)

#### ACC 230 Uses of Accounting Information I. (3)

*fall spring summer*

Introduction to the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes Prerequisite: Sophomore standing

#### ACC 240 Uses of Accounting Information II. (3)

*fall spring, summer*

Introduction to the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes 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 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 Prerequisite 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 3 hours lecture, 3 hours lab Prerequisite: professional program business student majoring in Accountancy or Computer Information Systems

*General Studies L*

#### ACC 340 External Reporting I. (4)

*fall spring summer*

Financial accounting theory and practice related to external reporting 3 hours lecture, 3 hours lab Prerequisites: FN 300 professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 250, 330

#### ACC 350 Internal Reporting. (4)

*fall spring summer*

Internal reporting systems for planning control and decision making. 3 hours lecture 3 hours lab Prerequisites: SCM 300, professional program business student majoring in Accountancy Prerequisite with a grade of "C" or higher: ACC 250 330

#### ACC 394 Special Topics. (1-4)

*fall and spring*

Possible topics.

a. 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 3 hours lecture 3 hours lab 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)

*not regularly offered*

Cases and computer applications deal with 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 3 hours lecture, 3 hours lab 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 auditing Planning evidence gathering and accumulation and reporting Ethical and legal considerations 3 hours lecture 3 hours lab Prerequisite: professional program business student majoring in Accountancy Prerequisite with a grade of "C" or higher. ACC 440

#### ACC 467 Management Advisory Services. (3)

*not regularly offered*

Concepts and methods of providing advisory services with respect to accounting information systems and financial analysis Administration strategy 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)

*not regularly offered*

#### ACC 502 Financial Accounting. (3)

*once a year*

Financial accounting concepts and procedures for external reporting Prerequisite: M.B.A. degree program student

#### ACC 503 Managerial Accounting. (3)

*once a year*

Managerial accounting concepts and procedures for internal reporting. Prerequisite: M.B.A. degree program student

#### ACC 511 Taxes and Business Strategy. (3)

*once a year*

Elementary categories of selected management decisions involving application of federal income tax laws Recognition of tax hazard and tax savings Prerequisite: ACC 502 or its equivalent

#### ACC 515 Professional Practice Seminar. (3)

*once a year*

History structure environment regulation, and emerging issues of the accounting profession

#### ACC 521 Tax Research. (3)

*once a year*

Tax research source materials and techniques Application to business and investment decisions Prerequisite: ACC 430

#### ACC 533 Application Solutions in the Connected Economy. (3)

*not regularly offered*

Analysis of software solutions and evaluation methods Emphasis on current topics such as enterprise modeling ERP software and internal organization output Prerequisite: M.S. information management degree program student or M.A.S. degree program student

#### ACC 541 Strategic Innovations in Information and Cost Management. (3)

*once a year*

Strategic cost management emphasizing contemporary topics including activity based costing and strategic uses of information technology systems Cooperative learning lecture Prerequisite: ACC 503 or M.S. information management degree program student or M.A.S. degree program student

#### ACC 567 Financial Models in Accounting Systems. (3)

*once a year*

Development and application of financial models by accountants Analysis of decisions on support systems as financial modeling environments Prerequisite: ACC 330

#### ACC 571 Taxation of Corporations and Shareholders. (3)

*once a year*

Tax aspects of the formation operation reorganization and liquidation of corporations and the impact on shareholders Prerequisite: ACC 521.

#### ACC 573 Taxation of Pass-Through Entities (3)

*once a year*

Tax aspects of the definition of formation operation liquidation, and termination of a partnership Tax planning emphasized Prerequisite: ACC 521

#### ACC 575 Family Tax Planning and Wealth Transfer Taxation. (3)

*once a year*

Tax treatment of wealth transfers at death and during lifetime with emphasis on tax planning Prerequisite: ACC 521

**ACC 577 Taxation of Real Estate Transactions. (3)***once a year*

Income tax aspects of acquisition, operation, and disposition of real estate: syndications, installment sales, exchanges, dealer investor issues, alternative financing and planning. Prerequisite: ACC 521 or instructor approval.

**ACC 582 Information Security of Interorganizational Systems. (3)**  
*not regularly offered*

Function and responsibility of the information security officer. Advanced topics in security methods and technology. Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**ACC 585 Performance Measurement of Emerging Business Models. (3)***once a year*

Application of quantitative techniques to accounting problems. Prerequisite: ACC 503 or M.S. in Information Management degree program student or M.A.S. degree program student.

**ACC 586 Shareholder Value Creation and Financial Statement Analysis. (3)***not regularly offered*

Develop skills necessary to export financial reporting information in a business environment and appreciation of reporting issues faced by management.

**ACC 587 Business Process Integrity Controls. (3)***once a year*

Design and evaluation of computer-based accounting information system. Development of computer-based business models for planning and control. Prerequisite: M.A.S. degree program student.

**ACC 591 Seminar on Selected ACC Topics. (1-12)***once a year*

Possible topics.

- Computer Security 3
- Data Warehouse and Data Mining 3
- Electronic Commerce 3
- Enterprise Modeling 3

**COMPUTER INFORMATION SYSTEMS (CIS)****CIS 200 Computer Applications and Information Technology. (3)***fa, spring, summer*

Introduction to business information systems and the use of business application software. Prerequisite: MAT 117 or higher. *General Studies: CS*

**CIS 220 Programming Concepts for Accountancy Majors. (3)***fa, spring, summer*

Introduction to business computer programming. Program languages such as C and C++ are used to familiarize students with proper programming style and practice. Prerequisite: pre-business student.

**CIS 235 Business Information Systems Development. (3)***fa, spring, summer*

Development of information systems and electronic commerce applications using object-oriented languages e.g. JAVA. Introduction to business technology and systems analysis. Prerequisites: CSE 100, MAT 119 or 210.

**CIS 300 Computers in Business. (3)***not regularly offered*

Introduction to information systems in business. Use of computers for business problem solving. Prerequisites: C.S. 200; professional program business student.

**CIS 307 Systems Modeling. (3)***not regularly offered*

Procedures for investigation and analyzing decisions on systems. Use of special languages as tools of analysis and simulation. Prerequisites: CSE 100, MAT 119 (or 210 or 270) professional program business student.

**CIS 335 Visual Paradigms for Information Systems Development. (3)***fa, spring, summer*

Using visual programming languages such as Visual Basic to implement data structures, file structures and interfaces in business information systems. Prerequisites: both CSE 100 and professional program business student majoring in Computer Information Systems or both C.S. 220 and professional program business student majoring in Accountancy.

**CIS 410 Object-Oriented Modeling and Programming. (3)***fa and spring*

Object-oriented modeling of business information systems. Abstract data types and object-oriented programming using a language such as C++. Prerequisite: professional program business student majoring in Computer Information Systems. Prerequisites with a grade of "C" or higher: CIS 235, 335.

**CIS 420 Business Database Concepts. (3)***fa and spring*

Database theory design and application including the entity relationship model, the relational, hierarchical, and network database models, and query languages. Prerequisite: professional program business student majoring in Computer Information Systems or Accountancy. Prerequisites with a grade of "C" or higher: ACC 330, C.S. 335.

**CIS 430 Networks and Distributed Systems. (3)***fa and spring*

Advanced topics such as communications protocols, distributed systems and client-server systems. Applications based on platforms such as networked UNIX. Prerequisites: CIS 410, professional program business student majoring in Computer Information Systems.

**CIS 440 Systems Design and Electronic Commerce. (3)***fa and spring*

Systems design for organization and electronic commerce systems using project management and systems analysis and design tools. Prerequisites: professional program business student majoring in Computer Information Systems. Prerequisites with a grade of "C" or higher: C.S. 410, 420. Pre- or corequisite with a grade of "C" or higher: C.S. 430.

*General Studies: L***CIS 494 Special Topics. (1-4)***not regularly offered***CIS 502 Management Information and Decision Support Systems. (3)***once a year*

Fundamentals of computer-based management information and decision support system. Prerequisite: M.B.A. degree program student.

**CIS 505 Object-Oriented Modeling and Programming. (3)***once a year*

Object-oriented modeling of business information systems abstract data type and object-oriented programming using a visual language. Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**CIS 506 Business Database Systems. (3)***once a year*

Hierarchical, network, relational and other recent data models for database systems. Processing issues such as concurrency control, query optimization and distributed processing. Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**CIS 512 Intelligent Decision Systems and Knowledge Management. (3)***once a year*

Definition, description, construction and evaluation of computer-based decision systems. Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**CIS 515 Management Information Systems. (3)***not regularly offered*

Systems theory concepts applied to the collection, retention and dissemination of information for management decision making. Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**NOTE:** For the General Studies requirement, courses and codes such as L, SQ, C and H see General Studies page 78. For graduation requirements, see University Graduation Requirements page 74. For an explanation of additional omnibus courses offered but not listed in this catalog see Classification of Courses page 51.

**CIS 520 Systems Design and Evaluation (3)***not regularly offered*

Methodologies, systems analysis and design issues include project management, interface, organizational requirements, constraints, documentation, implementation, control, and performance evaluation. Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**CIS 530 Information Systems Development. (3)***once a year*

Object-oriented and interpretive communication and control concepts for information system applications based on languages such as C++ and platforms such as networked UNIX. Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**CIS 535 Distributed Information Systems. (3)***once a year*

Distributed systems and their impact on information systems in business. Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**CIS 591 Seminar on Selected CIS Topics. (1-12)***once a year*

Possible topics:

- (a) Computer Security
- (b) Computing Architectures
- (c) Data Warehouse and Data Mining
- (d) Electronic Commerce
- (e) Enterprise Modeling

Prerequisite: M.S. in Information Management degree program student or M.A.S. degree program student.

**CIS 593 Applied Project. (1-12)***not regularly offered*

## Department of Economics

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*Chair*

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BLAKEMORE, BOYES BRADA BURDICK, BURGESS  
DeSERPA FATH GOODING, HAPPEL HOFFMAN  
HOGAN, KINGSTON, LOW, MANELL MAYER  
McDOWELL McPHETERS MELVIN MENDEZ  
ORMISTON SANTOS, SCHLEE

**ASSOCIATE PROFESSORS**

AHN, COGLEY, REFFETT REISER WILSON, WINKELMAN

**ASSISTANT PROFESSORS**

CHADE, DATTA HENDRICKS

**SENIOR LECTURER**

ROBERTS

The study of economics can give students a general knowledge of the ways goods and services are allocated and incomes generated, economics can help students understand why prices, employment, money, and financial markets behave as they do. Some knowledge of economics is crucial not only for students of business but for students pursuing graduate education in law or careers in journalism and communications.

Economists obtain positions at universities and in government, financial institutions, brokerage houses, private nonfinancial corporations, international organizations such as the International Monetary Fund and the World Bank, as financial journalists, and as marketing and management specialists in domestic and international firms.

**ECONOMICS—B.S.**

Economics majors are required to earn a minimum grade of "C" in MAT 210 Brief Calculus before taking upper division courses in economics. While MAT 210 meets the minimum mathematics requirement to major in Economics, all Economics majors who anticipate going on to graduate school in economics or in business or to law school are encouraged to take MAT 270 Calculus with Analytic Geometry I. Majors are encouraged to pursue further course work in mathematics. MAT 270 may be taken in lieu of MAT 210.

The major in Economics consists of 18 semester hours of upper division courses in economics. The following six hours must be included:

ECN 313 Intermediate Macroeconomic Theory *SB* . . . . . 3  
ECN 314 Intermediate Microeconomic Theory *SB* . . . . . 3

ECN 313 and 314 should be taken before other upper division courses in economics. Students must earn a minimum grade of "C" in ECN 313 and 314. Concurrent enrollment in ECN 313 and 314 is permitted. Concurrent enrollment in ECN 313 or 314 and other upper division courses in economics is subject to the approval of the faculty advisor.

**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.

**Other Economics Programs.** For information on majoring in Economics in the College of Liberal Arts and Sciences, see "Economics," page 353.

For information on the minor in General Economics and on the minor in Economics for Students Planning a Career in Law, see "Minor in Economics for Students Planning a Career in Law," page 353.

**GRADUATION REQUIREMENTS**

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 74 and "College Degree Requirements," page 152.

**ECONOMICS (ECN)****ECN 111 Macroeconomic Principles. (3)***fall/spring/summer*

Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels and employment level. *General Studies SB*

**ECN 112 Microeconomic Principles. (3)***fall and spring*

Basic microeconomic analysis. Theory of exchange and production and the theory of the firm

*General Studies SB***ECN 306 Survey of International Economics. (3)***fall and spring*

Survey of international trade issues, commercial policy, trade theory, customs unions, and international monetary topics. Not for Economics majors. Lecture/discussion. Cross-listed as BS 306. Credit is allowed for only ECN 306 or BS 306. Prerequisites: ECN 111 or 112. 2.00 ASU GPA, junior or standing.

*General Studies SB G***ECN 313 Intermediate Macroeconomic Theory. (3)***fall and spring*

Determinants of aggregate levels of employment, output, and income of an economy. Prerequisites: ECN 111, 112. Prerequisite with a grade of "C" or higher: MAT 210.

*General Studies SB***ECN 314 Intermediate Microeconomic Theory. (3)***fall and spring*

Role of the price system in organizing economic activity under varying degrees of competition. Prerequisites: ECN 111, 112. Prerequisite with a grade of "C" or higher: MAT 210.

*General Studies SB***ECN 315 Money and Banking. (3)***summer*

Functions of money, monetary systems, credit functions, banking practices, and central banking policy. Cannot be applied to the Economics major. Prerequisite: ECN 111.

**ECN 331 Comparative Economic Systems. (3)***not regularly offered*

Alternative institutions, past and present, for organizing the social division of labor. Property rights, information, and incentives in industry and societies. Prerequisite: ECN 111 or 112.

*General Studies SB G***ECN 360 Economic Development. (3)***not regularly offered*

Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth. Prerequisite: ECN 111 or 112.

*General Studies SB G***ECN 365 Economics of Russia and Eastern Europe. (3)***once a year*

Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century. Prerequisite: ECN 111 or 112.

*General Studies SB G***ECN 382 Managerial Economics. (3)***once a year*

Application of economic analysis to managerial decisions on marketing, market analysis in the context of the socio-economic environment. Not for Economics majors. Lecture/discussion. Prerequisites: ECN 111, 112. 2.00 ASU GPA, junior or standing.

**ECN 384 Economics of Social Behavior. (3)***once a year*

Application of economic analysis to contemporary behavior: discrimination, work versus leisure, crime, medical care, macroeconomic policies. Not for Economics majors. Lecture, student participation. Prerequisites: 2.00 ASU GPA, junior or standing.

*General Studies L/SB***ECN 394 Special Topics. (3)***not regularly offered*

Current topics of domestic or international interest. Analytical emphasis may be macro, micro, or both. See current *Schedule of Classes* for offerings. Not for Economics majors. Prerequisite: ECN 111 or 112.

**ECN 404 History of Economic Thought. (3)***not regularly offered*

Development of economic doctrines, theories of mercantilism, physiocracy, classicalism, neoclassicism, Marxism, and contemporary economics. Prerequisite: ECN 314 or instructor approval.

*General Studies L/SB***ECN 421 Earnings and Employment. (3)***once a year*

Analysis of earnings, employment, unemployment, training, education, and related topics. Policy issues are emphasized. Prerequisite: ECN 314 or instructor approval.

*General Studies L/SB***ECN 436 International Trade Theory. (3)***once a year*

Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium. Prerequisite: ECN 314 or instructor approval.

*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. Prerequisite: ECN 313 or instructor approval.

*General Studies SB, G***ECN 441 Public Finance. (3)***once a year*

Public goods, externalities, voting methods, public expenditure, taxation, and budget formation with emphasis on the federal government. Prerequisite: ECN 314 or instructor approval.

*General Studies L/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. Discussion, analysis. Prerequisite: ECN 314.

*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. Prerequisite: ECN 314 or instructor approval.

**ECN 480 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. Prerequisite: instructor approval.

*General Studies CS***ECN 484 Economics Internship. (3)***fall, spring, summer*

Academic credit for professional work organized through the internship program. Prerequisites: ECN 313, 314, outstanding academic record.

**ECN 485 Mathematical Economics. (3)***once a year*

Integrates economic analysis and mathematical methods into a comprehensive body of knowledge with contemporary economic theory. Prerequisite: instructor approval.

**ECN 493 Honors Thesis. (3)***not regularly offered**General Studies L***ECN 494 Special Topics. (1-4)***not regularly offered*

Current economic topics of domestic or international interest. Analytical emphasis may be macro, micro, or both. See current *Schedule of Classes* for offerings. Prerequisites: both ECN 313 and 314 or only instructor approval.

**NOTE:** For the General Studies requirement, courses and codes such as L, SQ, C, and H, see "General Studies," page 78. For graduation requirements, see "University Graduation Requirements," page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 51.

**ECN 498 Pro-Seminar. (3)***once a year*

Topic chosen from current area of interest. Prerequisites: both ECN 313 and 314 or on y nstructor approval

**ECN 502 Managerial Economics. (3)***fall and spring*

Application of macroeconomic analysis to managerial decisions on making decisions in areas of demand, production, cost, and pricing. Evaluation of competitive strategies. Prerequisite: M.B.A. degree program student.

**ECN 503 Global Economics for Managers. (3)***fall and spring*

Macroeconomic analysis of issues related to economic growth, inflation, interest rates, behavior, unemployment, exchange rate determination, and global competitiveness. Prerequisite: M.B.A. degree program student.

**ECN 504 History of Economic Thought. (3)***spring*

Historical development of economic theory. Emphasis on the development of economic analysis from preclassical economics through Keynes. Prerequisite: ECN 510 or instructor approval.

**ECN 509 Macroeconomic Theory and Applications. (3)***fall*

Theory of income, output, employment, and price level. Influence of business and economic environment. Prerequisites: both ECN 111 and calculus or on y nstructor approval.

**ECN 510 Microeconomic Theory and Applications. (3)***fall*

Application of economic theory to production, consumer demand, exchange, and pricing in a market economy. Prerequisites: both ECN 112 and calculus or on y nstructor approval.

**ECN 511 Macroeconomic Analysis I. (3)***fall*

Current theories of output, employment, inflation, and asset prices as well as macro aggregates. Introduction to dynamic optimization techniques. Prerequisites: both ECN 313 and calculus or on y nstructor approval.

**ECN 512 Microeconomic Analysis I. (3)***fall*

Theory of production, consumer demand, resource use, and pricing in a market economy. Prerequisites: both ECN 314 and calculus or on y nstructor approval.

**ECN 513 Macroeconomic Analysis I. (3)***fall*

Focuses on growth theory, dynamic general equilibrium models, monetary theory, open economy issues. Prerequisite: ECN 511 or instructor approval.

**ECN 514 Microeconomic Analysis II. (3)***spring*

General equilibrium welfare economics, product, and capital theory. Prerequisite: ECN 512 or instructor approval.

**ECN 515 Advanced Macroeconomic Analysis. (3)***fall*

Focuses on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques. Prerequisite: ECN 511 or instructor approval.

**ECN 516 Economics of Uncertainty, Information, and Strategic Behavior. (3)***fall*

Economic behavior under uncertainty, markets and transactions under asymmetric information, the theory of games with incomplete information, and applications. Prerequisite: ECN 512 or instructor approval.

**ECN 517 Monetary Theory. (3)***fall*

Traditional and post-Keynesian monetary theory, interest rate determination, the demand and supply of money. Prerequisite: ECN 511 or instructor approval.

