

**Affiliations.** For information on affiliations maintained by the college, see “Accreditation and Affiliation,” page 19.

**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  
 Women in Architecture

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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, ROTONDI,  
 SCHEATZLE, UNDERHILL, UNDERWOOD

### ASSOCIATE PROFESSORS

BRYAN, HARTMAN, KROLOFF, KUPPER, LOOPE,  
 SHEYDAYI, VAN DUZER, ZYGAS

### ASSISTANT PROFESSORS

ELLIN, HAHN, HEJDUK, 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 National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree, which when earned sequentially, comprise 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” below 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,” page 123.

In cooperation with the University Honors College, the school offers a special honors curriculum for students with University Honors College standing. Consult the advising officers in the school for information.

## ADMISSION

**Lower-Division Program.** New and transfer students who have been admitted to the university and who have selected Architectural Studies 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, including evidence of ability and the prospect for significant public service.

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. 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.

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 2001–2002 upper-division programs.

**Upper-Division Application Deadlines.** *April 16, 2001.* Portfolio and application documents are due in the school office by 5:00 P.M.

*June 1, 2001.* If the spring 2001 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 1. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Undergraduate Admissions office. Application is not complete until the university receives official transcripts for transfer course work. For those transfer students whose academic term ends in June rather than May, this deadline may be extended upon the written request of the applicant.

*July 2, 2001.* Acceptance notices are mailed no later than July 2.

**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 be written in the upper right-hand corner.

*Page 4.* All college transcripts for both ASU and transfer work should be included through the fall 2000 semester. Copies are acceptable. An academic advisor forwards 2001 ASU transcripts. (Applicants wishing to transfer spring semester 2001 work are responsible for submitting these transcripts by June 2 so that they may be added to

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**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

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 10–20 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 3, 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-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 87, 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 83, and "College Degree Requirements," page 119.

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

##### Fall

APH 100 Introduction to Environmental Design <i>HU, G, H</i> .....	3
ENG 101 First-Year Composition .....	3
SB elective .....	3
Approved elective .....	3
Approved elective (MAT 170 Precalculus may be needed).....	3
Total .....	15

##### Spring

ADE 120 Design Fundamentals I <sup>2</sup> .....	3
ENG 102 First-Year Composition .....	3
MAT 210 Brief Calculus <i>MA</i> .....	3
Approved elective .....	3
C 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
AVC 294 ST: Drawing Module.....	1
PHI 103 Principles of Sound Reasoning <i>L/HU</i> <sup>3</sup> .....	3
PHY 111 General Physics <i>SQ</i> <sup>4</sup> .....	3
PHY 113 General Physics Laboratory <i>SQ</i> <sup>4</sup> .....	1
Total .....	15

##### 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
AVC 294 ST: Drawing Module.....	1
ECN 112 Microeconomic Principles <i>SB</i> or an SB elective <sup>5</sup> .....	3
PHY 112 General Physics <i>SQ</i> <sup>4</sup> .....	3

PHY 114 General Physics Laboratory SQ <sup>4</sup> .....	1
Total .....	15
Option A lower-division total.....	60

- <sup>1</sup> 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 portfolio to the Academic Advising Office, ARCH 141.
- <sup>3</sup> If PHI 103 is not chosen, then ECN 112 must be taken to fulfill SB requirement.
- <sup>4</sup> Both lecture and lab must be taken to secure SQ credit.
- <sup>5</sup> If ECN 112 is not chosen, then PHI 103 must be taken to fulfill L requirement.

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

**Third Year**

<b>Fall</b>	
ADE 321 Architectural Studio I.....	5
APH 313 History of Western Architecture I L/HU* .....	3
ATE 353 Architectural Construction.....	3
Approved elective* .....	3
Total .....	14
<b>Spring</b>	
ADE 322 Architectural Studio II .....	5
ANP 331 Analysis and Programming.....	3
APH 314 History of Western Architecture II L/HU* .....	3
ATE 361 Building Structures I.....	3
Total .....	14
<b>Summer</b>	
ARP 484 Clinical Internship.....	1-12
Total .....	1-12