**ECN 521 Labor Economics I. (3)***spring*

Development of basic theoretical models for analyzing labor market issues. Prerequisite: ECN 510 or instructor approval.

**ECN 522 Labor Economics II. (3)***not regularly offered*

Extensions, criticisms of labor market theories. Applications to a variety of policy issues. Prerequisite: ECN 521.

**ECN 525 Econometrics I. (3)***spring*

Problem-oriented formulation of econometric models. Emphasizes estimation, hypothesis testing, and forecasting of general linear models. Prerequisite: 6 hours in statistics or instructor approval.

**ECN 526 Econometrics II. (3)***fall*

Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models. Prerequisite: ECN 525 or instructor approval.

**ECN 527 Econometrics III. (3)***spring*

Generalized method of moments estimation, estimation with censored and truncated samples, non-linear models, panel data models, econometrics of nonstationarities. Prerequisite: ECN 526 or instructor approval.

**ECN 531 Comparative Economic Systems. (3)***fall*

Philosophical foundations of macroeconomic systems and of properties of principal system models. Comparison of alternative institutions and system components of contemporary economies. Prerequisites: both ECN 509 and 510 or on y nstructor approval.

**ECN 536 International Trade Theory. (3)***spring*

Theories of comparative advantage and the employment verification theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation. Prerequisites: both ECN 509 and 511 or on y nstructor approval.

**ECN 538 International Monetary Theory and Policy. (3)***fall*

Foreign exchange market balance of payments and international financial institutions and arrangements theory and applications. Prerequisites: both ECN 509 and 510 or on y nstructor approval.

**ECN 541 Public Economics. (3)***fall*

Economics of collective action, public spending, taxation, and public impact of central government activity, resource allocation, and income distribution. Prerequisite: ECN 510 or instructor approval.

**ECN 553 Industrial Organization. (3)***spring*

Analysis of structure, conduct, and performance in industrial markets, the economics of organization. Prerequisite: ECN 510 or instructor approval.

**ECN 560 Economics of Growth and Development. (3)***fall*

Economic problems, issues, and policy decisions facing the developing nations of the world. Prerequisites: both ECN 509 and 510 or on y nstructor approval.

**ECN 584 Economics Internship. (1-3)***summer*

Academic credit for professional work organized through the internship program. Prerequisites: both ECN 510 and 511 or on y nstructor approval.

**ECN 585 Mathematics for Economists. (3)***fall*

Survey of mathematical and econometric models and econometrics in nonlinear programming, the Kuhn-Tucker theorem, concave programming, optimization over time. Prerequisite: calculus or instructor approval.

**ECN 591 Economics Seminar. (1-3)***fall, spring, summer*

Presentations by outside speaker, department faculty, and graduate students of work in progress. Prerequisite: instructor approval.

**ECN 593 Applied Projects. (3)***fall*

Preparation of a supervised applied project typically in conjunction with an internship. Prerequisites: ECN 510-511.

**ECN 594 Conference and Workshop in Economics.** (1-12)  
*fall*  
 Workshops offered include economic analysis, macroeconomic analysis, macroeconomics

**ECN 598 Special Topics.** (3)  
*not regular y offered*  
 Advanced topics in economics. Consult the *Schedule of Classes* for offerings. Prerequisite: instructor approval

**QUANTITATIVE BUSINESS ANALYSIS (QBA)**

For more QBA courses see Department of Management

**QBA 221 Statistical Analysis.** (3)  
*fall and spring*  
 Methods of statistical description. Applies probability theory and statistical inference in business. Prerequisite: MAT 119.  
*General Studies: CS*

**QBA 321 Applied Quality Analysis I.** (3)  
*once a year*  
 Applies statistical tools employed in empirical studies related to quality analysis. Applications focus on service processes. Prerequisite: QBA 221.  
*General Studies: L*

**QBA 410 Applied Business Forecasting.** (3)  
*not regularly offered*  
 Applies forecasting techniques in business and institutional environments. Prerequisite: QBA 321

**QBA 421 Applied Quality Analysis II.** (3)  
*once a year*  
 Applies statistical tools employed in manufacturing and experimental research. Applications focus on design and improvement of processes. Prerequisite: QBA 321

**QBA 502 Managerial Decision Analysis.** (3)  
*fall and spring*  
 Fundamentals of quantitative analysis to aid management decisions on making under uncertainty. Prerequisites: MAT 210, computer literacy, graduate degree program student

**QBA 525 Applied Regression Models.** (3)  
*once a year*  
 Simple linear regression, multiple regression, indicator variable, and logistic regression. Emphasis on business and economic applications. Prerequisite: MAT 210

**QBA 527 Categorical Data Analysis.** (3)  
*once a year*  
 Discrete data analysis in business research. Multidimensional contingency tables and other discrete models. Prerequisite: QBA 525

**QBA 530 Experimental Design.** (3)  
*once a year*  
 Experimental designs used in business research. Balanced and unbalanced factorial designs, repeated measures designs, and multivariate analysis of variance. Prerequisite: QBA 525 or its equivalent

**QBA 535 Multivariate Methods.** (3)  
*once a year*  
 Advanced statistical methods used in business research. Multivariate analysis of association and interdependence. Prerequisite: QBA 525

**QBA 540 Forecasting.** (3)  
*not regularly offered*  
 Foundation of statistical forecasts and forecast intervals: analytical and computer-assisted forecasting methods to business forecasting problems. Prerequisites: MAT 210, QBA 502

**QBA 593 Applied Project.** (1-12)  
*not regularly offered*

**QBA 599 Thesis.** (1-12)  
*not regularly offered*

**Department of Finance**

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**PROFESSORS**

BOOTH, COLES, KAUFMAN, POE, SUSHKA

**ASSOCIATE PROFESSORS**

CESTA, GALLINGER, HERTZEL, HOFFMEISTER, WILT

**ASSISTANT PROFESSORS**

CAMPELLO, GRFFIN, MARTIN, NARDAR, PERRY

**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.....	3
One additional 400-level FIN course.....	3
<b>Total</b> .....	<b>18</b>

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 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.

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C and H see General Studies page 78. For graduation requirements see University Graduation Requirements page 74. For an explanation of additional ombuds courses offered but not listed in this catalog see Classification of Courses page 51.

## GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 152

### FINANCE (FIN)

#### FIN 300 Fundamentals of Finance. (3)

*fa spring summer*

Primary and primary business management of business enterprises Prerequisites ACC 240 ECN 112 QBA 221

#### FIN 331 Financial Markets and Institutions. (3)

*fa and spring*

Analysis of financial markets and interrelated theory of financial markets and 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 FN 300

#### FIN 361 Managerial Finance. (3)

*fa and spring*

Theories and primary resource allocation cost of capital APM and capital budgeting asset valuation, capital structure and financial policy Prerequisite: professional program business student majoring in Finance Prerequisite with a grade of "C" or higher FN 300

#### FIN 380 Personal Financial Management. (3)

*fa and spring*

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, unorthodox non-Finance major

#### FIN 394 Special Topics. (1-4)

*not regularly offered*

#### FIN 421 Security Analysis and Portfolio Management. (3)

*fa and spring*

Security analysis theory and practice Selection and management of financial assets portfolio securities markets and portfolio risk return analysis Lecture, discussion. Prerequisite: professional program business student majoring in Finance Prerequisite with a grade of "C" or higher ACC 315 FIN 331 361

#### FIN 427 Derivative Financial Securities. (3)

*once a year*

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)

*once a year*

Asset liability and capital management financial institutions influence of market factors and regulatory agencies Emphasis on commercial banks Lecture discussion Prerequisite: professional program business student majoring in Finance. Prerequisite with a grade of "C" or higher ACC 315 FN 331 361

#### FIN 451 Working Capital Management. (3)

*not regularly offered*

Analysis of short term profitability and liquidity Emphasis on managing cash accounts receivable inventory and current liabilities. Lecture discussion Prerequisite: professional program business student majoring in Finance Prerequisite with a grade of "C" or higher ACC 315 FIN 331 361

#### FIN 456 International Financial Management (3)

*once a year*

Exchange rate determination financial markets managing multinational company ratios capital budgeting and hedging currency risk exposure from an international perspective Prerequisite: professional program business student majoring in Finance Prerequisite with a grade of "C" or higher ACC 315 FIN 331 361  
*General Studies G*

#### FIN 461 Financial Cases and Modeling. (3)

*once a year*

Case oriented capstone course in managerial finance Contemporary issues of quality management capital budgeting capital structure and financial strategy Lecture, discussion group work Prerequisite: professional program business student majoring in Finance Prerequisite with a grade of "C" or higher ACC 315 FN 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 College of Business honors program student Prerequisite with a grade of "C" or higher ACC 315 FN 331 361

#### FIN 484 Finance Internship. (3)

*fa spring summer*

Academic credit for fieldwork in finance organized through the internship program Prerequisite: FN 331 361 strict academic record instructor approval

#### FIN 494 Special Topics. (1-4)

*not regularly offered*

#### FIN 502 Managerial Finance. (3)

*once a year*

Theory and practice of financial decisions in making and managing risk analysis valuation of capital budgeting cost of capital and working capital management Prerequisites ACC 502 ECN 502 QBA 502

#### FIN 521 Investment Management. (3)

*once a year*

Valuation of equities, fixed incomes and options/financial futures in an individual security and portfolio context mathematical asset allocation approaches Lecture discussion Prerequisite FIN 502

#### FIN 527 Derivative Financial Securities. (3)

*once a year*

Analysis of forwards, futures and options on contracts on bonds, commodities equities and foreign exchange Design of speculative and hedging strategies Lecture discussion. Prerequisite FN 502, 521.

#### FIN 531 Capital Markets and Institutions. (3)

*once a year*

Recent theoretical and operational developments in economic sectors affecting capital markets and institutions Lecture discussion. Prerequisite FN 502

#### FIN 551 Financial Statement Analysis (3)

*once a year*

Analysis of corporate financial statements to ascertain the financial strength and default risk Emphasis on studying cash flows. Lecture cases Prerequisite ACC 502 FN 502

#### FIN 556 International Financial Management. (3)

*once a year*

Behavior of real and nominal currency exchange rates, management of international investment portfolios corporate exchange exposure and hedging exchange risk Lecture discussion Prerequisite FIN 502

#### FIN 561 Financial Management Cases. (3)

*once a year*

Case oriented course in applications of finance theory to management issues Acquisition allocation and management of funds within the business enterprise Working capital management capital budgeting capital structure and financial strategy Lecture discussion presentation Prerequisite FN 502

#### FIN 581 Applied Corporate Finance (3)

*once a year*

Applications in corporate finance Market efficiency capital structure "principal agent" theory, corporate control dividend policy and capital budgeting Prerequisite FIN 502

#### FIN 781 Theory of Finance. (3)

*once a year*

Fundamental tools of financial economics asset pricing arbitrage, option pricing capital structure dividend policy asymmetric information, and transaction cost economics Prerequisite FIN 502 521 531.



**FIN 791 Doctoral Seminar in Finance. (1-12)**

once a year

Possible topics

- (a) Financial Institutions and Markets (3)  
Economic and monetary theory applied to financial markets and institutions, implications of financial structure for market performance and efficiency
- (b) Financial Management (3)  
Financial theory pertaining to capital structure, dividend policy, valuation, cost of capital, and capital budgeting
- (c) Investments (3)  
Investments and market theory, efficient markets hypothesis, option and commodity markets.

Prerequisite: FIN 781

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**School of Health Administration  
and Policy**

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**PROFESSORS**

FORSYTH JOHNSON, KRISMAN-LIFF  
SCHNELLER, WILLIAMS

**ASSISTANT PROFESSOR**

RIVERS

While the school 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.

Students have the opportunity to enhance their skills by completing courses in one of the M.B.A. specializations, including information management, supply chain management, finance, or service marketing. Additional courses available in the program include:

HSA 560 Health Services Administration and Policy	3
HSA 561 Biostatistics	3
HSA 562 Health Care Organization and Systems	3
HSA 563 Health Care Economics	3
HSA 564 Health Care Finance	3
HSA 565 Policy Issues in Health Care	3
HSA 598 ST Epidemiology	3

For more information, see the *Graduate Catalog*

**HEALTH SERVICES ADMINISTRATION (HSA)**

**HSA 220 Health Care Organizations. (3)**

fall and spring

Overview of United States health care delivery systems, financial 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: ENG 101 (or 105, 102). *General Studies L*

**HSA 473 Comparative Health Systems. (3)**

not regularly offered

Comparison of health care financing and delivery in industrialized countries, covers insurance, hospital management and physician payment. Lecture/discussion.

**HSA 498 Pro-Seminar. (1-7)**

not regularly offered

Possible topics

- (a) Health Care Finance (3)
- (b) Health Economics (3)
- (c) Health Service Administration and Policy (3)
- (d) Policy Issues in Health Care (3)

**HSA 502 Health Care Organization. (3)**

once a year

Concepts, structures, functions, and values which characterize contemporary health care systems in the United States.

**HSA 505 Community Health Care Perspectives. (3)**

once a year

Epidemiological, sociological and political perspectives and techniques for analyzing health problems and responding to health care needs in communities. Prerequisite: HSA 502.

**HSA 512 Health Care Economics. (3)**

once a year

Economics of production and distribution of health care services, with special emphasis on the impact of regulation, competition, and economic incentives. Prerequisite: HSA 502.

**HSA 520 Health Care Organizational Structure and Policy. (3)**

once a year

Functional relationships among managerial elements of health care institutions with major focus on hospital governance and policy dynamics. Prerequisite: HSA 502.

**HSA 522 Health Care Management Systems. (3)**

once a year

Systemic concepts, quantitative methods, and information systems applied to management problems in health institutions and community health planning. Prerequisites: HSA 505, QBA 502.

**HSA 532 Financial Management of Health Services. (3)**

once a year

Acquisition, allocation, and management of financial resources within the health care enterprise. Budgeting, cost analysis, financial planning, and internal controls. Prerequisites: ACC 503, FIN 502, HSA 502.

**HSA 540 Health Care Outcomes. (3)**

once a year

Project-oriented course on application of efficiency-based methods for the evaluation of the outcomes of health care. Seminar/individual student research. Prerequisite: HSA 512 or enrollment in Ph.D. program.

**HSA 542 Health Care Jurisprudence. (3)**

once a year

Legal aspects of health care delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff. Prerequisites: HSA 505, 520.

**HSA 560 Health Services Administration and Policy. (3)**

fall and spring

Introduction to organizational theory and management of complex organization within the historical and contemporary contexts of the U.S. public health.

**HSA 561 Biostatistics. (3)**

fall

Aspects of descriptive statistics and statistical inference most relevant to health issues: numerical data, rates, and confidence intervals.

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**NOTE:** For the General Studies requirement, courses and codes such as L, SQ, C, and H, see "General Studies" page 78. For graduation requirements, see "University Graduation Requirements," page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 51.

**HSA 562 Health Care Organization and Systems. (3)***once a year*

Functional relationships among managerial elements of health care institutions with major focus on hospital governance and policy dynamics

**HSA 563 Health Care Economics. (3)***fall*

Introduction to concepts and methods used to direct and understand production and distribution of health care services

**HSA 564 Health Care Finance. (3)***once a year*

Overview of the acquisition, allocation and management of financial resources by health care providers. Focuses on economic financial and accounting principles

**HSA 565 Policy Issues in Health Care. (3)***once a year*

Current policy issues in health through concept of access cost and quality, issues relating to disease trends and policy formulation

**HSA 566 Basic Principles of Epidemiology. (3)***spring*

Basic principles of epidemiology evaluation of etiology natural history intervention therapy, and disease prevention Lecture Lab Prerequisite: Master of Public Health major or instructor approval

**HSA 571 Managed Care. (3)***not regularly offered*

Trends in managed care integrated systems complexities of balancing objectives e.g. financial and quality A two semester long marketing assessment on Prerequisite: HSA 502

**HSA 573 Comparative Health Systems. (3)***once a year*

Comparison of health care financing and delivery in underdeveloped countries covers insurance, hospital management and physician payment Lecture/discussion

**HSA 575 Chronic Care Administration. (3)***not regularly offered*

Management of long term care services and facilities including behavioral health and rehabilitation programs

**HSA 589 Integrative Seminar. (3)***fall/spring semester*

Capstone assessment of current policies problems and controversies across the broad spectrum of health services administration Prerequisite: HSA 505, 520, 522-532

**HSA 591 Seminar. (1-12)***once a year*

Proposed topics

- a Behavioral Health 3
- b Cost Containment and Quality Assurance 3
- c Health Care Economics Outcomes 3
- d Health Care Policy 3
- e Managing Physicians 3
- f Topical Health Services Research 3

**HSA 593 Applied Project. (3)***fall/spring semester*

Optional on-site experience in advanced development of managerial skills in health services administration or a didactic minimum of 10 weeks Prerequisites: 18 hours of credit toward program of study director approval

**HSA 598 Special Topics. (1-4)***once a year*

Proposed topics.

- a Epidemiology 3

**International Business Studies**

Josef C. Brada

*Director*

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Adela Gasca

*Coordinator*

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[www.cob.asu.edu/up/ipo.cfm](http://www.cob.asu.edu/up/ipo.cfm)**Certificate in International Business Studies**

The program of study leading to the Certificate in International Business Studies is designed to prepare students for positions with multinational firms, banks, government agencies and international organizations. This program is not a substitute for the listed areas of business specialization; rather, the courses required for the certificate add an international dimension to the student's chosen major.

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.

**International Business Principles and Operations. At**

least 15 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 and the international course in their major. 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 333 Comparative Economic Systems SB/G*	3
ECN 300 Economic Development SB/G	3
ECN 365 Economics of Russia and Eastern Europe SB/G	3
ECN 436 International Trade Theory SB/C	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 in International Business	3
MGT 450 International Management	3
BS 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.....	1-4
SCM 463 Global Supply Chain Management.....	3

\* College of Business students may not use this course to fulfill the 60 semester hours in college 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.** This requirement can be satisfied either by means of course work or through participation in approved College of Business exchange programs with foreign schools of business, or by some combination of the two. The course work option requires at least 12 semester hours of approved electives in international and area studies. A minimum of six semester hours must be in courses that provide a cross-cultural perspective from the global point of view of one or more disciplines. A minimum of six semester hours must be in courses that provide an understanding of one region of the world.

The College of Business has exchange agreements with universities in Mexico, Spain, the United Kingdom, France, Italy, and Chile. Students who participate in an approved College of Business exchange program with a foreign business school for two semesters are deemed to have fulfilled the global and area studies requirements of the Certificate in International Business upon the successful completion of this exchange program. Students who participate in such an exchange program for one semester are deemed to have satisfied the required six hours of area studies courses. Students who participate in a business seminar need to complete only three hours of area studies courses to meet the requirements of the certificate.

**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 complete at least 50 percent of the 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 122. For more information, call 480/965-4066, or access the Web site at [www.cob.asu.edu/up/ipo.cfm](http://www.cob.asu.edu/up/ipo.cfm).

### INTERNATIONAL BUSINESS STUDIES (IBS)

#### 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. Not for Economics majors. Lecture, discussion. Cross-listed as ECN 306. Credit is allowed for only ECN 306 or IBS 306. Prerequisites: ECN 111 (or 112); 2.00 ASU GPA; junior standing.

*General Studies: SB, G*

#### IBS 394 Special Topics. (1-4)

*fall and spring*

Possible topics:

- (a) Economics of Latin America. (3)
- (b) 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)

*not regularly offered*

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)

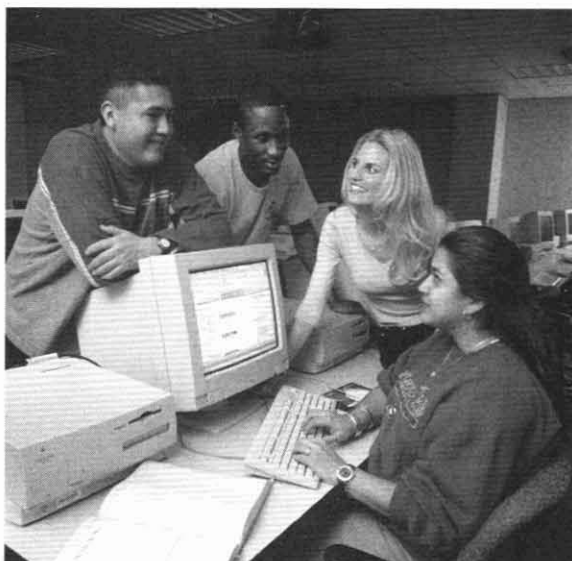
*fall and spring*

Possible topics:

- (a) International Management. (3)  
Prerequisite: IBS 300 or MGT 301.
- (b) Multinational Management. (3)
- (c) Regional Business Environment of Southeast Asia. (3)  
Credit is allowed for only IBS 494 ST: International Management or IBS 494 ST: Multinational Management or MGT 459.

#### IBS 499 Individualized Instruction of International Business. (3)

*fall and spring*



ASU offers ample computer lab resources for students.

Doug Crouch: photo

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 78. For graduation requirements, see "University Graduation Requirements," page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 51.

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## Department of Management

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### PROFESSORS

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### SENIOR LECTURER

KREITNER

### LECTURERS

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The faculty in the Department of Management are widely recognized for their work in the areas of strategic management, organizational behavior, human resource management, operations management, and management science. Faculty members emphasize high tech management, quality, process and project management, decision and risk analysis, globalization, diversity, small business and entrepreneurship, change management, systems dynamics, organizational identity, corporate governance, and human resource management practices in their research, consulting, and teaching.

Department of Management faculty take great pride in their teaching excellence and have been very active in continuing to improve collaborative teaching techniques. Eight management faculty and teaching assistants have won recent college or university level awards for their excellence in teaching effectiveness.

### MANAGEMENT—B.S.

Understanding of theory and concepts of management are enhanced by experiencing and testing these concepts in skill based exercises and cases throughout the curriculum. After analyzing surveys of graduates, their employers, and members of the Dean's Council of 100, the department concluded that the major should have a strong emphasis on measurable, competency based skills. Based on the survey data, the department identified major skill areas that encompass the most important competencies, including:

Administrative  
 conflict management  
 diversity awareness management  
 project management

Analytical  
 creativity/innovation  
 critical analysis skills  
 planning decision making skills  
 Coaching/Facilitating  
 employee motivation  
 employee training development  
 mentoring  
 Communication  
 persuasion and negotiation  
 verbal  
 written  
 Team Orientation  
 delegation and empowerment  
 develop and maintain teamwork  
 relationship building

The faculty focus on both understanding theory and developing competency in these specific skills in all management courses, particularly the three courses taken by all management majors: MGT 311 Human Resource Management, MGT 352 Human Behavior in Organizations, and MGT 463 Strategic Management. The emphasis is on special participative exercises and assignments to practice the skills. Some of these skills, such as communicating, team building, and critical analysis are also emphasized in college core classes (MGT 301 Management and Organization Behavior and SCM 300 Global Supply Operations). Further, all undergraduate management classes emphasize skill development exercises for appropriate course topics. Management majors can choose their electives in one of four tracks: general management, managing human resources, small business and entrepreneurship, or managing business processes.

### General Management Track

The central purpose of the Management major is to prepare men and women for managerial leadership in a world characterized by demands for continuous improvements in quality; growing technological sophistication, racial, cultural, and gender diversity in the workforce, and expanding globalized markets. This emphasis is on accomplishing the organization's goals in a changing environment by successfully coordinating all available resources. As technological change and global markets create new opportunities for modern organizations, the contemporary manager faces increasingly complex challenges.

To prepare students to meet these challenges, the general management track curriculum is designed to provide exercises and cases that focus on developing competency based skills. Applications orientations in classroom settings promote the development of administrative, analytic and communicating skills, coaching and facilitating skills, and a team orientation. This pragmatic focus is developed in both internal and external contexts.

1. legal environment of management activity;
2. the range of human behavior encountered in organizational settings;
3. the interrelation of the component functions of a business;
4. the responsibilities of a firm in contemporary society;

- 5 the challenges to an organization active in an international arena; and
- 6 the role of the entrepreneur in the growth of businesses

The following courses must be taken to complete this track:

MGT 311 Human Resource Management . . . . .	3
MGT 352 Human Behavior in Organizations . . . . .	3
MGT 434 Social Responsibility of Management . . . . .	3
MGT 459 International Management . . . . .	3
MGT 463 Strategic Management L . . . . .	3
MGT elective . . . . .	3
Total . . . . .	18

This generalist perspective addresses such current issues as diversity in the workplace, global involvement, total quality management, and ethics and other managerial emphases that promote success. An interactive, cooperative learning environment is stressed.

As the preferred track for the individual wanting a general grounding in the management discipline, students find a broad range of opportunities available upon graduation. Service and manufacturing firms, for profit and not for profit organizations, and large and small organizations will immediately benefit from the preparation of these graduates and recruit them for challenging trainee positions or entry level management positions

**Managing Human Resources Track**

People are the common denominator in all organizations. The efficient and effective management of people is central to the success of the organization. Management has been defined as "the process of getting things done through people." The human resource management track in the Management major introduces students to the spectrum of knowledge necessary to effectively manage people.

This track is designed to train and familiarize future employees, general managers, and human resource specialists with the human resource functional areas, such as performance appraisal, dismissal, and the legal environment surrounding the employment relationship.

Students in this track develop key skills in managing workforce diversity, team building, and negotiation. Focus in this track is on developing skills in managing people. Students are involved in class activities such as cases and experiential exercises that develop skills in preventing and solving human resource problems.

The following courses must be taken to complete this track:

MGT 311 Human Resource Management . . . . .	3
MGT 352 Human Behavior in Organizations . . . . .	3
MGT 413 Compensation Management . . . . .	3
MGT 423 Employee Management Relations . . . . .	3
MGT 463 Strategic Management L . . . . .	3
MGT elective . . . . .	3
Total . . . . .	18

Large corporations in manufacturing and services, as well as small businesses and consulting firms, hire students who successfully complete this track.

**Small Business and Entrepreneurship Track**

Managing, growing, developing, and starting small businesses is one of the most vital and challenging segments of the economy. Most new innovations spring from small to midsize firms. New venture opportunities emerge each day. Smaller firms constitute the job creation engine of the nation. The potential for individual wealth creation largely resides among entrepreneurial firms, and in an era of downsizing, many current and former corporate employees are looking toward self employment as a long term career option. The sequence of courses in the small business and entrepreneurship track does not limit student ability to seek employment in the corporate environment. Rather, it provides an enhanced skill set many firms will value, and it offers alternative career options.

The small business and entrepreneurship course sequence provides a broad based understanding of the entrepreneurial process and the unique problems and challenges faced by smaller firms. In addition, students gain an opportunity to develop their own potential venture concepts.

The following courses must be taken to complete this track:

MGT 311 Human Resource Management . . . . .	3
MGT 352 Human Behavior in Organizations . . . . .	3
MGT 440 Small Business and Entrepreneurship . . . . .	3
MGT 445 Business Plan Development . . . . .	3
MGT 463 Strategic Management L . . . . .	3
MGT elective . . . . .	3
Total . . . . .	18

Note that students who have completed MGT 494 Small Business Planning should not take MGT 445 Small Business Plan Development.

Students completing the small business and entrepreneurship track are most likely to work in small businesses or new ventures within larger corporations. Students in this track (or other business majors) may also be interested in the Certificate in Small Business and Entrepreneurship. See "Certificate in Small Business and Entrepreneurship," page 175.

**Managing Business Processes Track**

Processes are central to all organizations. Designing and manufacturing a product involves a series of steps in a transformation process starting with raw materials acquisition and continuing through product production, delivery and use. Determining and delivering a service involves a series of steps in setting service characteristics and providing the service. Specific theories and tools for managing, changing, and continuously improving business processes have been developed and are key ingredients to successfully managing businesses in the global economy.

Students in this track develop key skills in communicating and working with people, particularly in planning and managing process changes. The focus in this track is on understanding key aspects of process design and analysis

**NOTE:** For the General Studies requirement courses and codes (such as L, SQ, C, and H) see "General Studies" page 78. For graduation requirements see "University Graduation Requirements" page 74. For an explanation of additional non-business courses offered but not included in this catalog see "Classification of Courses" page 51.

Students are involved in case studies and industry projects dealing with actual process issues. Students in this track focus on developing knowledge and skills in product/service design and management, process improvement and problem solving, analysis of process costs, change management, team approaches to solving process problems, and project management skills.

The following courses must be taken to complete this track:

MGT 311	Human Resource Management	.....3
MGT 352	Human Behavior in Organizations	.....3
MGT 433	Management Decision Analysis	.....3
	or MGT 468 Management Systems (3)	
	or MGT 480 Team Management Skills (3)	
MGT 463	Strategic Management <i>L</i>	.....3
OPM 450	Changing Business Processes <i>L</i>	.....3
QBA 321	Applied Quality Analysis I <i>L</i>	.....3
	or SCM 432 Materials Management (3)	
Total		.....18

Because managing and controlling the quality of processes is a key issue in process management, students electing this track are strongly urged to also complete the Certificate in Quality Analysis. See "Certificate in Quality Analysis," page 154.

Although large corporate manufacturing and service firms will hire students in this new track, there will also be special opportunities for these students to have a strong positive impact in the many start-up and medium-size businesses in Arizona. Many management consulting firms that recruit college graduates are very interested in students from this track.

**Approved Electives for Management.** The following electives have been approved for the management tracks.

ACC 316	Management Uses of Accounting	.....3
MGT 413	Compensation Management	.....3
MGT 422	Training and Development	.....3
MGT 423	Employee-Management Relations	.....3
MGT 424	Employee Selection and Appraisal	.....3
MGT 433	Management Decision Analysis	.....3
MGT 434	Social Responsibility of Management	.....3
MGT 440	Small Business and Entrepreneurship	.....3
MGT 445	Business Plan Development	.....3
MGT 459	International Management	.....3
MGT 468	Management Systems	.....3
MGT 480	Team Management Skills	.....3
MGT 494	Special Topics	.....3
MKT 302	Fundamentals of Marketing Management	.....3
OPM 450	Changing Business Processes <i>L</i>	.....3

**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.cob.asu.edu/mgt](http://www.cob.asu.edu/mgt).

### 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 college requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 152.

### GRADUATE PROGRAMS

The Department of Management participates actively in several master's and Ph.D. programs, particularly the technology M.B.A., executive M.B.A., evening M.B.A., and day M.B.A. programs. For a detailed description of these programs, see the *Graduate Catalog*. Areas of specialization offered by the Department of Management for technology, evening, and executive M.B.A. students include process management in high technology organizations; globalization and diversity management; entrepreneurship and small business development; and management consulting.

The Department of Management has adopted a modular approach to Ph.D. education to improve its 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.** More information, hot links to courses and faculty, and any updates on the Department of Management areas of specialization for the M.B.A. programs can be found on the Web at [www.cob.asu.edu/mgt](http://www.cob.asu.edu/mgt).

General information on the M.B.A. programs can be found on the Web at [www.cob.asu.edu/mba](http://www.cob.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.cob.asu.edu/mgt/degree/phdmainpg.htm](http://www.cob.asu.edu/mgt/degree/phdmainpg.htm).

### MANAGEMENT (MGT)

#### MGT 301 Management and Organization Behavior. (3)

*fall, spring, summer*

Administrative, organizational, and behavioral theories and functions of management, contributing to the effective and efficient accomplishment of organizational objectives. Prerequisites: 1 psychology (social and behavioral) course and 1 sociology course.

#### MGT 311 Human Resource Management. (3)

*fall, spring, summer*

Human resource planning, staffing, training and development, compensation, appraisal, and labor relations. Prerequisite: MGT 301.

#### MGT 352 Human Behavior in Organizations. (3)

*fall, spring, summer*

Human aspects of business as distinguished from economic and technical aspects and how they influence efficiency, morale, and management practice. Prerequisite: MGT 301.

#### MGT 380 Management and Strategy for Nonmajors. (3)

*fall, spring, summer*

Introduction to the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility.

#### MGT 394 Special Topics. (3)

*not regularly offered*

#### MGT 413 Compensation Management. (3)

*fall and spring*

Establishing base and incentive pay with job analysis, job evaluation, and wage surveys; performance appraisal; conformance to compensation laws. Prerequisites: MGT 311; professional program business student.

**MGT 422 Training and Development. (3)***fa and spring*

Learning theory, or entation and basic eve training management development resource materials and methods Prerequisites: MGT 311 professional program business student

**MGT 423 Employee-Management Relations. (3)***fa and spring*

Employment relationships in union/nonunion setting Employee management rights responsibilities compensation administration negotiation unions union structure, and mock government negotiations

**MGT 424 Employee Selection and Appraisal. (3)***fa and spring*

Concepts and methods of personnel selection and performance appraisal includes job analysis measurement, and legal issues Emphasizes experiential exercises Prerequisite: MGT 311.

**MGT 433 Management Decision Analysis. (3)***fa and spring*

Decisions making concepts and methods in the private and public sectors and the application to organizational problems Understanding of individual and group decision making Prerequisites: MGT 301; professional program business student.

**MGT 434 Social Responsibility of Management. (3)***fa, spring, summer*

Relationship of business to the social system and its environment Criteria for appraising management decisions Managers as change agents Prerequisites: MGT 301 professional program business student

**MGT 440 Small Business and Entrepreneurship. (3)***fa, spring, summer*

Opportunities, risks and problems associated with small business development and operation

**MGT 445 Business Plan Development. (3)***fa 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)***fa, spring, summer*

Concepts and practices of multinational and foreign firms Objectives, strategies policies and organizational structures for operating in various environments. Credit awarded for only MGT 459 or BS 494 ST International Management or IBS 494 ST Multinational Management. Prerequisite: BS 300 or MGT 301.

**MGT 463 Strategic Management. (3)***fa, spring, summer*

Strategic formulation and administration of the total organization including integrative analysis and strategic planning To be taken last semester of senior year Prerequisites: completion of 108 hours, including a other business administration core requirements; professional program business student.

*General Studies L***MGT 468 Management Systems. (3)***fa and spring*

Systems theory and practice applied to organization process and research Organizations seen as open systems interacting with changing environments Prerequisite: MGT 301

**MGT 480 Team Management Skills. (3)***fa and spring*

Cooperative educational class teaching team skills in active listening conflict resolution decisions making, effective meetings norming and team roles Cooperative learning

**MGT 484 Internship. (3)***fa, spring, summer*

Nonmajor elective credit only

**MGT 494 Special Topics. (1-4)***not regularly offered*

Current topics in management primarily designed for business majors See the *Schedule of Classes* for current offerings Possible topics

a Applied International Management 3

b Cultural Factors in International Business 3

Prerequisite: IBS 300 or MGT 301 or BS 494 or MGT 459

**MGT 499 Individualized Instruction. (1-3)***not regularly offered***MGT 502 Organization Theory and Behavior. (3)***once a year*

Important concepts and applications in management including communication, decision making group dynamics leadership motivation organization change, and organizational design Prerequisites: computer literacy graduate degree program student

**MGT 522 Human Resource Activity and the Management of Diversity. (3)***once a year*

Applies general and human resource management principles to work effectively with a diverse spectrum of people Discussion, exercises Prerequisite: M.B.A. degree program student

**MGT 522 Human Resource Activity and the Management of Diversity. (3)***once a year*

Applies general and human resource management principles to work effectively with a diverse spectrum of people Discussion exercises Prerequisite: M.B.A. degree program student

**MGT 523 Managing People for Service Advantage. (3)***once a year*

Covers HRM practices that are conducive to building and maintaining internal customer equity and maximizing external customer service Discussion lecture/class exercises cases Prerequisite: M.B.A. degree program student

**MGT 559 International Management. (2-3)***once a year*

Studies international and cross-cultural influences on management processes and development of global leadership capabilities experiential management professional Discussion company analyses case analyses lecture, guest speakers Prerequisite: M.B.A. degree program student

**MGT 561 Advanced Integrated Project. (2-3)***once a year*

Capstone project of the high technology ASU M.B.A. Student teams develop business plans for new technology based products Online project Prerequisite: M.B.A. degree program student

**MGT 570 Management Consulting. (3)***once a year*

Develops understanding of how internal and external consultants add value Prerequisites: ability to use common business software including Microsoft Office familiarity with spreadsheets

**MGT 589 Strategic Management. (3-4)***spring*

Formulation of strategy and policy in the organization emphasizing the integration of decisions in the functional areas Prerequisite: M.B.A. degree program student

**MGT 591 Seminar. (1-12)***not regularly offered*

Possible topics

a Business Plan Competition 3

(b) Entrepreneurship 3

(c) Human Resource Activity and the Management of Diversity 3

(d) Human Resource Management and Service Delivery 3

(e) Human Resources and High Technology Management 3

(f) International Management 3

(g) Management Consulting 3

(h) Organizational Change and Business Process Consulting 3

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C, and H, see "General Studies" page 78. For graduation requirement, see "University Graduation Requirements" page 74. For an explanation of additional minor business courses offered but not listed in this catalog, see "Catalog of Courses" page 51.

**MGT 593 Applied Projects. (3)***once a year*

Cross functional teams take responsibility for implementation of organizational change within a local firm. Lecture/discussion on experiential learning. Prerequisite: corequisite: core courses in the MBA program

**MGT 598 Special Topics. (3)***not regularly offered*

Graduate special topics chosen from human resources, strategic management and international management including special topics in international management in Asia or Europe. Prerequisite: instructor approval

**MGT 791 Seminar: Doctoral Seminar in Management. (1-12)***once a year*

Short module seminars. Possible topics

- a) Cause Modeling 1
- b) Change and Coping 1
- c) Cognition, Micro and Macro Perspectives 1
- d) Dysfunction in Workplace 1
- e) Economic Theories of the Firm 1
- f) Levels of Analysis 1
- g) Motivation and Attitudes 1
- h) Organizational Identity and Identification 1
- Organizational Learning and Organizational Identity 1
- Organizational Performance and Reward System 1
- (k) Organizational Strategy and Culture 1
- Organizational Structure, Technology and Information Systems 1
- m) Organizational Withdrawal 1
- n) Performance Appraisal 1
- o) Power and Organizational Change. (1)
- p) Selection 1
- q) Strategy Overview 1
- r) Teams, Groups and Leadership 1
- s) The Craft of Research 1

**OPERATIONS MANAGEMENT (OPM)****OPM 394 Special Topics. (3)***not regularly offered*

Current topics in operations and production management primarily designed for nonbusiness majors. See the *Schedule of Classes* for current offerings which may for example include Operations and Logistics Management for nonmajors

**OPM 450 Changing Business Processes. (3)***once a year*

Describes and analyzes business processes. Generate and evaluates alternatives. Creates improvement and implementation plans. Prerequisites: SCM 300, QBA 221

*General Studies L***OPM 540 Quality and Productivity Management. (3)***not regularly offered*

Organizational factors influencing quality and productivity in the production of goods and services. Quality and productivity strategies, improvement programs, and measurement systems. Prerequisite: SCM 502 or instructor approval.