**Fourth Year**

<b>Fall</b>	
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
Professional elective .....	3
Total .....	14
Option A upper-division total .....	60
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 HU, G, H.....	3
ECE 100 Introduction to Engineering Design CS.....	4
ECN 112 Microeconomic Principles SB.....	3
ENG 101 First-Year Composition.....	3
MAT 270 Calculus with Analytic Geometry I MA.....	4
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 MA .....	4
PHY 121 University Physics I: Mechanics SQ <sup>3</sup> .....	3
PHY 122 University Physics Laboratory I SQ <sup>3</sup> .....	1
Total .....	14

**Second Year**

<b>Fall</b>	
ADE 221 Design Fundamentals II <sup>2</sup> .....	3
ADE 223 Design Fundamentals II Lecture.....	1
APH 200 Introduction to Architecture HU, G .....	3
ECE 210 Engineering Mechanics I: Statics.....	3
MAT 272 Calculus with Analytic Geometry III MA .....	4
PHY 131 University Physics II: Electricity and Magnetism SQ <sup>3</sup> .....	3
PHY 132 University Physics Laboratory II SQ <sup>3</sup> .....	1
Total .....	18
<b>Spring</b>	
ADE 222 Design Fundamentals III <sup>2</sup> .....	3
ADE 224 Design Fundamentals III Lecture.....	1
ANP 236 Introduction to Computer Modeling CS .....	3
AVC 294 ST: Drawing Module.....	2
ECE 380 Probability and Statistics for Engineering Problem Solving CS .....	3
MAT 274 Elementary Differential Equations MA.....	3
Total .....	15
Option B lower-division total.....	64

- <sup>1</sup> 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 portfolio to the Academic Advising Office, ARCH 141.
- <sup>3</sup> Both lecture and lab 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 L/HU* .....	3
ATE 353 Architectural Construction.....	3
ECE 312 Engineering Mechanics II: Dynamics.....	3
Total .....	14
<b>Spring</b>	
ADE 322 Architectural Studio II .....	5

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

ANP 331 Analysis and Programming.....	3
APH 314 History of Western Architecture II <i>L/HU*</i> .....	3
ECE 313 Introduction to Deformable Solids.....	3
Total .....	14
<b>Summer</b>	
ARP 484 Clinical Internship.....	1
Total .....	1
<b>Fourth Year</b>	
<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 Analysis for Engineers I.....	2
SB and C elective*.....	3
Total .....	13
Option B upper-division total .....	56
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-Division 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>	
AAD 551 Architectural Management I.....	3
ADE 522 Advanced Architectural Studio II.....	5
APH 515 Current Issues and Topics.....	3
Professional elective*.....	3
Total .....	14

##### Sixth Year

<b>Fall</b>	
ADE 621 Advanced Architectural Studio III.....	5
ANP 681 Project Development.....	3
ATE 556 Building 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 .....	14
Graduate division total.....	56

\* 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. 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 college-wide, interdisciplinary Ph.D. degree in Environmental Design and Planning with concentrations in design; history,

theory, and criticism; and planning. For more information, see the *Graduate Catalog*.

### ARCHITECTURAL ADMINISTRATION AND MANAGEMENT (AAD)

**AAD 551 Architectural Management I.** (3) S  
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. Courtesies: ADE 522.

**AAD 552 Architectural Management II.** (3) S  
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) A  
Development building, real estate, construction funding, land acquisition, and the sources for capital. Prerequisite: instructor approval.

**AAD 599 Thesis.** (1–12) N

**AAD 681 Professional Seminar: Capstone.** (3) S  
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) F, S, SS  
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) F  
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) S  
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) F  
Theory and applications of basic design principles, history and theory of how architecture design is impacted by basic design. Lecture, discussion. Prerequisite: ADE 120. Corequisite: ADE 221.

**ADE 224 Design Fundamentals III Lecture.** (1) S  
History and theory of design fundamentals with an emphasis on architectural issues. Lecture, discussion. Prerequisite: ADE 223. Corequisite: ADE 222.

**ADE 321 Architectural Studio I.** (5) F  
Introductory building design problems. Emphasis on design process, communication methods, aesthetics, construction, and technology. Lecture, studio, field trips. Prerequisite: admission to upper division. Corequisite: ATE 353.