**OPM 581 Management of Technology and Innovation. (3)***fa*

Technology life cycles, technology forecasting, new product development process, innovation teams, innovation best practices. Prerequisite: MBA degree program student

**OPM 583 Project Management in Service Organizations. (2-3)***fa*

Project management planning, leadership, and control in service organizations. Discussion on lecture/class exercises/cases. Prerequisite: MBA degree program student

**OPM 585 Facilities Design and Management of Technology. (3)***once a year*

Decisions regarding management of facilities and technology for manufacturing and service firms. Facilities location, layout, process design, and selection

**OPM 586 High-Technology Project Management. (2-3)***fa*

Project management processes for high technology organizations including planning, scheduling, team development, and control. Prerequisite: MBA degree program student

**OPM 587 Project Management. (3)***once a year*

Planning, scheduling, and controlling of projects in R & D, manufacturing, construction, and services. Project selection, financial considerations, and resource management. Prerequisite: QBA 502

**OPM 588 Strategic Project Management. (2-3)***fa*

Overview of strategic project management processes, project planning and control, project portfolio management, resource allocation, management of strategic project partners. Discussion on lecture, class exercises/cases. Prerequisite: MBA degree program student

**OPM 591 Seminar. (1-12)***once a year*

Possible topics

- a) High Performance Management Processes 3
- b) Management of Technology 3
- (c) Manufacturing Management in High Technology (3)
- d) Manufacturing Strategy 3
- e) New Product and Process Development 3
- f) Technology Project Management 3

**OPM 593 Applied Projects. (3)***once a year*

Cross functional teams take responsibility for implementation of organizational change within a local firm. Lecture/discussion on experiential learning. Prerequisite: corequisite: core courses in the MBA program

**OPM 791 Doctoral Seminars in Operations and Production Management. (1-12)***not regularly offered*

Short module seminars. Possible topics

- a) Management of Technology 1
- b) Manufacturing Strategy 1
- Operations Management 1
- d) Project Management 1

**QUANTITATIVE BUSINESS ANALYSIS (QBA)***For more QBA courses see 'Department of Economics***QBA 505 Management Science. (3)***not regularly offered*

Quantitative approaches to decision making including linear programming and simulation, with emphasis on business applications. Prerequisites: MAT 210, QBA 502

**QBA 508 Product and Service Innovation. (3)***fa and spring*

Develops strategies for innovation in products and services. Prerequisites: basic algebra, basic probability concepts, elementary knowledge of Windows

**QBA 550 Intermediate Decision Analysis. (3)***not regularly offered*

Quantitative decision analysis methods for business decisions on making under uncertainty including decision diagrams, subjective probabilities and preference assessment. Prerequisites: MAT 210, QBA 502

**QBA 591 Seminar. (1-12)***fa and spring*

Current topics in quantitative business analysis primarily designed for technology evening, and executive MBA students. Elective courses for these programs may include the following possible topics.

- a) Decision Models 3
- b) Decision Models for Consulting 3
- c) Management Problem Solving 3
- d) Strategic Decision Analysis 3

**QBA 593 Applied Project. (1-12)***not regularly offered***QBA 599 Thesis. (1-12)***not regularly offered***QBA 791 Doctoral Seminars in Quantitative Business Analysis. (1-12)***not regularly offered*

The Department of Management has adopted a modular approach to Ph.D. education. Possible topics

- (a) Chaos Theory 1
- b) Risk Analysis 1
- c) Strategic Decision Making 1
- d) Systems Dynamics 1



**Department of Marketing**

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HUNTER, A OSTROM, ROUNDTREE

**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 I	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
MKT 412 Promotion Management	3

MKT 424 Retail Management	3
MKT 430 Marketing for Service Industries	3
MKT 434 Industrial Marketing	3
MKT 435 International Marketing	3
MKT 484 Internship	3
MKT 499 Individualized Instruction	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 college requirements. See "University Graduation Requirements," page 74 and "College Degree Requirements," page 152.

**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

**MKT 301 Principles of Advertising. (3)**

*fall, spring, summer*  
 Advertising as a communication 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 organization 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 the practical application in the sale of industrial goods, consumer goods, and intangibles. Prerequisite: MKT 300

**MKT 311 Creative Strategy in Marketing. (3)**

*once a year*  
 Discusses 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; 2.0 ASU GPA.

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C, and H, see General Studies, page 78. For graduation requirements, see University Graduation Requirements, page 74. For an explanation of additional nonbusiness courses offered but not listed in this catalog, see "Classification of Courses," page 51.

**MKT 394 Special Topics. (1-4)**

*fa*  
Possible topics  
a Global Markets 3  
b Marketing and Selling 3

**MKT 411 Sales Management. (3)**

*not regularly offered*  
Applies management concepts to the administration of the sales operation Prerequisite MKT 302

**MKT 412 Promotion on 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)**

*once a year*  
Role of retailing in marketing Problems and functions of retail managers with 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 Industrial Marketing. (3)**

*once a year*  
Strategies for marketing products and services to industrial commercial and governmental markets Changing industry and market structure 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 environment Prerequisites MKT 302 or instructor approval professional program business student

**MKT 451 Marketing Research. (3)**

*fa 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)**

*fa and spring*  
Policy formulation and decisions making by the marketing executive integrates marketing programs and considers contemporary marketing issues Prerequisite professional program business student Prerequisite with a grade of C or higher MKT 303 304 451  
*General Studies*

**MKT 484 Internship. (3)**

*fa spring, summer*  
Prerequisite with a grade of "B" or higher MKT 302

**MKT 494 Special Topics (1-4)**

*fa spring, summer*  
Chosen from topics in the marketing and international marketing area may include seminars international marketing in Europe and Asia  
Possible topics

a Applied International Marketing

**MKT 499 Individualized Instruction. (1-3)**

*fa, spring, summer*  
Topics of special interest chosen by students and agreed to by the departments independent studies with a professor acting as a guide

**MKT 502 Marketing Management (3)**

*fa spring, summer*  
Managing the marketing function; market and environmental analysis marketing planning strategy and control concept Development and management of marketing programs Prerequisite ECN 502

**MKT 524 Services Marketing. (3)**

*once a year*  
Strategy for marketing services emphasizing the distinctive characteristics and approaches that make marketing of services different from marketing manufactured goods Prerequisite MKT 502 or its equivalent

**MKT 563 Marketing Strategy. (3)**

*not regularly offered*  
Planning and control concepts and methods for development and evaluation of marketing strategy from a marketing perspective Prerequisite MKT 502

**MKT 584 Internship. (3)**

*fa spring, summer*

**MKT 591 Seminar. (1-12)**

*once a year*  
Offered in conjunction with the M.B.A. program (see M.B.A. program section) Possible topics.

- a Business to Business Marketing 3
- b Competitive Strategy for Services 3
- c Consumer Behavior and Market Strategy 3
- d Customer Satisfaction Service Quality Measurement 3
- e International Marketing 3
- f Marketing in the Information Age 3
- g New Product and Service Development 3

## Small Business Programs

**Emma J. Watson**  
*Academic Director*  
**(BAC 111) 480/965-3962**  
**Fax 480/727-6185**

[www.cob.asu.edu/up/smallbusiness.cfm](http://www.cob.asu.edu/up/smallbusiness.cfm)

### Mission

The ASU College of Business, in collaboration with the Center for the Advancement of Small Business, will create and sustain preeminent programs in small business for undergraduate students in all disciplines to prepare them for leadership in small and growing businesses.

### Minor in Small Business

The minor in Small Business is available to nonbusiness majors and consists of 18 semester hours, with five required courses and one approved elective. Three *Ca\$hung In™* seminars are required to graduate. National and local experts present *Ca\$hung In™* seminars on campus late in the afternoons three times per semester. COB 380 Small Business Leadership is a prerequisite or corequisite for the other courses. All GPA and semester hour requirements apply as listed.

### Requirements

COB 350 Strategic Business Leadership	3
COB 380 Small Business Accounting and Finance	3
COB 382 Small Business Sales and Market Development	3
COB 353 Small Business Working Relationships	3
COB 384 Small Business Operations and Planning	3
Approved elective	3
<b>Total</b>	<b>18</b>

### B.I.S. Concentration in Small Business (B.I.S. Majors Only)

The requirements for the small business concentration are identical to those for the minor in Small Business listed above. For B.I.S. degree requirements see "Bachelor of Interdisciplinary Studies," page 108.

**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.

**Small Business and Entrepreneurship Track (Management Majors Only).** See "Small Business and Entrepreneurship Track," page 169, for the requirements of this program.

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**Department of Supply Chain Management**

Joseph R. Carter  
*Chair*  
(BA 446) 480/965-6044  
Fax 480/965-8629  
www.cob.asu.edu/scm

---

**PROFESSORS**

J. CARTER, P. CARTER, ELLRAM, GUNTERMANN,  
HENDRICK, JENNINGS, KIRKWOOD, PEARSON, SMELTZER

**ASSOCIATE PROFESSORS**

ARANDA, BOHLMAN, BROOKS, BUTLER, CHOI, DAVIS,  
DUNDAS, KEEFER, LEONARD, LOCK, LYNCH, MALTZ,  
MURRANKA, SIFERD, VERDIN

**ASSISTANT PROFESSORS**

AMUNDSON, CLINTON, KRAUSE

**RESEARCH PROFESSOR**

MONCZKA

**ADJUNCT PROFESSOR**

CAVATO

**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 College of Business by teaching the B.S. core requirement BUS 301 Fundamentals of Management Communication.

**SUPPLY CHAIN MANAGEMENT—B.S.**

Supply chain management is the management of resources to design, procure, fabricate, produce, assemble, store, distribute, deliver, use, maintain, recycle, and dispose of goods and services.

A "supply chain" consists of interconnected companies required to transform ideas into delivered products and services.

Supply chain management is a business approach that focuses on integration and partnerships in order to meet customers' needs on a timely basis, with relevant and high quality products, produced and delivered in a cost effective manner.

Current interest in supply chain management stems from the need of world class organizations to purchase, produce, move, and market goods and services on a global basis. Relentless focus on time, cost, and quality have sharpened the need to coordinate and cooperate with business partners around the world to meet and exceed customers' needs and wants.

The major in Supply Chain Management consists of the following courses:

SCM 345 Logistics Management.....	3
SCM 355 Supply Management.....	3
SCM 432 Materials Management.....	3
SCM 44 Productivity and Quality Management.....	3
SCM 455 Research and Negotiation L.....	3
SCM 470 Supply Chain Strategy.....	3
<b>Total.....</b>	<b>18</b>

**REAL ESTATE—B.S.**

The Real Estate faculty offer a unique one year program designed for the student's last year of college. This innovative program emphasizes student involvement with real estate executives on projects in the Phoenix metropolitan area. Students are organized in teams to develop their analytical, communication, and team skills.

The program is organized around five aspects of real estate: brokerage management, development, financing, investments, and market analysis. With the 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 finance.

Successful completion of the program satisfies the requirements of the major based on the following courses:

LFS 411 Real Estate Law.....	3
REA 3 Real Estate Analysis.....	3
REA 331 Real Estate Finance.....	3
REA 411 Real Estate Appraisal.....	3

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**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C and H see General Studies page 78. For graduation requirements see "University Graduation Requirements" page 74. For an explanation of additional non-business courses offered but not listed in this catalog see "Classification of Courses" page 51.

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). 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.

### 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 or 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 a university and college requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 152.

### BUSINESS (BUS)

#### BUS 301 Fundamentals of Management Communication. (3)

*fall, spring, summer*

Written and oral communication in a management context. Prerequisite: C/S 200. Prerequisite with a grade of "C" or higher: ENG 102. *General Studies L*

#### BUS 451 Business Research Methods. (3)

*not regularly offered*

Methods of collecting information pertinent to business problems involving conducting design, collection, analysis, interpretation, and presentation of primary and secondary data. *General Studies L*

#### BUS 494 Special Topics. (1-4)

*not regularly offered*

#### BUS 502 Managerial Communication. (1-3)

*fall and spring*

Analysis of various business problems, situations, and development of appropriate communication strategies. Prerequisite: MGT 502.

#### BUS 504 Professional Report Writing. (3)

*once a year*

Preparation and presentation of professional reports.

#### BUS 507 Business Research Methods. (3)

*not regularly offered*

Techniques for gathering information for business decision making. Selection, design, and completion of a business-oriented research project.

#### BUS 591 Seminar. (3)

*not regularly offered*

Selected managerial communication topics.

#### BUS 594 Study Conference or Workshop. (3)

*not regularly offered*

#### BUS 700 Research Methods. (3)

*not regularly offered*

### LEGAL AND ETHICAL STUDIES (LES)

#### LES 305 Legal, Ethical, and Regulatory Issues in Business. (3)

*fall, spring, summer*

Legal theories, ethical issues, and regulatory compliance affecting business practices and decisions. For students in the College of Business. LES 306 or its equivalent is not acceptable in lieu of LES 305.

#### LES 306 Business Law. (3)

*once a year*

Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections. For students in the College of Business. LES 306 or its equivalent is not acceptable in lieu of LES 305.

#### LES 308 Business and Legal Issues in Professional Sports. (3)

*not regularly offered*

Economic structure of professional sports and application of contract law, trust, arbitration, and labor laws in the industry. Prerequisites: 2.00 GPA, junior or 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 or standing.

#### LES 411 Real Estate Law. (3)

*once a year*

Legal and ethical aspects of and ownership interests, transfer, finance, development, and regulations of the real estate industry.

#### LES 532 Negotiation Agreements. (3)

*fall and spring*

Develops negotiation competencies to build partnerships and create strong agreements with internal, external customers, suppliers, work teams, and external constituents. Lecture and substantial student interaction through team exercises.

#### LES 579 Legal and Ethical Issues for Business. (3)

*fall and spring*

Studies legal and ethical components of business decisions, self-regulation, and social responsibility as strategies. Prerequisites: ACC 503, FIN 502, MGT 502, MKT 502.

### 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, investment, 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 projects. Emphasis on 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 or standing.

#### REA 401 Real Estate Appraisal. (3)

*once a year*

Factors affecting the value of real estate. Theory and practice of appraisal 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: FN 300, professional program business student

**REA 461 Current Real Estate Topics. (3)***not regularly offered*

Discusses and analyzes current real estate topics of interest. Prerequisites: REA 300; professional program business student

**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. Prerequisites: ACC 240, C S 200, QBA 221

**SCM 301 Supply Chain Management. (3)***not regularly offered*

Examines the purchasing materials and logistics management areas. Presents techniques for acquiring, storing, processing, and moving materials inventory. Prerequisite: professional program business student

**SCM 345 Logistics Management. (3)***fall and spring*

Managing logistics activities with emphasis on integrating transportation needs with 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. Prerequisite: professional program business student majoring in Supply Chain Management. Pre- or corequisite: SCM 300

**SCM 405 Urban Transportation. (3)***not regularly offered*

Economic, social, political, and business aspects of passenger transportation. Public policy and government aid to urban transportation development. Prerequisite: upper division standing or instructor approval.

**SCM 432 Materials Management. (3)***fall and spring*

Studies managing the productive flow of materials in organizations including MRP I, JIT, quality, facility planning, and job design. Fee. Prerequisites: SCM 300, professional program business student majoring in Supply Chain Management

**SCM 440 Productivity and Quality Management. (3)***fall and spring*

Productivity concepts at the national, organizational, and individual levels. Quality management and its relationship to productivity in organizations. Prerequisite: professional program business student majoring in Supply Chain Management

**SCM 455 Research and Negotiation. (3)***fall and spring*

Current philosophy, methods, and techniques used to conduct both strategic and operations supply chain management research and negotiation. Includes negotiation simulations. 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)***not regularly offered*

Analyzes carrier economics, regulation, management, and rate-making practice; evaluates public policy issues related to carrier transportation. Prerequisite: upper-division standing or 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

**SCM 479 Supply Chain Strategy. (3)***fall and spring*

Synthesis of purchasing, production, transportation, and distribution systems to provide an integrated 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

**SCM 502 Operations and Supply Management. (3)***fall and spring*

Contemporary management issues including environmental, project, and supply chain management; new product development, quality control, TQM. Prerequisite: MBA degree program student

**SCM 532 Supply Chain Design and Development Strategies. (3)***fall*

Strategic orientation toward the design and development of the supply chain for purchasing materials and logistics systems

**SCM 541 Supply Chain Management and Control. (3)***spring*

Management and control of purchasing and logistics management systems. Total Quality Management to assess and assure customer satisfaction. Global strategies.

**SCM 545 Supply Chain Continuous Improvement Strategies. (3)***spring*

Leading edge strategies such as reengineering, high performance teams, and expert systems for continuous improvement of the supply chain. Seminar

**SCM 591 Seminar. (1-12)***not regularly offered*

Possible topics:

- a. Global Supply Chain Management 3
- b. New Product Development 3
- (c) Quality and Productivity Management 3)
- d. Services Operations Management 3

**SCM 791 Doctoral Seminar. (1-12)***once a year*

Possible topics:

- a. Logistics, Transportation, and Physical Distribution Management 3)
- b. Purchasing and Materials Management 3

**NOTE:** For the General Studies requirement courses and codes (such as L, SQ, C, and H) see "General Studies" page 78. For graduation requirements, see "University Graduation Requirements" page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses" page 51.

# College of Education

David C. Berliner, Ph.D., Dean

[www.ed.asu.edu/coe](http://www.ed.asu.edu/coe)



Instructor-student interaction adds to the learning experience.

Dave Tevis photo

<b>Division of Curriculum and Instruction</b> . . . . .	<b>187</b>
<b>Division of Educational Leadership and Policy Studies</b> . . . . .	<b>195</b>
<b>Division of Psychology in Education</b> . . . . .	<b>196</b>

## 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 [www.ed.asu.edu/coe](http://www.ed.asu.edu/coe).

## 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 Professional Teacher Preparation Program (PTPP) is the largest program in the college, designed to prepare students for teaching positions in elementary education, secondary education, and special education, including bilingual education and English as a second language. 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 "Bachelor of Arts in Education," page 182.

The faculty in Curriculum and Instruction are grouped according to their interests into one or more of 10 research clusters. These clusters include curriculum studies; early childhood; equity, diversity, and citizenship; gender; language and literacy; mathematics education; middle level interest; science education; special education and teacher preparation; and professional development. For more information on research clusters and graduate programs, please refer to the *Graduate Catalog*.

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.	Bilingual education/English as a second language	Division of Curriculum and Instruction
Secondary Education	B A.E.	Academic specializations: biological sciences, business education, chemistry, Chinese,* economics, English, family and human development home economics),* French, geography, German, history, Japanese, journalism, mathematics, mathematics chemistry, mathematics/physics, physical education, physics, physics chemistry, political science, Russian,* 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.

**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 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.

**Center for Bilingual Education and Research.** The Center for Bilingual Education and Research (CBER) conducts, supports, and encourages research in the field of dual language education. The purpose of the center's work is to inform public policy. CBER is also engaged in research, program development, and scholarly discourse aimed at improving public education in the border regions of the United States. The center gives special attention to the needs of Spanish speaking students

**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

**Office of Student Affairs.** The Office of Student Affairs assists individuals interested in teacher preparation programs through advising, admission, retention activities, and certification assistance. Other services include program of study validation, declaration of graduation, petition review, student communication, and high school and community college articulation/relations and recruitment. In addition,

the office provides support services through tutorial assistance and scholarship programs.