**ADE 322 Architectural Studio II.** (5) S  
Site and building design problems. Emphasis on programmatic and environmental determinants and building in natural and urban contexts. Lecture, studio, field trips. Prerequisite with a grade of "C" or higher: ADE 321. Corequisite: ANP 331.

**ADE 421 Architectural Studio III.** (5) F  
Topical design problems of intermediate complexity, including interdisciplinary problems. Lecture, studio, field trips. Prerequisite with a grade of "C" or higher: ADE 322.

**ADE 422 Architectural Studio IV.** (5) S  
Topical design problems of advanced complexity, including interdisciplinary problems. Lecture, studio, field trips. Prerequisite with a grade of "C" or higher: ADE 421.

**ADE 510 Foundation Architectural Studio.** (6) SS  
Fundamentals of architectural design, methodology, visualization, and representation. Lecture, studio, field trips. Prerequisite: admission to graduate program.

**ADE 511 Core Architectural Studio I.** (6) F  
Application of design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants. Lecture, studio, field trips. Prerequisites: APH 200, 509. Prerequisite with a grade of "C" or higher: ADE 510.

**ADE 512 Core Architectural Studio II.** (6) S  
Application of architectural design fundamentals to increasingly complex problems, including specific sites and activities. Lecture, studio, field trips. Prerequisite with a grade of "C" or higher: ADE 511.

**ADE 521 Advanced Architectural Studio I.** (5) F  
Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form. Lecture, studio, field trips. Prerequisite: admission to graduate program.

**ADE 522 Advanced Architectural Studio II.** (5) S  
Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form. Lecture, studio, field trips. Prerequisite with a grade of "C" or higher: ADE 521.

**ADE 621 Advanced Architectural Studio III.** (5) F  
Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form. Lecture, studio, field trips. Prerequisite with a grade of "C" or higher: ADE 522.

**ADE 622 Advanced Architectural Studio IV.** (5) S  
Individual, student-initiated project reflecting a culminating synthesis of architectural ideas. Studio. Prerequisites with a grade of "C" or higher: ADE 621; ANP 681.

**ADE 631 Building Systems Simulation Studio.** (5) F  
Design of energy-efficient medium and large commercial complexes; synthesis to optimize performance using new and advanced algorithms. Lecture, lab, studio. Prerequisites: ATE 521, 550, 551, 582.

**ADE 661 Bioclimatic Design Studio.** (6) A  
Sustainable architectural and site synthesis at a variety of scales emphasizing bioclimatic criteria and the use of passive and low-energy systems. Prerequisite: professional degree or instructor approval. Corequisite: ATE 558.

### ENVIRONMENTAL ANALYSIS AND PROGRAMMING (ANP)

**ANP 236 Introduction to Computer Modeling.** (3) F, S  
Fundamentals of computer operation, geographic information systems, geometric modeling of three-dimensional forms and rendering of light, mathematical modeling of processes using spreadsheets. Lab. Cross-listed as DSC/PUP 236. Credit is allowed for only ANP 236 or DSC 236 or PUP 236. Prerequisite: major in the College of Architecture and Environmental Design. *General Studies: CS.*

**ANP 331 Analysis and Programming.** (3) S  
Analysis of natural and human environmental determinants as the basis of the programming and design of the built environment. Lecture, studio. Corequisite: ADE 322.

**ANP 475 Computer Programming in Architecture.** (3) F, S  
Computer programming for architectural problems and applications. Lecture, lab. Prerequisite: CSE 183 or equivalent.

**ANP 477 Computer Applications to Design Problems.** (3) F  
Examination of generic 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) N

**ANP 530 Computer Graphics in Architecture.** (3) A  
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.

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

**ANP 561 Architectural Information Processing Systems.** (3) A 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) S Concepts and 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) N

**ANP 598 Special Topics.** (1–4) N  
(a) Computer-Aided Design Methods

**ANP 599 Thesis.** (1–12) N

**ANP 681 Project Development.** (3) F 2000

Definition and elaboration of major ideas for implementation in ADE 622 Advanced Architectural Studio IV in relation to contemporary theory and practice. Seminar. Prerequisite: ADE 522.