**Office of Professional Field Experiences.** The Office of Professional Field Experiences places all teacher preparation students in public schools and similar institutions for internships and student teaching, monitors students' progress in their field experiences, sponsors courses for mentor teachers, and conducts research on student teacher performance in the field.

**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

**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

**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

Undergraduate students interested in teacher certification in art, music, dance, or theatre enroll through programs offered by the Herberger College of Fine Arts. These students must also meet the same eligibility requirements for admission to the Professional Teacher Preparation Program (PTPP) for certification, and a formal application must be submitted to the PTPP.

Undergraduate programs leading to the Bachelor of Arts in Education degree are described in the text and tables that follow. For descriptions of graduate degree programs, see the Graduate Catalog. For more information, see the "College of Education Graduate Degrees and Majors" table, page 180.

## 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, communication arts, early childhood education, elementary education, English as a second language, Indian education, mathematics education, reading education, science education, secondary education, social studies education	Division of Curriculum and Instruction
	M.Ed.	Bilingual education, communication arts, early childhood education, elementary education, English as a second language, Indian education, mathematics education, professional studies, reading education, science education, secondary education, social studies education	Division of Curriculum and Instruction
	Ed.D.	Bilingual education, communication arts, curriculum studies, 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
	Ph.D. <sup>1</sup>	Art education, <sup>2</sup> curriculum studies, early childhood education, educational media and computers, <sup>3</sup> elementary education, English education, exercise and wellness education, <sup>4</sup> 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., M.Ed.	—	Division of Curriculum and Instruction

<sup>1</sup> This program is administered in collaboration with the College of Education and the Graduate College.

<sup>2</sup> This concentration is administered in collaboration with the Herberger College of Fine Arts.

<sup>3</sup> Applications are not being accepted at this time.

<sup>4</sup> Doctoral courses for this interdisciplinary program administered by ASU Main are offered by ASU East.



## ADMISSION

### Preprofessional Admission

Students admitted to ASU during their freshman and sophomore years may also be admitted to the College of Education with preprofessional status. Preprofessional students should seek advising within the College of Education through its Office of Student Affairs, EDB L1-13.

Admission to ASU with preprofessional status in the College of Education does not guarantee admission to the PTPP. Admission to the PTPP is a separate process.

### Professional Program Admission

Students are eligible for consideration for admission to the PTPP for certification if they meet the following criteria:

1. admission to ASU as a classified student;
2. a minimum cumulative GPA of 2.50;
3. completion of at least 56 semester hours by the time of PTPP admission;
4. submission of scores on the American College Test (ACT) or the Pre-Professional Skills test (PPST) (see "Scores," on this page);
5. completion of ENG 101 and 102 and General Studies L or SQ and MA requirements with a grade of "C" or higher (courses in progress do not satisfy this requirement); and
6. a special application with additional supporting materials (great emphasis is placed on prior experience, paid or volunteer, working with the age or group of the certification area sought).

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 Affairs in the College of Education (480/965-5555) to determine if there are additional admission requirements for their teaching fields.

PTPP application deadlines are February 1 for fall admission and September 1 for spring admission. Applications can be downloaded via the Web at [www.asu.edu/educ/osa](http://www.asu.edu/educ/osa).

Because PPST or ACT scores must be included for an application to be complete, applicants should plan to take the test well in advance of application deadlines.

**Scores.** An ACT composite score of 21 or higher is required, or PPST scores of 172 in math, 173 in reading, and 174 in writing are required. Students who do not meet regular admission standards can still be considered for provisional admission (if scores fall between 18 and 20 on the ACT or 170 and 173 in the PPST). Students who fall under this classification need to fulfill specific academic requirements with the purpose of meeting the regular admission standards in the PTPP in order to demonstrate requisite qualifications for successful teaching and to meet the state's certification requirements.

### Transfer Students

To be considered for admission to the PTPP for certification, transfer students must first be formally admitted to ASU (see "Transfer Applicants," page 56). Transfer students must attend a Transfer Advising Session (TAS). These sessions are provided in groups according to specialization area and conducted by academic advisors. During the TAS, information is provided regarding the university General Studies requirement, course selection and registration in the College of Education, and admission requirements for the highly competitive Professional Teacher Preparation Program. ASU Undergraduate Admissions should receive the application for admission to ASU, transcripts, applicable test scores, and other required information at least five months before the PTPP application deadline date for the desired PTPP admission semester.

Students should access the ASU Education Transfer Guides for optimal course selection on the Web at [www.asu.edu/provost/articulation](http://www.asu.edu/provost/articulation).



Students walking beside the Administration building

Doug Crauch photo

### Declaration of Graduation

A declaration of graduation must be filed during the first semester of enrollment in the PTPP (Preprofessional students completing 87 hours (the university limit for registering without a program of study) who have not been admitted to the PTPP are provided a registration waiver by the College of Education. See "University Graduation Requirements," page 74

### ADVISING

All students pursuing teaching certificates are strongly encouraged to seek early advising from the Office of Student Affairs in the College of Education, 480-965-5555. Careful planning and early advising in developing an approved program of study are essential if teacher candidates are to complete certification and graduation requirements within the typical 120-semester-hour undergraduate degree program.

**Mandatory Advising.** Transfer students are required to meet with an academic advisor before registering for their first semester classes. Freshmen must meet with an advisor before registering for each of their first two semesters.

### DEGREES

#### Bachelor of Arts in Education

The faculty in the College of Education offer the Bachelor of Arts in Education (B.A.E.) degree. See the "College of Education Baccalaureate Degrees and Majors" table, page 179, for more information. Candidates for the Bachelor of Arts in Education degree must complete the Professional Teacher Preparation Program (PTPP) offered by the College of Education. Graduates of this program are able to 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.

Each student in the PTPP selects one of ten programs that provide specialized education and preparation. The program areas are:

1. Apprentice Teacher Program (ATP)
2. Bilingual Education (K-8)/English as a second language (BLE/ESL)
3. Diné Teacher Education Program
4. Early Childhood Interprofessional Program (birth-third grade)
5. Elementary Education
6. Secondary Education Professional Teacher Preparation (SED) (7-12)

7. Special Education Professional Teacher Preparation (SPE)
8. *Teaching for a Diverse Future* (TDF)
9. Integrated Certification in Teacher Education (INCITE)
10. Teacher Education for Arizona Mathematics and Science (TEAMS)

**Apprentice Teacher Program (ATP).** ATP is a fast-track certification option that is completed in one calendar year, January through December, with all course work based in the 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 premises that undergird the ATP program might be called "practice informed by theory" as students are immersed in both "school" and "teacher" cultures throughout their program. Admission for spring semester only.

**Bilingual Education (K-8)/English as a Second Language (BLE/ESL).** The Bilingual/ESL 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 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 Dine 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. Graduates qualify for an initial teaching certificate for elementary education and an Arizona endorsement in bilingual education. For more information, call 520-724-6819.

**Early Childhood Interprofessional Program (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.



Ira D. Payne Education Hall

Marco Fernandez photo

**Elementary Education Partnership Program.** 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 ESL certificate.

**Secondary Education Professional Teacher Preparation (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 25 subject specializations. Fine arts and physical education majors receive a K–12 endorsement.

**Special Education Professional Teacher Preparation (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 disability area; however, the certificate the student qualifies for will be determined by their student teaching placement. A school internship is required for each semester. The program is accredited by the Council for Exceptional Children.

**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 cognatist 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. Only available in specific fall semesters.

**Integrated Certification in Teacher Education (INCITE).** Integrated Certification in Teacher Education is a flexible program that prepares working adults for teaching. This school-based program offers both secondary education and elementary education options, including a middle school endorsement. All course work, including authentic

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 78. For graduation requirements, see "University Graduation Requirements," page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 51.

field experience with children, is offered during the evening and on weekends

**Teacher Education for Arizona Mathematics and Science (TEAMS).** TEAMS is a year long, middle grades program leading to secondary certification, middle school endorsement, and a Master's Degree specializing in mathematics, science, and technology. It is based around technology, field based experiences, internships, and course work.

#### **PTPP Certification Areas or Endorsements**

- Elementary Education
  - bilingual education
  - English as a second language
- Secondary Education
  - certification in specific academic specializations
  - K-12 endorsements in fine arts and physical education
- Special Education
  - emotionally disabled
  - learning disabilities
  - mental retardation

PTPP students in areas other than Special Education complete a common core of courses as well as courses specific to the area or option selected. Early Childhood Education and Elementary Education prepare students for certification by the state in grades K-8. Students who select these majors develop the knowledge and skills needed to teach children from a variety of language, cultural, and developmental backgrounds. The Early Childhood Education concentration prepares students to work in infant programs, preschools, and grades K-3. The Elementary Education bilingual education/English as a second language (ESL) concentration prepares students to work in bilingual/ESL settings in grades K-8. The Special Education major prepares students to teach mildly handicapped students in diverse settings and for certification in grades K-12 in MR, ED, or LD.

Secondary Education offers programs that prepare students for certification by the state in specific academic subjects in grades 7-12. Students with teaching majors in the Herberger College of Fine Arts earn the appropriate bachelor's degree from that college.

Courses for the academic specialization are determined by the faculty in the academic discipline. Therefore, students with majors in Secondary Education have two academic advisors: one in the college and department of the academic specialization and one in the Office of Student Affairs in the College of Education. For more information, refer to "Academic Specializations," page 185.

#### **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 74.

#### **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 78. Note that all three General Studies awareness areas are required. General Studies courses are listed in the "General Studies Courses" table, page 81, 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 PTPP. Students are encouraged to consult with an academic advisor to ensure they comply with all necessary requirements.

#### **COLLEGE DEGREE REQUIREMENTS**

A minimum of 120 semester hours are required for the B.A.E. degree in these categories:

1. academic specialization (secondary education);
2. college core requirements (Early Childhood Education, Elementary Education, and Special Education majors only) and
3. PTPP

The College of Education expects its 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 182.

#### **Program Requirements**

Progress toward the B.A.E. degree involves meeting university, college, and division requirements. 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 PTPP.

#### **MAJOR REQUIREMENTS**

##### **Academic Specialization**

Courses in the academic specialization give students a greater depth of knowledge in one academic area. A Secondary Education major completes 36 to 60 hours, depending upon the area, in the subject in which the student wishes to be certified; fine arts may require more. Refer to the pages shown in the "Academic Specializations" table, page 185.

##### **College of Education Core Requirements**

The programs that prepare students for teacher certification by the state in elementary education, early childhood education, and special education require students to complete semester hours selected from specific core courses pertinent to the teaching area. Teacher candidates should confer with an academic advisor in the Office of Student Affairs regarding course selection.

##### **Professional Teacher Preparation Program (PTPP)**

The PTPP is a four-semester sequential program consisting of 36 to 38 semester hours. Ranging from nine to 16 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 the PTPP courses, students continue completing the General Studies requirement and core requirements or academic specialization requirements through the third semester of the program.

**Selected Studies in Education—B.A.E.**

Applications are not being accepted for the major in Selected Studies in Education at this time.

**Field Experience Requirements**

In addition to course work, students admitted to the PTPP 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*.

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 fourth semester of the PTPP and is a full day, full semester obligation. Student teaching is usually possible only during fall and spring semesters.

**Admission to Student Teaching (Semester IV).** To be admitted to student teaching a student must have attained a high level of professional standards in previous field experience assignments and meet the following requirements:

1. be in good standing as defined in this policy;
2. completion of any provisional admissions requirement;
3. have no incompletes in PTPP courses;
4. complete all PTPP courses; and
5. have an approved declaration of graduation on file.

There are additional requirements for certain programs. Secondary Education majors may have no more than two required courses remaining in the academic specialization and have no more than two courses to complete in General Studies. Students must also receive approval from their specialization advisor.

Elementary and Special Education majors must have completed all core courses, all methods courses, and may only have two additional courses to complete.

Students must complete the application procedure and approval to student teach from the Office of Professional Field Experiences (EDB L1 14, 480/965 6255) at least 12 weeks before the beginning of the student teaching term. 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 placement schools. 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 course work that would interfere with the heavy demands placed upon them while student teaching.

**Academic Specializations**

Academic Specialization	Page
Art education <sup>1</sup>	272
Biological sciences	341
Business education	
Chemistry	347
Chinese <sup>2</sup>	388
Dance education <sup>1</sup>	286
Economics <sup>3</sup>	
English	355
Family and human development (home economics) <sup>2</sup>	364
French	388
Geography	368
German	388
History	376
Japanese	388
Journalism	479
Mathematics	404
Mathematics chemistry	404
Mathematics physics	404
Music <sup>4</sup>	291
Physical education	361
Physics	421
Physics chemistry	421
Political science	433
Russian <sup>2</sup>	388
Social studies	446
Spanish	388
Theatre education <sup>3</sup>	305

<sup>1</sup> Art education and dance education concentrations are under corresponding B.F.A. majors.

<sup>2</sup> Applications are not being accepted at this time.

<sup>3</sup> See an advisor for details.

<sup>4</sup> Students focus on either the choral general music or instrumental music concentration under the B.M. degree.

**NOTE:** For the General Studies requirement courses and codes (such as L, SQ, C, and H) see General Studies, page 78. For graduation requirements see University Graduation Requirements, page 74. For an explanation of additional omnibus courses offered but not listed in this catalog, see Classification of Courses, page 51.

## ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and the region. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges 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 683, or access the Web site at [www.asu.edu/ved](http://www.asu.edu/ved).

## ACADEMIC STANDARDS

### Preprofessional Status

Students admitted to the College of Education *en pro fessi mal st itus* 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 do not necessarily qualify for admission to any teacher preparation program offered by the College of Education.

### Professional Program Status

Students admitted to the PTPP 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 PTPP standards are higher than those for the university, a student who is suspended from the PTPP may still be eligible to enroll in other non-PTPP courses.

A copy of the Retention and Disqualification Policy for the PTPP may be obtained from the Office of Student Affairs, 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 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 whether they can succeed in the teaching profession are reviewed by the director of the Office of Professional Field Experiences and the director of the Division of Curriculum and Instruction. 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 or the Main Campus Standards Committee. 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.

## Postbaccalaureate Programs

Postbaccalaureate programs prepare students for certification by the state and are designed for those who hold a bachelor's degree in an area other than education. The college offers postbaccalaureate programs in early childhood education, elementary 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. Information on postbaccalaureate programs is available through the Office of Student Affairs, 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 entry must meet the College of Education admission requirements for postbaccalaureate programs:

1. an earned bachelor's degree from an accredited institution
2. a cumulative GPA of 2.50 or higher for the last 60 semester hours of credit earned;
3. submission of a completed application form and supporting materials by the appropriate deadline dates during the semester before admission, and
4. completion of an academic specialization for secondary education (consult the Office of Student Affairs, EDB L1 13).

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-5 or secondary education programs (7-12) should consult the Office of Student Affairs in the College of Education (480 965 5555) to determine if there are additional admission requirements for their teaching fields.

Application deadlines are February 1 for fall admission and September 1 for spring admission. Applicants should contact the Office of Student Affairs for an application.

## Student Teaching

Students in a postbaccalaureate program for initial teacher certification must file student teaching applications early in the semester before the student teaching term. Application deadlines are September 15 for spring semester and February 1 for fall semester. To be accepted for student teaching, students must:

1. attain a cumulative ASU GPA of 2.50 or higher in required professional education coursework;
2. complete all required professional education coursework other than one preapproved course that can be taken concurrently with student teaching (Secondary Education students must also receive approval from their academic specialization advisors).

3. remove all academic deficiencies such as grades of "D," "E," or "I" before placement, and
4. obtain a final approval from the Office of Professional Field Experiences (this review considers appropriate professional conduct and satisfactory performance in field settings and academic achievement).

### Certification for Teaching

The curricula for both the undergraduate and postbaccalaureate teacher education 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. Some teaching areas have specific math, science, and fine arts requirements. 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 Affairs 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 Affairs maintains information about current certification requirements in Arizona and other states. This information includes fingerprint clearance and passing the Arizona Educator Proficiency Assessment.)

The College of Education also offers courses for certified teachers leading to special endorsements by the Arizona Department of Education. Of special interest are endorsements in the areas of bilingual education, English as a second language (ESL), middle school education, reading, and school library science. The bilingual education endorsement is required of all teachers specifically responsible for providing bilingual instruction. The ESL endorsement is required of all teachers specifically responsible for providing ESL instruction. Students should contact the Office of Student Affairs for information and advising regarding teaching concentrations or special teaching endorsements.

### 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.

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## Division of Curriculum and Instruction

Nicholas Appleton

Director

(ED 426) 480/965-1644

[www.ed.asu.edu/coe/candi](http://www.ed.asu.edu/coe/candi)

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### PROFESSORS

BAKER, BARONE, BATTER, CHRISTIE, EDELSKY, FALTS, FLORES, GRYDER, GUZZETT, HUDELSON, MCGOWAN, McISAAC, PIBURN, RUTHERFORD, SEARFOSS, STAHL, STALEY, ZUCKER

### ASSOCIATE PROFESSORS

ARIAS, BENAVIDES, BLUMENFELD-JONES, COHEN, COHN, D'GANG, GOMEZ, McCOY, MDDLETON, RADER, SMITH, SURBECK, VALLEJO

### ASSISTANT PROFESSORS

ANJAN, FOSCHMAN, LAMOREY, MacSWAN, McQUILLAN, ROBERTS, ROLSTAD, TRUJILLO, TSE, YOUNG

### CLINICAL ASSOCIATE PROFESSOR

GARCIA

### CLINICAL ASSISTANT PROFESSOR

CHRISTINE

### LECTURERS

BURSTEIN, COCCARELLA, GLASS, KORTMAN, SPANAS

### Professional Teacher Preparation Programs

Apprentice Teacher Program (ATP)  
 Bilingual Education (K-8)/English as a Second Language (BLE/ESL)  
 Diné Teacher Education Program  
 Early Childhood Interprofessional Program (birth-third grade)  
 Elementary Education Partnership Program  
 Integrated Certification in Teacher Education (INCITE)  
 Secondary Education Professional Teacher Preparation (SED) (7-12)  
 Special Education Professional Teacher Preparation (SPE)  
 Teacher Education for Arizona Mathematics and Science (TEAMS)  
 Teaching for a Diverse Future (TDF)

Degrees: B.A.E., M.A., M.Ed., Ed.D., Ph.D.

### DEGREES

#### 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 early childhood,

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**NOTE:** For the General Studies requirement, courses and codes such as L, SQ, C, and H, see General Studies, page 78. For graduation requirements, see University Graduation Requirements, page 74. For an explanation of additional campus courses offered but not listed in this catalog, see Classification of Courses, page 51.

elementary, secondary and special education settings. Concentrations available at the undergraduate level include bilingual education, English as a second language (ESL) and Indian education. Programs in special education lead to Arizona teacher certification in the mentally disabled, emotionally disabled, learning disabilities, and early childhood education for the disabled. 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 of Curriculum and Instruction offer several graduate degrees in a number of majors.

See "College of Education Graduate Degrees and Majors" table, page 180, and the *Graduate College*

### BILINGUAL EDUCATION (BLE)

#### BLE 335 Language Diversity in Classrooms. (3)

*fa and spring*

Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction curriculum assessment and language policy. Lecture/discussion. *ab* Corequisites: RDG 414 481

#### BLE 400 Principles of Language Minority Education. (3)

*fa and spring*

Overview of phonology and theoretical foundations of bilingual education and ESL modes of instruction. Other topics include significant aspects and judicious measures. Lecture/seminar/discussion. Prerequisite: PTPP admission

#### BLE 409 Language-Sensitive Content Teaching. (3)

*fa and spring*

For preservice students seeking K-8 certification and the endorsement in bilingual education or ESL. Lecture/discussion. Prerequisite: PTPP admission

#### BLE 414 Reading Methods, Management, and Assessment in BLE/ESL Settings. (3)

*fa 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/discussion. Prerequisite: PTPP admission

#### BLE 420 Science Methods, Management, and Assessment in BLE/ESL Settings. (3)

*fa and spring*

Methods, management strategies and assessment procedures for teaching science to BLE/ESL students in elementary schools. Lecture, discussion. Prerequisite: PTPP admission

#### BLE 433 Language Arts Methods, Management, and Assessment in Elementary BLE/ESL Settings. (3)

*fa and spring*

Sociocultural factors and written first and second language acquisition and congruent teaching, management, assessment practices in BLE/ESL settings. Lecture/discussion. Prerequisite: PTPP admission

#### BLE 455 Social Studies Methods, Management and Assessment in Elementary BLE/ESL Settings. (3)

*fa and spring*

Examines methods, classroom management strategies and assessment techniques for social studies instruction in elementary BLE/ESL classes. Lecture/discussion. Prerequisite: PTPP admission

#### BLE 478 Student Teaching in the Elementary School. (3-15)

*fa and spring*

Supervised teaching in the area of specialization. Synthesized experience in curriculum, instruction and classroom management in a BLE/ESL setting. Fee. Prerequisite: PTPP admission

#### BLE 480 Mathematics Methods, Management, and Assessment in Elementary BLE/ESL Settings. (3)

*fa and spring*

Teaching, management and assessment of mathematics in K-8 BLE/ESL settings. Lecture/discussion. Prerequisite: PTPP admission

#### BLE 481 Reading Practicum. (3)

*fa and spring*

Application of concepts from BLE 414. Supervised classroom-based experiences in teaching reading to BLE/ESL students. Prerequisite: PTPP admission

#### BLE 496 Field Experience. (0)

*fa and spring*

Application of course content in a bilingual ESL school setting. Emphasis on observation, pupil management, planning and delivering instruction and assessment. Fee. Prerequisite: PTPP admission

#### BLE 498 Pro-Seminar. (1-7)

*fa and spring*

Small group study and research for advanced students with their majors. Prerequisites: PTPP admission, major status in the department or instructor approval

#### BLE 511 Introduction to Language Minority Education. (3)

*once a year*

Historical, philosophical, theoretical, and pedagogical foundations of language minority education in the United States.

#### BLE 514 Bilingual/Multicultural Aspects of Special Education. (3)

*spring*

Theories and issues related to the education of bilingual and culturally diverse exceptional children.

#### BLE 515 Instructional Methods for Bilingual Students. (3)

*fa*

Introduction to general dual language teaching approaches and assessment strategies. Focuses on the effective teaching of limited English proficient populations. Prerequisite: BLE 511

#### BLE 520 ESL for Children. (3)

*spring*

Examines approaches to second language development and assessment for children congruent with recent research in second language acquisition in children. Prerequisite: BLE 511

#### BLE 521 Primary/Elementary Communication Arts in Bilingual Education. (3)

*spring*

Examination of bilingual biterate development of elementary school children, bringing together native and second language language and literacy development findings with educational practices. Prerequisite: BLE 511

#### BLE 522 Literacy/Biliteracy Development. (3)

*fa*

Examines teachers with first and second language literacy research practice and assessment in elementary school settings (Spanish English emphasis). Lecture/discussion. Cross-listed as RDG 522. Credit is awarded for only BLE 522 or RDG 522. Prerequisite: BLE 511

#### BLE 524 Secondary Sheltered ESL Content Teaching. (3)

*fa*

Teaching and assessing ESL adolescents in the content areas with an emphasis on integrating language acquisition principles with content learning. Lecture/seminar/group work. Corequisite: BLE 541

#### BLE 528 Social Studies for Bilingual/ESL Teachers. (3)

*spring*

Provides language and instructional methodologies and assessment strategies relevant to bilingual multicultural students in social studies content delivered in Spanish and English. Prerequisite: BLE 511

#### BLE 533 Literacy in Secondary BLE/ESL Settings. (3)

*spring*

Examines first and second language literacy research practice and assessment across content areas in secondary school settings. Lecture/discussion. Cross-listed as RDG 533. Credit is awarded for only BLE 533 or RDG 533. Prerequisite: BLE 511

#### BLE 535 Sociolinguistic Issues in Bilingual Education. (3)

*fa*

Survey of major theoretical issues (e.g., language status, communication competence, language attitudes) interrelating language, social processes and bilingual education. Prerequisite: BLE 511

#### BLE 541 Nature of Bilingualism/Second Language Acquisition. (3)

*once a year*

Bilingual and second language acquisition with emphasis on children and adolescents. Stresses cognitive, social and cultural aspects. Prerequisite: BLE 511



**BLE 543 Bilingual Education Models. (3)**

*once a year*

Bilingual education programs in other countries; analysis of political, social, economic, and educational implications; practice in planning bilingual education curricula. See also offerings under MCE, SED, SPE, and SPF. Prerequisite: BLE 511.

**BLE 561 Parent Involvement in Language Minority Education Programs. (3)**

*fall and spring*

Examines issues, approaches, and strategies for improving parental and community involvement in the schooling of language minority children and youth. Prerequisite: BLE 511.

**BLE 565 Literature for Hispanic Youth/Literatura para Jóvenes Hispanoparlantes. (3)**

*spring*

Selects analyzes and utilizes literature for Hispanic and Spanish speaking children and adolescents. Cross-listed as L S 565. Credits allowed for only BLE 565 or L S 565.

**BLE 580 Practicum. (1-6)**

*fall and spring*

Provides for practical application in school settings of principles of BLE/ESL. Special permission required.

**BUSINESS EDUCATION (BUE)**

**BUE 480 Teaching Business Subjects. (3)**

*spring*

Organization and presentation of appropriate content for business subjects in the secondary school.

**BUE 481 Technology in Business and Vocational Education. (3)**

*spring in even years*

Emerging curricula and instructional technology in business and vocational education. Lecture/hands-on computer instruction.

**BUE 501 Principles of Business Education. (3)**

*fall*

History, philosophy, principles, and objectives of business and distributive education.

**BUE 502 Organization and Management of Cooperative Programs. (3)**

*fall*

Work study programs for business occupations in high schools and community colleges.

**BUE 503 Competency-Based Business and Vocational Education. (3)**

*spring*

Development and administration of competency-based individualized programs in business and vocational education.

**BUE 505 Current Literature in Business and Vocational Education. (3)**

*spring*

Critical analyses, generalizations, and trends in business and vocational education.

**BUE 506 Information Processing for Business and Vocational Teachers. (3)**

*summer*

Development of curriculum and strategies for teaching information processing; hardware/software evaluation and equipment acquisition on technology in business and vocational education.

**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 PTPP observation and mediated participation in a school setting. Focus on observation of development, learning, management, instruction, assessment, and motivation. 4 hours required per week. Fee. Corequisite: semester of the PTPP.

**DCI 397 Field Experience II. (0)**

*fall*

Second semester PTPP observation and mediated participation in a school setting. Focus on observation of development, learning, management, instruction, assessment, and motivation. 6 hours required per week. Fee. Corequisite: semester I of the PTPP.

**DCI 510 Teacher as Researcher. (3)**

*fall, spring, summer*

Introduces teacher research as a new research genre; offers teachers guidance on planning and conducting research on the practice. Lecture/workshop.

**DCI 591 Seminar. (1-12)**

*not regularly offered*

**DCI 701 Curriculum Theory and Practice. (3)**

*fall and spring*

Curriculum theory and practice as a field of study; its current orientations and applications; modes of inquiry and community of scholars and practitioners. Seminar. Corequisite: master's-level curriculum course.

**COLLEGE OF EDUCATION (COE)**

See the *Graduate Catalog* for the COE courses.

**COUNSELING PSYCHOLOGY (CPY)**

See the *Graduate Catalog* for the CPY courses.

**EDUCATIONAL ADMINISTRATION AND SUPERVISION (EDA)**

See the *Graduate Catalog* for the EDA courses.

**HIGHER AND POSTSECONDARY EDUCATION (HED)**

See the *Graduate Catalog* for the HED courses.

**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: PTPP 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 aspects of development of children, birth through age eight, with implications for teachers and parents. Classroom observation and participation required.

**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: PTPP 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.

**NOTE:** For the General Studies requirement courses, and codes such as L, SQ, C, and H) see "General Studies" page 78. For graduation requirements see University Graduation Requirements, page 74. For an explanation of additional omnibus courses offered but not listed in this catalog see "Classification of Courses" page 51.

**ECD 400 Inquiry Into Teaching and Learning. (3)***fa and spring*

Foundational basics of the early childhood field including historical roots, current practices, ethics, models of teaching, and application in early childhood settings. Prerequisite: PTPP admission.

**ECD 401 Integrated Curriculum and Assessment: Social Studies and Creative Arts. (3)***fa 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: PTPP admission.

**ECD 402 Integrated Curriculum and Assessment: Math and Science. (3)***fa and spring*

Emphasizes developmentally appropriate educational strategies and instructional techniques in teaching mathematics and science to children in preschool through 3rd grade with an integrated curriculum approach. Prerequisite: PTPP admission.

**ECD 403 Educational Environments: Preschool/Kindergarten/Primary Grades. (3)***fa and spring*

Focuses on interactions between young learners and the physical and social environments encountered in preschool, kindergarten, and primary settings. Prerequisite: PTPP admission.

**ECD 404 Teaching Reading and Language Arts in Early Childhood. (3)***fa 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: PTPP admission.

**ECD 405 Practicum in Teaching Reading and Language Arts in Early Childhood. (2)***fa 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: PTPP admission.

**ECD 414 Interprofessional Practicum. (3)***fa and spring*

Investigates services and agencies available in the local community to parents of children with special needs. Practical experiences with an interdependent seminar format. Dispositions: knowledge, experiences, and skills necessary for interprofessional collaboration across multiple agencies and programs. Prerequisite: PTPP admission.

**ECD 496 Field Experience. (0)***fa and spring*

Apples course content in a preschool through 3rd grade setting. Emphasis on observation, focus on child-centered curriculum planning and delivering instruction, and assessment. Fee. Corequisite: ECD 404.

**ECD 501 Interprofessional Collaboration. (3)***fa*

Dispositions, knowledge, experiences, and skills necessary for interprofessional collaboration required of professionals who work with multigenerational families with young children. Prepares students to implement effective strategies and workable plans to support interprofessional collaboration for providing integrated services to young children and their families.

**ECD 521 Primary/Elementary Communication Arts in Bilingual Education. (3)***spring*

Examines bilingual/iterate development of elementary school children bringing together native and second language, oral language and literacy development findings with educational practices. Prerequisite: BLE 511.

**ECD 522 Developmental Social Experiences in Early Childhood Education. (3)***fa*

Materials, techniques, aesthetic expression, creative activities, and values in the integrated curriculum.

**ECD 525 Emergent Literacy. (3)***spring*

Examines recent research on language and literacy development and effective strategies for teaching language and literacy in kindergarten to grade 3. Lecture, discussion. Cross-listed as RDG 525. Credit awarded for only ECD 525 or RDG 525.

**ECD 527 Mathematics in Early Childhood Education. (3)***fa*

Theory and practice in the use of manipulatives for teaching mathematics to preschool and primary grade children. Prerequisite: ECD 402 or its equivalent.

**ECD 544 Play Education. (3)***spring and summer*

Theories of play and the educational implications of each. Practical applications at the early childhood level.

**ECD 555 Modern Practices in Early Childhood Education. (3)***fa and summer*

Trends and practices, instructional and resource materials, and methods and techniques in early childhood education.

**ECD 601 Theories and Issues in Early Childhood Education. (3)***fa and summer*

Current theories and issues in early childhood education. Presents issues of early childhood best practices, policy, theory, research, and evaluation that are significant to the early childhood profession. Highlights building on the child development conceptual framework as related to theory and practice.

**ECD 733 Social and Emotional Development. (3)***one year*

Inquiry into the social and emotional development dynamics in children such as peer relationships, self-concept, and parenting processes with implications for teachers.

**ECD 744 Evaluative Procedures: Young Children. (3)***spring*

Critical examination and use of developmentally appropriate evaluative procedures for children from birth through age 8.

**ELEMENTARY EDUCATION (EED)****EED 334 Children's Literature and Elementary School Curriculum. (3)***fa 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 awarded for only EED 334 or RDG 334. Prerequisite: professional program admission. Corequisite: DC 396 or EED 496.

**EED 420 Science Methods, Management, and Assessment in the Elementary School. (3)***fa and spring*

Examines philosophy of science and how these relate to the implementation, management, and assessment of science teaching. Lecture, discussion, lab. Fee. Prerequisite: PTPP admission.

**EED 433 Language Arts Methods, Management, and Assessment in the Elementary School. (3)***fa 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)***fa 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: PTPP admission.

**EED 455 Social Studies Methods, Management, and Assessment in the Elementary School. (3)***fa and spring*

Teaching methods, classroom management strategies, and assessment techniques for social studies instruction in the elementary grades. Lecture, discussion, lab. Prerequisite: PTPP admission.

**EED 478 Student Teaching in the Elementary School. (3-15)***fa and spring*

Supervised teaching in the area of specialization. Synthesized experience in curriculum, instruction, and classroom management. Fee. Prerequisite: PTPP 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: PTPP admission.

**EED 496 Field Experience. (0)**

*fall and spring*

Application of course content to a K-8 school classroom. Emphasis on observation, pupil management planning and delivery of instruction and assessment. Fee.

**EED 498 Pro-Seminar. (1-7)**

*not regularly offered*

Possible topics

- (a) Language and Learning (3)  
General Studies: L

**EED 511 Principles of Curriculum Development. (3)**

*fall spring summer*

Contemporary curriculum theories. Curriculum as an interrelated entity. Principles of concept change and effecting change.

**EED 526 Communication Arts in the Elementary School. (3)**

*spring and summer*

Critical examination of school language arts teaching, focusing on the societal assumptions regarding oral and written language development.

**EED 528 Social Studies in the Elementary School. (3)**

*fall and summer*

Problems and trends of current programs. Development of a balanced and articulated program for social studies.

**EED 529 Science in the Elementary School. (3)**

*spring*

Problems and trends of current programs. Development of a balanced and articulated science program.

**EED 530 Outdoor/Environmental Education. (3)**

*summer*

Use of various outdoor settings as laboratories for classroom related experience. Study, observation, inquiry, research and recreation. Includes strategies and materials for developing environmental literacy.

**EED 537 Mathematics in the Elementary School. (3)**

*fall and summer*

Contemporary mathematics teaching. Content materials, and approaches to instruction.

**EED 538 Teaching Social Studies with Literature. (3)**

*fall and summer*

Develops the rationale, resources and strategies for adopting a literature-based approach to social studies teaching in grades K-8. Lecture/discussion on cooperative learning. Prerequisite: EED 455 or its equivalent.

**EED 578 Student Teaching in the Elementary School. (9-15)**

*fall and spring*

Supervised teaching for postbaccalaureate students. Synthesized experience in curriculum instruction and classroom management. Fee. Prerequisites: completion of 21 hours of defined coursework from an approved program of study, GPA of 2.50 postbaccalaureate nondegree or 3.00 postbaccalaureate degree. Approval of the Office of Professional Field Experiences.

**EED 581 Diagnostic Practices in Mathematics. (3)**

*fall and spring*

Specific skills in diagnosing and treating children's learning difficulties in mathematics. Includes practical experiences both on and off campus in identifying strengths and weaknesses and implementing them. Prerequisite: instructor approval.

**EED 584 Internship. (1-12)**

*not regularly offered*

**EED 598 Special Topics. (1-4)**

*not regularly offered*

Possible topics

- a) Using Math Manipulatives in Elementary Schools  
Fee
- b) Using Math Manipulatives in Middle Schools  
Fee

**EED 720 Language in Education. (3)**

*once a year*

Sociolinguistic seminar on language issues in education including language acquisition, classroom interaction, language attitudes related to language and class/gender/ethnicity.

**INDIAN EDUCATION (IED)**

**IED 401 Navajo Language and Culture I. (3)**

*fall*

History and culture are added components to the introduction of Navajo reading, writing and speaking. Emphasis on basic communication and appreciation of history and culture. Lecture, discussion.

**IED 403 Navajo Language and Culture II. (3)**

*spring*

Emphasis on communication, grammar and sentence structures. Translations, reading, writing and discussions of proper and standard 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. 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. Experimental on 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. 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. Experimental 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 and state policy, federal, 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 historical and present influence of this tradition of factors. Credit awarded 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, dispersal, and survival. General Studies: HU, SB, C, H.

**IED 498 Pro-Seminar. (1-7)**

*fall and spring*

Possible topics

- a) 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. Emphasis on development of reading, writing, and speaking skills.

**NOTE:** For the General Studies requirement courses and codes see L, SQ, C and H see General Studies page 78. For graduation requirements, see University Graduation Requirements page 74. For an explanation of additional omnibus courses offered but not listed in this catalog see "Classification of Courses" page 51.

**IED 500 Administration and Management of Indian Education Programs. (3)***fa*

Emphasis on educational leadership research and practice in the schooling of American Indian students. Examines effective practices.

**IED 510 History of American Indian Education. (3)***fa and spring*

Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society.

**IED 530 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 sociolinguistic and language reclamation perspective.

**IED 544 The Role of Governments in Native Education Policy and Administration. (3)***fa*

Examines the interrelationship of federal Indian policy, federal 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 these traditional factors. Credit awarded for only IED 444 or 544. Lecture/seminar.

**IED 560 Yaqui History and Culture. (3)***fa*

Yaqui history and culture ranging from precontact to the present. Larger themes of Yaqui identity, belief systems, family traditions, community, resistance, dispersal, and survival.

**IED 594 Workshop in Indian Education. (6)***summer*

Examines curriculum, pedagogy, community involvement, current issues, and research.

**LIBRARY SCIENCE (LIS)****LIS 410 Children's Literature. (3)***fa, spring, summer*

Selects, analyzes, and utilizes modern and classic literature with young readers.

**LIS 510 Computers and Technology in the School Library. (3)***fa*

Library uses of technology and computers. Fundamental concepts and issues in library media centers. Prerequisites: both LIS 571 and 581 or on-site instructor approval.

**LIS 533 Current Library Problems. (3)***fa*

Critical analysis of current practices and problems in school librarianship. Prerequisites: a combination of LIS 540 and 561 and 571 and 581 or on-site instructor approval.

**LIS 540 Classification and Cataloging. (3)***fa*

Descriptive cataloging and Dewey Decimal Classification of print and nonprint library materials.

**LIS 561 Selection of Library Materials. (3)***fa*

Principles and procedures used in the selection of materials for the school library.

**LIS 563 Children's Literature. (3)***fa, spring, summer*

Selects and uses children's literature and related nonprint media to support the elementary school curriculum. Credit awarded for only LIS 563 or RDG 563.

**LIS 565 Literature for Hispanic Youth/Literatura para Jovenes Hispanoparlantes. (3)***spring*

Selects, analyzes, and utilizes literature for Hispanic and Spanish speaking children and adolescents. Credit awarded for only BLE 565 or LIS 565.

**LIS 571 Basic Reference Resources. (3)***spring*

Provides reference services in the school library. Content and use of basic resources.