### ARCHITECTURAL PHILOSOPHY AND HISTORY (APH)

**APH 100 Introduction to Environmental Design.** (3) F, S Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as DSC/PUP 100. Credit is allowed for only APH 100 or DSC 100 or PUP 100. *General Studies: HU, G, H.*

**APH 200 Introduction to Architecture.** (3) F, SS Survey of issues and polemics affecting current architectural theory and practice. Lecture, discussion. *General Studies: HU, G.*

**APH 300 World Architecture I/Western Cultures.** (3) F Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants. Prerequisite: nonmajor. *General Studies: HU, G, H.*

**APH 301 World Architecture II/Eastern Cultures.** (3) S Historical and contemporary built environments of Eastern civilizations: Mid-East, Central Asia, Far East, and South Pacific as manifestations of cultural history and responses to environmental determinants. *General Studies: G.*

**APH 304 American Architecture.** (3) N Architecture in the United States from earliest colonial times to present. Prerequisite: nonmajor. *General Studies: HU.*

**APH 305 Contemporary Architecture.** (3) N 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) F Representative buildings and sites with emphasis on their physical and social settings from antiquity through the Middle Ages. Prerequisite: junior standing or instructor approval. *General Studies: L/HU.*

**APH 314 History of Western Architecture II.** (3) S Representative examples of architecture and urban design with emphasis on their social and historical contexts; from the Middle Ages to the present. Prerequisite: APH 313. *General Studies: L/HU.*

**APH 411 History of Landscape Architecture.** (3) F Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design. Cross-listed as PLA 310. Credit is allowed for only APH 411 or PLA 310. *General Studies: H.*

**APH 414 History of the City.** (3) F 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 allowed for only APH 414 or PUP 412. *General Studies: H.*

**APH 441 Ancient Architecture.** (3) N Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites. Prerequisite: APH 313. *General Studies: HU.*

**APH 442 Preservation Planning.** (3) F 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) N Selected examples of Renaissance architecture and urbanism with emphasis on their historical and cultural settings. Prerequisite: APH 314. *General Studies: HU.*

**APH 444 Baroque Architecture.** (3) N 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) F Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style. Prerequisite: major in college. *General Studies: HU.*

**APH 447 20th-Century Architecture II.** (3) S Developments in architecture since the international style. Prerequisite: APH 446. *General Studies: HU.*

**APH 505 Foundation Theory Seminar.** (3) F Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory. Lecture, seminar.

**APH 509 Foundation Seminar.** (3) SS Historical, technical, theoretical, environmental, and professional issues in architecture. Lecture, seminar, field trips. Prerequisite: ADE 510.

**APH 511 Energy Environment Theory.** (3) F Solar and other energy sources in designed and natural environments; architectural, urban, and regional implications of strategies using other renewable resources.

**APH 515 Current Issues and Topics.** (3) S Critical examination of current architectural issues, topics, and discourse. Prerequisite: APH 505.

**APH 581 Contemporary Urban Design.** (3) S Exploration of the contemporary city and urban design issues related to contemporary cities. Seminar, lecture, discussion. Prerequisite: APH 505.

**APH 681 Architectural Theory.** (3) S Examination of architectural theory. Emphasis on application of theory to practice. Seminar. Prerequisite: instructor approval.

**APH 682 Architectural Criticism.** (3) F Examination of architectural criticism, emphasizing specific methods of criticism and their application for aesthetic judgment. Seminar. Prerequisite: instructor approval.

**APH 683 Critical Regionalism.** (3) N Critical inquiry in cultural grounding the definition of place in architectural theory and practice. Lecture, field studies. Prerequisite: APH 446 or 447.

### ARCHITECTURE PROFESSIONAL STUDIES (ARP)

**ARP 451 Architecture Field Studies.** (1–6) F, S, SS Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated with approval of director.

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

**ARP 684 Professional Internship.** (2–6) S 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) F Materials and methods of construction. Aesthetic, code, and cost considerations. Lecture, lab. Corequisite: ADE 321.

**ATE 361 Building Structures I.** (3) S Introduction to load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications. Lecture, lab. Prerequisite: admission to upper division.

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

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

**ATE 452 Building Systems II.** (3) S

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) F

Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems. Lecture, lab. Prerequisite: ATE 361.