**LIS 581 School Library Administration. (3)***spring*

Administrative roles of K-12 libraries and media centers.

**LIS 584 School Library Internship. (1-6)***fa and spring*

Prerequisites: LIS 410, 540, 561, 571, 581, instructor approval.

**MULTICULTURAL EDUCATION (MCE)****MCE 446 Understanding the Culturally Diverse Child. (3)***once a year*

Survey of cultural and linguistic diversity in American education including educational equity, pluralism, learning styles, and roles of schools in a multicultural society.

*General Studies, C***MCE 447 Diversity in Families and Communities in Multicultural Settings. (3)***fa and spring*

Diversity and the changing role of schools in a multicultural society. Lecture/seminar/online activities/discussion.

**READING EDUCATION (RDG)****RDG 301 Literacy and Instruction in the Content Areas. (3)***fa, spring, summer*

Required course for a Secondary Education candidate. Introduces theory and instructional strategies for learning written and oral texts across academic disciplines. Prerequisite: PTPP admission.

**RDG 334 Children's Literature and Elementary School Curriculum. (3)***fa 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 awarded for only EED 334 or RDG 334. Prerequisite: professional program admission. Corequisite: DC 396 or EED 496.

**RDG 414 Teaching Reading/Decoding. (3)***fa 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: PTPP admission.

**RDG 481 Reading Practicum. (3)***fa, spring, summer*

Applies concepts from RDG 414 in classroom settings. Students demonstrate teaching strategies under supervision. Required for Elementary Education candidate. Prerequisite: PTPP admission.

**RDG 494 Special Topics. (1-4)***fa and spring*

Possible topics:

a. Reading Decoding, 3

**RDG 505 Developmental Reading. (3)***fa, spring, summer*

For classroom and special reading teachers. Specific professional skills in decoding, comprehension, and evaluation. Required for Special Reading Endorsement. Prerequisite: teaching certificate.

**RDG 507 Content Area Literacy. (3)***fa, spring, summer*

Theory, teaching strategies, and practical application concerning learning from text across subject matter disciplines.

**RDG 522 Literacy/Billiteracy Development. (3)***fa*

Acquaints teachers with first and second language literacy research, practice, and assessment in elementary school settings. Spanish English emphasis. Lecture/discussion. Cross-listed as BLE 522. Credit awarded for only BLE 522 or RDG 522. Prerequisite: BLE 511.

**RDG 525 Emergent Literacy. (3)***spring*

Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3. Lecture/discussion. Cross-listed as ECD 525. Credit awarded for only ECD 525 or RDG 525.

**RDG 530 Research Issues in Literacy. (3)***spring, odd year*

For graduate students interested in research on major issues related to literacy instruction. Seminar activities include reviewing quantitative and qualitative methods and analyzing literacy research. Prerequisite: COE 511 or DC 510 or EDP 502.

**RDG 533 Literacy in Secondary BLE/ESL Settings. (3)**

*spring*  
Examines first and second language literacy research practice and assessment across content areas in secondary school settings. Lecture/discussion. Cross-listed as BLE 533. Credits awarded for only BLE 533 or RDG 533. Prerequisite: BLE 511.

**RDG 544 Adolescent Literacy Programs for New Times. (3)**

*not regularly offered*  
Theories, strategies and issues in developing implementing and assessing approaches to literacy instruction for today's diverse adolescent students (grades 7–12). Prerequisite: RDG 507 or instructor approval.

**RDG 550 Practicum Experiences in Elementary and Secondary Reading. (3)**

*spring and summer*  
Practicum experience utilizing assessment and instructional techniques for classroom settings. (See RDG 557 for State of Arizona reading endorsement. Lab. Prerequisite: RDG 505 (or its equivalent).

**RDG 556 Assessment and Procedures in Elementary and Secondary Reading. (3)**

*fall*  
Techniques for classroom and clinical reading assessment and instruction. Emphasis on continuous assessment. May be taken concurrently with RDG 557. Recommended for State of Arizona reading endorsement. Lecture/lab. Prerequisite: RDG 505.

**RDG 557 Advanced Elementary and Secondary Reading Practicum. (3)**

*spring and summer*  
Advanced practicum experience utilizing specialized reading and other assessment and instructional techniques for classroom and clinical settings. Lab sections. Recommended for State of Arizona reading endorsement. May be taken concurrently with RDG 556. Lab. Prerequisite: RDG 505, instructor approval.

**RDG 563 Children's Literature. (3)**

*fall spring summer*  
Selects and uses children's literature and related nonprint media to support the elementary school curriculum. Cross-listed as LIS 563. Credits awarded for only LIS 563 or RDG 563.

**RDG 581 Literature-Based Reading Programs. (3)**

*fall spring summer*  
For classroom and specialized reading teachers. The role of literature in the acquisition and development of literacy. Specific suggestions for helping students learn to read and/or expand the reading ability with literature. Introduction to literature studies. Prerequisite: teaching certification.

**RDG 582 Practicum: Literature Studies. (3)**

*spring*  
Practical application of literature study group principles in field sites or through on-campus simulations. Lecture/supervised practice. Prerequisite: RDG 581 or instructor approval.

**RDG 596 Gender, Culture, and Literacies. (3)**

*spring*  
Influence of gender and culture on written oral and post-typographic texts. Seminar.

**RDG 630 Research in Literacy. (3)**

*not regularly offered*  
For advanced graduate students interested in applied research problems, literature of literacy instruction, and major issues related to literacy research. Prerequisite: instructor approval.

**SECONDARY EDUCATION (SED)**

**SED 400 Principles of Effective Instruction in Secondary Education. (3)**

*fall spring summer*  
Examines different modes of education. Develops and applies appropriate teaching practices for each model to secondary school classrooms. Lecture/discussion. Prerequisite: PTPP admissions.

**SED 403 Principles, Curricula, and Methods. (3)**

*fall spring summer*  
Advanced level of development of knowledge and skills of instructional planning and methods of teaching and evaluation in the secondary school. Requires observation/participation. Prerequisite: PTPP admissions.

**SED 478 Student Teaching in Secondary Schools. (3–12)**

*fall and spring*  
Practice of teaching. Relationship of theory and practice in teaching. Fee. Prerequisite: PTPP admissions.

**SED 480 Special Methods of Teaching Social Studies. (3)**

*fall and spring*  
Introductory approaches: production and collection of materials. Prerequisite: PTPP admissions.

**SED 496 Field Experience. (0)**

*fall and spring*  
Apples course content in a secondary school setting. Emphasis on observation, pupil management, planning and delivering instruction and assessment. Fee. Corequisite: SED 403.

**SED 501 Introduction to Effective Instruction. (6)**

*fall spring summer*  
Introductory course for postbaccalaureate certification program in secondary education. Emphasis on developing basic classroom management, instruction, and evaluation. Includes a field assignment of at least 120 hours. Prerequisite: admissions to postbaccalaureate certification program.

**SED 522 Secondary School Curriculum Development. (3)**

*fall spring summer*  
Social processes, issues, principles, patterns, and procedures in curriculum development.

**SED 533 Improving Instruction in Secondary Schools. (3)**

*fall spring summer*  
Analyses of procedures, methods, techniques and experiences in teaching in secondary school. Prerequisites: SED 478, 578.

**SED 577 Issues and Trends in Secondary Education. (3)**

*not regularly offered*  
Analyses of day and professional reports, problems and issues in American secondary education. Prerequisites: SED 478, 578.

**SED 578 Student Teaching in the Secondary Schools. (3–12)**

*fall and spring*  
Practice of teaching. Relationship of theory and practice in teaching. Postbaccalaureate students only. Fee. Prerequisites: completion of approved postbaccalaureate program, minimum 2.50 GPA, approval of the Office of Professional Field Experiences.

**SED 588 Human Relations in the Secondary Schools. (3)**

*once a year*  
Problems in human relations inherent in the interaction of pupils, teachers, administrators, nonprofessional staff and laymen. Prerequisites: SED 478, 578.

**SED 598 Special Topics. (1–4)**

*not regularly offered*  
Possible topics:  
Using Math Materials Middle Schools  
Fee

**SED 711 Secondary Curriculum Development. (3)**

*spring and summer*  
Theories and processes of developing curriculum, evaluation of research. Prerequisites: SED 478, 522 or its equivalent. 578.

**SED 722 Improvement of Instruction in the Secondary School. (3)**

*fall*  
Evaluates the research issues and theories related to the improvement of instruction. Prerequisite: SED 533.

**SPECIAL EDUCATION (SPE)**

**SPE 294 Special Topics. (1–4)**

*not regularly offered*

**SPE 309 Basic Special Education Curriculum. (3)**

*fall spring summer*  
Introduction to curriculum practices used in inclusion classrooms.

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C and H, see General Studies page 78. For graduate requirements, see "University Graduate Requirements" page 74. For an explanation of additional minimum courses offered but not listed in this catalog, see "Classification of Courses" page 51.

**SPE 311 Orientation to Education of Exceptional Children. (3)***fa spr g summer*

Includes gifted mildly handicapped severely handicapped and the bilingual/cultural/exceptional child

*General Studies SB***SPE 312 Mental Retardation (3)***fa spr ng summer*

Characteristics and assessment specific to mental retardation  
Emphasizes terminology development educational programming and therapeutic procedures Prerequisite: PTPP admission

**SPE 314 Introduction to Bilingual/Multicultural Special Education (3)***fa spr ng summer*

Theoretical background and practical application of general issues regarding the education of bilingual/multicultural/handicapped children Prerequisite: PTPP admission

**SPE 336 Behavioral and Emotional Problems in Children. (3)***fa spr ng summer*

Characteristics and assessment specific to emotionally and behaviorally disturbed children Emphasizes terminology development, and educational programming Prerequisite: PTPP admission

**SPE 361 Introduction to Learning Disabilities. (3)***fa spr g summer*

Characteristics and assessment specific to learning disabilities  
Emphasize terminology development and educational programming Prerequisite: PTPP admission

**SPE 394 Special Topics. (1-4)***fa and spr ng*

Possible topics

- a Basic Special Education Curriculum 3
- b Focus on Practice at the Secondary Level 3
- c Quality Practice in the Collaborative Classroom 3

Prerequisite: PTPP admission

**SPE 411 Parent Involvement and Regulatory Issues. (3)***fa a d spr ng*

Emphasizes parental decisions through effective communication and state and federal regulations impacting services for the handicapped Prerequisite: PTPP admission

**SPE 412 Evaluating Exceptional Children. (3)***fa and spr ng*

Normative and criterion-referenced diagnostic techniques including formatives/evaluations Emphasizes application Requisites: day practice Prerequisite: PTPP admission

**SPE 413 Methods in Language, Reading, and Arithmetic for Exceptional Children. (3)***fa and spr ng*

Methods, techniques and materials for effective teaching Requisite: day practice Prerequisite: PTPP admission

**SPE 414 Methods and Strategies in Behavior Management. (3)***fa and spr ng*

Organization and delivery of instruction including formatives/evaluations techniques of behavior management Requisites: day practice Prerequisite: PTPP admission

**SPE 415 Social Behavior Problems of Exceptional Children. (3)***fa and spr ng*

Analysis of interventions to social behavior problems/exceptants Prerequisite: day practice Prerequisite: PTPP admission

**SPE 455 Early Childhood and the Handicapped (3)***fa*

Early childhood education as it applies to the handicapped child

**SPE 478 Student Teaching in Special Education. (3-15)***fa and spr ng*

Year-long fee-requisite PTPP admission

**SPE 494 Special Topics. (1-4)***fa a d spr ng*

Possible topics

- a Instructional Content Areas See Social Studies 3

**SPE 496 Field Experience (0)***n t regular y offered*

Appreciate content area application setting Emphasize observation pupil management planning and delivering instruction and assessment Fee Prerequisite: PTPP admission

**SPE 498 Pro-Seminar. (1-7)***fa a d spr ng*

Possible topics

- a Field Experience 1-3

Applicable content in a special education setting Emphasize observation pupil management planning and delivering instruction and assessment Fee Prerequisite: PTPP admission

**SPE 510 Inclusionary Curriculum for Special Education Teachers. (3)***fa and summer*

Curricular practices used in classrooms

**SPE 511 The Exceptional Child. (3)***fa spr ng summer*

Educational needs of exceptional children and adults Not recommended for students who have completed SPE 311

**SPE 512 Individuals with Mental Retardation. (3)***fa spr ng summer*

Etymology diagnosis and management of individuals with mental retardation Current trends in prevention programming and teacher preparation Not recommended for students who have completed SPE 312

**SPE 514 Bilingual/Multicultural Aspects of Special Education. (3)***fa spr ng summer*

Theories and issues related to the education of bilingual and culturally diverse exceptional children

**SPE 515 Methods for the Remediation of Learning Problems of Exceptional Children. (3)***spr ng*

Methods and materials for remedial teaching the basic academic problems of exceptional children Prerequisites: SPE 511 methods course in the teaching of reading and mathematics

**SPE 522 Academic Assessment of Exceptional Children. (3)***fa*

Normative and criterion-referenced assessment of learning problems of exceptional children includes formatives/evaluations Requisites: practice in the teaching of reading and mathematics SPE 311 or 511 elementary methods courses program approval

**SPE 523 Prescriptive Teaching with Exceptional Children. (3)***fa*

Language reading and arithmetic methodology and materials used in individualized instruction Requisites: practice in Lecture practice Prerequisites: SPE 311 or 511 elementary methods courses; program approval Pre- or corequisite: SPE 522

**SPE 524 Effective Classroom Behavior Management. (3)***sp ng*

Organization and delivery of instruction including formatives/evaluations and techniques of academic behavior management for exceptional children Requisite: practice in Lecture practice Prerequisites: SPE 311 or 511 522 523 program approval

**SPE 525 Social Behavior Interventions. (3)***sp ng*

Analysis and intervention into social behavior problems of exceptional children Focus on strategies to change maladaptive behavior Requisites: practice in Lecture practice Prerequisite: SPE 311 or 511 or 522 or 523 program approval

**SPE 531 Behavior Management Approaches with Exceptional Children. (3)***fa and s me*

Behavior management approaches for classroom behavior of exceptional children Prerequisite: SPE 511 or 512 equivalent

**SPE 536 Characteristics of Children with Behavioral Disorders. (3)***fa spr ng summer*

Variable contributing to behavior patterns of behaviorally disordered children

**SPE 551 Teaching Young Children with Special Needs. (3)***spr ng*

Method materials and curriculum for preschool and primary aged children with special needs Prerequisites: SPE 455 and 511 or their equivalents

**SPE 552 Management of Individuals with Severe Handicaps. (3)***sp g*

Instruction and management of highly aged and adult individuals with severe physical or multiple handicaps Prerequisites: SPE 511 or its equivalent instructor approval

**SPE 553 Developmental/Functional Assessment. (3)**

*fall*  
Teacher focused developmental functional assessment of preschool and severely, physically and multiply handicapped individual  
Requires field experience Prerequisites SPE 511 and 512 and 574 or the equivalents

**SPE 554 The Parent/School Partnership. (3)**

*spring*  
Includes knowledge and procedures for involvement and training of parents and caregivers of preschool and severely handicapped individuals  
Requires field experience Prerequisites SPE 455 and 511 (or the equivalents)

**SPE 561 Characteristics/Diagnosis of Learning Disabilities. (3)**

*fall spring summer*  
Theories related to learning disabilities including identification and characteristics

**SPE 562 Methods of Teaching Students with Learning Disabilities. (3)**

*not regularly offered*  
Various methods and intervention strategies for remedial learning disabilities of children and youth Prerequisite SPE 361 or 561

**SPE 574 Educational Evaluation of Exceptional Children. (3)**

*fall*  
Design and statistical considerations of normative and criterion-referenced tests. Collection, recording and analysis of data from formal evaluation. Prerequisites SPE 511 or its equivalent methods course in teaching reading and mathematics

**SPE 575 Current Issues in the Education of Exceptional Children. (3)**

*fall*  
Mainstreaming, categorization, financing, legal diagnosis, abuse, legislative, and other critical and controversial issues related to the education of exceptional children

**SPE 577 Mainstreaming Methods. (3)**

*spring*  
Addresses successful mainstreaming methods practical problem-solving sessions related to teacher's classroom needs and individual contracts focusing on mainstreaming issues. General educator encouraged

**SPE 578 Student Teaching in Special Education. (9-15)**

*fall and spring*  
Year grade on year. Fee Prerequisites completion of specified courses approval by the special education program coordinator

**SPE 582 Classroom Research with Exceptional Children. (3)**

*summer*  
Introduction to interpreting research. Specific research techniques with primary emphasis on classroom research, including applied behavior analysis

**SPE 585 Creativity: Research and Development. (3)**

*spring*  
Explores nature of creativity in terms of philosophical underpinnings empirical evidence, human development self actualization and the ecology surrounding the creative event

**SPE 586 Advising the Gifted Child. (3)**

*once a year*  
Focuses on educational planning and guidance social and emotional development, and family problem solving regarding needs of gifted children.

**SPE 587 Controversies in Educating the Gifted. (3)**

*fall*  
In-depth analysis of major controversies in educating the gifted, including nature nurture the role of mental tests and sex differences

**SPE 588 The Gifted Child. (3)**

*fall and summer*  
Gifted children's characteristics identification needs school and home environments, definitions and misunderstandings. Research by Pressey Stanley Terman and others.

**SPE 589 Methods in Teaching the Gifted. (3)**

*spring and summer*  
Methods in teaching elementary and secondary school gifted children including individualized and computer assisted instruction team teaching Prerequisite SPE 588

**SPE 774 Characteristics and Causation of Exceptionality. (3)**

*fall*  
In depth analysis of literature pertaining to causes of exceptionality and learning educational personal social and cognitive characteristics. Lecture, discussion

**SPE 775 Evaluation and Intervention in Special Education. (3)**

*spring*  
In depth analysis of research and literature on evaluation procedures and intervention approaches for exceptional individuals at all ages. Lectures, discussions

**SPE 781 Research and Evaluation in Special Education. (3)**

*spring*  
Issues and problems in conducting research and/or evaluation programs involving exceptional children

**Division of Educational Leadership and Policy Studies**

Terrence G. Wiley

Director

(ED 120) 480/965-6357

[www.ed.asu.edu/elps](http://www.ed.asu.edu/elps)

**REGENTS' PROFESSOR**

BERLNER

**PROFESSORS**

APPLETON FENSKE GLASS GONZALEZ HANSON,  
NORTON SMITH, TURNER, VALVERDE WEBB WILEY

**ASSOCIATE PROFESSORS**

CASANOVA, HARTWELL-HUNNICUTT, WILKINSON

**ASSISTANT PROFESSORS**

MARGOLIS MOSES, PENA

**CLINICAL PROFESSOR**

DYER

**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 of Educational Leadership and Policy Studies offer several graduate degrees in a number of majors

**NOTE:** For the General Studies requirement courses and codes such as L, SQ, C and H see General Studies page 78. For graduate requirements see University Graduate Requirements page 74. For an explanation of additional non-business courses offered but not listed in this catalog see Classification of Courses page 51.

For more information on courses, faculty, and programs, contact the division office or see the *Graduate Catalog*.

### SOCIAL AND PHILOSOPHICAL FOUNDATIONS (SPF)

#### SPF 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*

#### SPF 301 Culture and Schooling (3)

*fall and spring*

For the professional teacher preparation program. Overview of the cultural and political issues in which formal schooling takes place in the United States. 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 assumptions, behavior, and perspectives derived from philosophy, sociology, and law. Prerequisite: education major.

#### SPF 501 Culture and Schooling (3)

*fall and spring*

Introduction to social science concepts, future and the current issues in which schooling takes place in the United States. Lecture/Recitation.

#### SPF 510 Introduction to Organization and Administration of American Public Schools. (3)

*fall and spring*

Experience organizational structure and administration of public education through the application of legal and ethical concepts and relevant information of the social sciences. Cross-listed as EDA 510. Credit awarded for only EDA 510 or SPF 510.

#### SPF 511 School and Society. (3)

*fall, spring, summer*

Interaction of public school and society and the role of education in social change.

#### SPF 520 Cultural Diversity in Education. (3)

*spring*

Philosophical and sociological investigation of cultural diversity in the United States and how it relates to education.

#### SPF 530 Sociology of Education. (3)

*fall*

Explorations in the history of sociology, thought, especially theories of the relation between educational systems and the social/cultural world.

#### SPF 533 Comparative Education in the Western World. (3)

*not regularly offered*

Educational practices and traditions in the leading nations of Europe and the Soviet Union.

#### SPF 544 Philosophical Foundations of Education. (3)

*fall*

Theories of education in ancient, medieval, and modern classical and contemporary philosophies.

#### SPF 566 History of Education. (3)

*spring*

Development of educational institutions and ideas in the Western world from ancient times to the 20th century.

#### SPF 603 Visual Ethnography in Education. (3)

*spring*

Advanced qualitative methods class combining ethnography with the use of video and still photography in data gathering and presentation. Seminar. Co-requisite: COE 503.

#### SPF 612 Evaluation Theory. (3)

*fall*

Explore the major theories of evaluation inquiry leading to value judgments and educational policy through examination of cases.

#### SPF 622 Organizational Theory. (3)

*spring*

Major views of organization and their influence on role definition and participant behaviors in educational organization. Seminar/discussion. Cross-listed as HED 688. Credit awarded for only HED 688 or SPF 622.

### SPF 711 Social and Historical Foundations of Education. (3)

*not regularly offered*

Problems of American education and their socio-historical context.

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## Division of Psychology in Education

Elsie G. J. Moore

*Director*

(FDB 302) 480/965-3384

[coe.asu.edu/psyched](http://coe.asu.edu/psyched)

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### REGENTS' PROFESSORS

BERLINER, KULHAVY

### PROFESSORS

BARONA, BERNSTEIN BITTER, BLANCHARD  
CLAIBORN, FREEMAN, GLASS, GREEN, HACKETT  
HARRIS, HORAN, KERR, KUNNIE, KLEIN, KRUS,  
McISAAC, McWHIRTER, NELSEN, ROBINSON, KURP, US,  
SANTOS, de BARONA, SMITH, STROM, SULL, VAN  
TRACEY, Z. MILES

### ASSOCIATE PROFESSORS

ARCINIEGA, ARREDONDO, BEHRENS, BROWN, HOOD,  
MOORE, ROBERTS, SAVENYE, STAFFORD

### ASSISTANT PROFESSORS

BREM, BRUSH, FISHER, JUAN, MATTHEWS,  
NAKAGAWA, OTAWANG, THOMPSON

### CLINICAL ASSOCIATE PROFESSOR

HOMER

### CLINICAL ASSISTANT PROFESSORS

GLIDDEN-TRACEY, GOE, STAMM

### PROGRAM AREAS

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 on courses, faculty, and programs, contact the division office or see the *Graduate Catalog*.

### COUNSELOR EDUCATION (CED)

#### CED 294 Special Topics (1-4)

*fall and spring*

Possible topics

- Career Development 1-3
- Foundations of Leadership 1
- Leadership Curriculum 1-3
- Topic 1-3



**CED 394 Special Topics. (1–4)**

*fall and spring*

Possible topics

(a) **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 the lecture and dialogue on one of the themes of leadership diversity and service civic responsibility. Pass fail elective taught in the classroom of McCintock Residence Hall. Open to freshmen through senior undergraduates, and majors welcome.

**CED 484 Internship. (1–12)**

*fall and spring*

Possible topics

- a) Leadership Internship
- b) Leadership Internship and Capstone

**CED 493 Honors Thesis. (1–6)**

*fall and spring*

**CED 494 Special Topics. (1–4)**

*fall and spring*

Possible topics

- (a) Paraprofessional Training (3)

**CED 498 Pro-Seminar. (1 7)**

*fall and spring*

Possible topics

- a) Resident Assistant Experience 2

**CED 512 Introduction to Helping Relationships. (3)**

*fall, spring, summer*

Introduction to the skills used in the helping professions and an examination of the settings in which they occur.

**CED 522 Theories of Counseling and Psychotherapy. (3)**

*fall, spring, summer*

Presentation of major theories of psychology intervention as well as underlying personality theory upon which they are based.

**CED 523 Psychological Tests. (3)**

*fall, spring, summer*

Standardized tests in the study of the individual with emphasis on test score interpretation in counseling.

**CED 534 Occupations and Careers (3)**

*fall, spring, summer*

The world of work, career development, education and training for occupational entry and mobility.

**CED 545 Analysis of the Individual. (3)**

*fall, spring, summer*

Theory and methods commonly used in studying the individual. Observational methods, diagnostic interviews, structured and semistructured methods for assessing personality. Pre- or corequisite CED 523.

**CED 567 Group Dynamics and Counseling. (3)**

*fall, spring, summer*

Group process factors, theory, and diversity issues determining effective interaction in small groups. Emphasis placed on lecturettes, self-awareness and experiential components. Lecturettes discuss experiential. Prerequisite: admission to graduate degree program.

**CED 577 Counselor Prepracticum. (3)**

*fall, spring, summer*

Focus on racial, social, and cultural factors in the development of helping relationships through integration of cognitive and affective self-awareness with counseling skills. Lecture/lab. Prerequisite: admission to M.C. or school counselor certification program. Pre- or corequisite CED 522.

**CED 655 Student Development Programs in Higher Education. (3)**

*once a year*

Emerging conceptual models of student development. Overview of student personnel and student affairs programs in community colleges, four-year colleges, and universities. Observation on campuses.

**CED 656 The American College Student. (3)**

*spring*

Overview of American college student from demographic background and characteristics and various attitudes perspectives includes access, persistence and degree completion. Lecture, group discussion on research projects. Cross-listed as HED 679. Credit satisfied for only CED 656 or HED 679.

**CED 672 Marriage and Family Counseling. (3)**

*fall*

Introduction to marriage and family counseling theories. Emphasis on a systems communication model utilizing cocounseling.

**CED 684 Internship in Community Counseling. (3–6)**

*fall, spring, summer*

**EDUCATIONAL PSYCHOLOGY (EDP)**

**EDP 301 Learning and Motivation in Education. (2)**

*fall and spring*

Using a case format, learning and motivation principles are applied to education contexts. Prerequisite: education major.

**EDP 302 Assessment and Evaluation in Education. (1)**

*fall and spring*

Using a case format, assessment and evaluation principles are applied to education contexts. Prerequisite: education major.

**EDP 303 Human Development. (3)**

*fall and spring*

Selected aspects of child and adolescent development. Emphasis on possibilities for influence by teachers and parents. Prerequisites: CDE 232 or equivalent education major.

*General Studies L*

**EDP 310 Educational Psychology. (1–6)**

*fall, spring, summer*

Human behavior in educational situations presented 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. Emphasis on 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 decisions making. Elements of exploratory data analysis, descriptive indexes, and statistical inference. Lecture, lab. Prerequisite: MAT 117.

*General Studies CS*

**EDP 502 Introduction to Quantitative Methods. (3)**

*fall, spring, summer*

Topics in statistical analysis, measurement and research design. Exploratory data analysis, estimation on theory and statistical inference. Use of computers for data analysis. Cross-listed as COE 502. Credit satisfied for only COE 502 or EDP 502.

**EDP 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 COE 503. Credit satisfied for only COE 503 or EDP 503.

**EDP 504 Learning and Instruction. (3)**

*fall, spring, summer*

Introduction to psychology of learning and instruction includes the foundations of learning theories and the application to educational practice. Cross-listed as COE 504. Credit satisfied for only COE 504 or EDP 504.

**EDP 510 Essentials of Classroom Learning. (3)**

*fall, spring, summer*

Theoretical and empirical foundations of learning in the classroom. Minimum: Credit exposure to research and method in instructional psychology.

**NOTE:** For the General Studies requirement courses and codes (such as L, SQ, C, and H) see General Studies page 78. For graduation requirements see University Graduation Requirements page 74. For an explanation of additional non-business courses offered but not listed in this catalog see Classification of Courses page 51.

**EDP 513 Child Development. (3)***fa spring summer*

Examine problems and achievements experienced by children growing up in a technological society. Emphasizes on discovering the child's perspective.

**EDP 514 Psychology of the Adolescent. (3)***fa spring summer*

Contemporary physical and social development of adolescents in contemporary society. Impact of family, school, and workplace on adolescent development. Prerequisite: EDP 311 or PGS 101 or its equivalent.

**EDP 530 Theoretical Issues and Research in Human Development. (3)***fa*

Psychological theories, research, and methods relevant to human development. Emphasizes on the relations between early development and later performance.

**EDP 535 Applied Behavior Analysis. (3)***fa*

Principles of conditioning as applied to behavior. Current research on the experimental analysis of behavior. Educational psychology.

**EDP 536 Physiology of Behavioral Disorders. (3)***fa*

Critical study of various systems brain function for fundamental behaviors and system dysfunctions. Mental neurology disorders. Prerequisite: instructor approval.

**EDP 540 Theoretical Views of Learning. (3)***fa and spring*

Casual and cognitive theories of learning. Present orientations. Justification of experimental and rational foundations. Implications for educational practice.

**EDP 542 The Psychology of Learning and Instruction. (3)***spring*

Critical review and evaluation of research on learning variables relevant to acquisition and retention of instructional materials. Lab.

**EDP 544 Psychology of Reading. (3)***fa*

Alternative analyses of the reading process. Descriptive procedures for investigating instructional and non-instructional variables related to reading achievement.

**EDP 545 Foundational Studies in Language and Learning. (3)***spring*

Historical developments in research relating to cognitive models to the instructional process. Language learning. Prerequisites: both EDP 541 and 552 or instructor approval.

**EDP 550 Introduction to Measurement in Education. (3)***fa and spring*

Nature and types of educational measures. Critiquing and selecting appropriate measuring devices. Constructing measuring devices. Social controversies about tests. Lecture/lab. Prerequisite: EDP 502 or instructor approval.

**EDP 552 Quantitative Data Analysis in Education I. (3)***fa spring summer*

Continued treatment of statistical estimation, testing, and research synthesis. Inferential techniques including ANOVA and multiple regression with computers. Lecture/lab. Prerequisite: EDP 502 or instructor approval.

**EDP 554 Quantitative Data Analysis in Education II. (3)***fa spring summer*

Advanced issues in applied multiple regression and ANOVA. Introduction to ANCOVA. Use of computers for data analysis. Lecture/lab. Prerequisite: EDP 552 or instructor approval.

**EDP 556 Data Processing Techniques in Measurement and Research. (3)***once a year*

Use of statistical packages for data analysis. Emphasis on data management, data structures, and related statistical procedures. Lecture/lab. Prerequisite: EDP 552. Prerequisite/corequisite: EDP 554 or instructor approval.

**EDP 560 Individual Intellectual Assessment. (3)***fa and spring*

Issues in administration and interpretation of individual intelligence tests. Theoretical basis, ethical considerations, and diagnostic use of test results. Fee. Prerequisite: admission to a program in professional psychology or instructor approval.

**EDP 561 Lab in Psychological Assessment. (3)***spring*

Lab experience in administration, scoring, and interpretation of individual intelligence tests. Lab. Prerequisite: admission to a program in professional psychology or instructor approval. Corequisite: EDP 560.

**EDP 562 School Psychology: Theory and Practice. (3)***fa*

Development and present status of school psychology. Including an overview of assessment and intervention strategies and professional issues.

**EDP 563 Interventions in School Psychology. (3)***fa*

Examines case-based consultation and consultation on research relevant to school psychology practice. Field experience. Prerequisite: school psychology program or instructor approval.

**EDP 564 Curriculum-Based Assessment and Academic Interventions. (3)***spring*

Constructing administration and scoring outcome-based measures. Use of measures for using the various educational decisions.

**EDP 566 Diagnosis of Learning Difficulties. (3)***spring*

Clinical diagnosis of learning difficulties. Emphasizing specific academic problems. Use and interpretation of diagnostic instruments in practical school situations. Prerequisites: EDP 560 and 562 or the equivalent. Instructor approval.

**EDP 567 School Psychological Services to Minority Students. (3)***spring*

Historical perspectives and major issues in school psychology and academic assessment and interventions with minority school children.

**EDP 568 Diagnosis and Interventions for Children and Adolescents with Emotional Handicaps. (3)***fa*

Clinical diagnosis of emotional handicaps in children and adolescents with emphasis on interpretation of diagnostic instruments and designing appropriate interventions in school settings. Lecture/lab. Prerequisites: EDP 566, PSY 578 or its equivalent.

**EDP 651 Methods and Practices of Qualitative Research. (3)***spring*

Advanced course for students familiar with theory and extant work. Topics include data collection, analysis, reporting, and an extensive fieldwork project. Prerequisite: COE 503.

**EDP 652 Multivariate Procedures in Data Analysis I. (3)***fa*

Introduction to matrix algebra. Application of MANOVA, MANCOVA, power analysis, effect size, discriminant and repeated measures analysis with computers. Lecture/lab. Prerequisite: EDP 554 or instructor approval.

**EDP 654 Multivariate Procedures in Data Analysis II. (3)***spring*

Treatment of applied multivariate multiple regression, canonical correlation, factor analysis, log-linear models, and structural equation models with computers. Lecture/lab. Prerequisite: EDP 652 or instructor approval.

**EDUCATIONAL TECHNOLOGY (EDT)****EDT 300 Computers in Education. (1)***fa, spring summer*

Introduction to general computer applications, teacher utility programs, Word, Web, and evaluation of educational software. Required for majors in the College of Education.

**EDT 321 Computer Literacy. (3)***fa 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)***fa I, spring summer*

Introduction to computer applications such as HyperCard, telecommunications, authoring languages, and expert systems. Lecture/lab.

*General Studies CS*

**EDT 405 Presentation Technology for Multimedia. (3)**

*fa*

Explores the use of multimedia hardware and software used in creating presentations for educational, corporate and commercial applications

**EDT 406 Computer Graphics and Animation. (3)**

*spring*

Study and application of 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

**EDT 501 Foundations and Issues in Educational Technology. (3)**

*fall and spring*

Introduction to educational technology Examines accomplishments and issues in the field

**EDT 502 Design and Development of Instruction. (3)**

*fall and spring*

Design development and formative evaluation of objectives based instructional materials

**EDT 503 Instructional Media Design. (3)**

*fall and spring*

Uses media selection design and production principles to prepare design specifications for instructional materials and products Prerequisite: EDT 502

**EDT 504 Development of Computer Based Instruction. (3)**

*fall and spring*

Systematic design development and formative evaluation of computer based instruction Prerequisites: EDT 455 instructor approval, 502

**EDT 505 Multimedia Presentation Technologies. (3)**

*fall*

Explores the design of multimedia presentation and the utilization of tools and resources to effectively deliver those presentations Lecture lab

**EDT 506 Educational Evaluation (3)**

*spring*

Procedures for evaluating educational program training systems and new technology application Prerequisite: EDT 502

**EDT 511 Technology Applications in Education. (3)**

*fall and summer*

Integration and evaluation of emerging technologies into K-12 and adult teaching and learning Online and lecture

**EDT 520 Educational Technology and Training. (3)**

*spring*

Applications of educational technology to training and human performance systems in business industry and government emphasizing trends and project management. Lecture, lab Prerequisites: EDT 501, 502

**EDT 523 Distance Education Theory and Practice. (3)**

*fall*

Explores development of distance learning principles by examining national and international systems and applications Online and lecture

**EDT 525 Web Resources for Educators. (3)**

*spring*

Explores Web based and distance learning applications for educators Online and lecture

**EDT 527 Instructional Video Production. (3)**

*spring*

Design and production of instructional video Lecture lab Prerequisite: EDT 502 instructor approval

**EDT 528 Development of Web-Based Instruction. (3)**

*fall*

Design and development of online instructional using advanced technologies Prerequisite: EDT 502

**EDT 531 Hypermedia. (3)**

*spring*

Design, development and evaluation of open-ended nonlinear computer based tools and applications Lecture lab Prerequisites: EDT 455 instructor approval, 502

**EDT 701 Research in Educational Technology. (3)**

*spring*

Review and analysis of research studies in educational technology Methodology for design conducting and reporting educational technology research Prerequisites: EDT 501, 502 instructor approval

**EDT 702 Research in Technology Based Education. (3)**

*fall*

Critical exposure to theories research and methods in technology-based education

**EDT 703 Research in Distance Education. (3)**

*spring*

Seminar with emphasis on research in telecommunications and distance education

**EDT 704 Emerging Technologies in Education. (3)**

*spring*

Examine the role and impact of emerging technologies in education

**EDT 780 Advanced Instructional Development. (3)**

*spring*

Conducting and documenting selected instructional development activities Prerequisites: EDT 502 instructor approval

**EDT 792 Advanced Educational Technology Research (3)**

*fall and spring*

Design and execution of educational technology research on selected topic Prerequisites: EDT 701 instructor approval

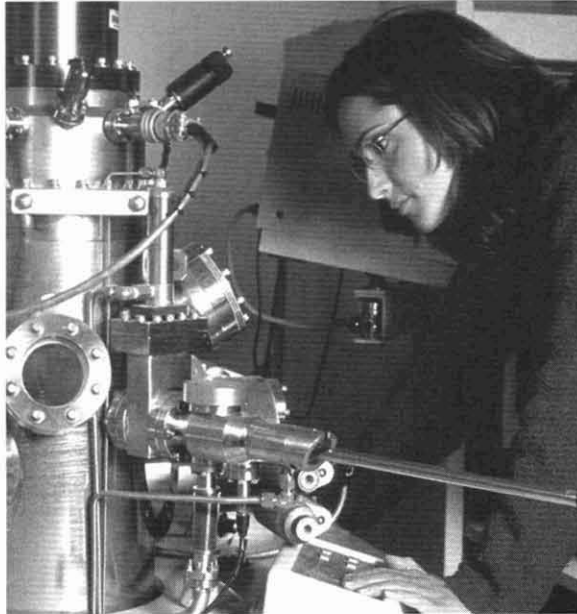
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**NOTE:** For the General Studies requirement courses and credits such as L, SQ, C and H see General Studies page 8 For graduation requirements see "University Graduation Requirement" page 74 For an explanation of additional minor business courses offered but not listed in this catalog, see Classification of Courses page 51

# College of Engineering and Applied Sciences

Peter E. Crouch, Ph.D., Dean

[www.eas.asu.edu](http://www.eas.asu.edu)



Hands-on experience is an important part of the engineering curriculum.

John Phillips photo

<b>Del E. Webb School of Construction</b> . . . . .	<b>207</b>
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<b>Department of Bioengineering</b> . . . . .	<b>215</b>
<b>Department of Chemical and Materials Engineering</b> . . . . .	<b>220</b>
<b>Department of Civil and Environmental Engineering</b> . . . . .	<b>229</b>
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## 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](http://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 Bioengineering
- 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

**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 System Science and Engineering Research