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

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

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

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) S

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) F

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) N

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) F

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) S

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) F

Comprehensive design development through the understanding and integration of building materials and systems. Lecture, seminar. Prerequisites: AAD 551; ATE 462, 553; level AutoCAD proficiency.

**ATE 557 Construction Documents I.** (3) S

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

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

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) F

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) F

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

**ATE 562 Experimental Evaluation.** (3) A

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

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

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

**ATE 564 Advanced Structures: Concrete.** (3) A

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

**ATE 565 Advanced Structures: High Rise.** (3) A

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

**ATE 582 Environmental Control Systems.** (3) A

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

**ATE 599 Thesis.** (1–12) N**ARCHITECTURAL COMMUNICATION (AVC)****AVC 161 Advanced Freehand Perspective Drawing.** (2) N

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) F, S

(a) Drawing Module

**AVC 301 Architectural Communication.** (2) F

Communication skills for architecture studios. Emphasis on graphics, drawing conventions, media, computer-aided design, design of presentations, and oral presentations. 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**

GIARD, KROELINGER, REZNIKOFF

**ASSOCIATE PROFESSORS**

BERNARDI, BRANDT, CUTLER, DETRIE, JOHNSON, McDERMOTT, NIELSEN, PATEL, RATNER, SANFT, WITT

**ASSISTANT PROFESSORS**

HARMON-VAUGHAN, HERRING, McCOY, NICKERSON, NIEDERHELMAN, RANDALL, ROTHSTEIN, WEED

Information about the School of Design may be obtained via the Web address provided or by sending electronic mail to [caed.advising@asu.edu](mailto:caed.advising@asu.edu).

**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 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,

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**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

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 all the while considering the 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.

## ORGANIZATION

Programs in the School of Design are organized by the faculty of the school under the direction and administration of the director.

## 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 ad design, brand identity, broadcast graphics, corporate identity, environmental graphics, informational graphics, in-house corporate design, museum informational design, publication design, Web site design, and others. 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 routinely used by people on a daily basis. The industrial design profession serves the needs of both manufacturers and consumers by developing products that are attractive, useful, safe, convenient, and comfortable to use. The designer's special talents and skills include an aesthetic sense, 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 staffs.

Through studio projects, students learn to visualize ideas and communicate them to others and to refine skills in free-hand 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. Stress is placed on the role of the designer in a team effort. Third-year stu-

dents 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 (FIDER), 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. In addition to the portfolio review, the faculty in charge of the Interior Design program conduct a required four-hour design project to measure minimum competency and understanding of the design process. The limited spaces available each year are awarded to applicants with the highest promise for professional success. The faculty of the School of Design retain the right to admit any meritorious student who may be deficient in a published school criterion. Such admission requires an extraordinary review of the applicant by the school's admissions committee. Should the faculty choose to admit such an applicant, the student is placed automatically on a provisional admission status with stipulations as to what is required to be removed from probation. See "Application To Upper-division Programs," page 131.

Students not admitted to upper-division programs are not dismissed from the university and may reapply or may

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 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 2000–2001 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 16, 2001.* Portfolio and application documents are due in the school office by 5:00 P.M. The Interior Design faculty also conduct a *required* half-day design project to measure minimum competency and understanding of the design process. The date is announced when the portfolio is submitted. Students who do not complete the charette are not considered for upper-division admission.

*June 1, 2001.* If the spring 2001 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 1. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Undergraduate Admissions office. Application is not complete until the university receives official transcripts for transfer course work. For those transfer students whose academic term ends in June rather than May, this deadline may be extended upon the written request of the applicant.

*July 2, 2001.* Acceptance notices are mailed no later than July 2.

*March 15, 2001.* The application deadline for Graphic Design is March 15, 2001. In addition to the portfolio submittal, 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 Program Coordinator for Graphic Design at the end of the first week of April. Acceptance notices will be 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 contacting the College of Architecture and Environmental Design Academic Advising Office (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, which is to be addressed by each applicant. 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:

*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 2000 semester. Copies are acceptable. An academic advisor forwards 2001 ASU transcripts. (Applicants wishing to transfer spring semester 2001 work are responsible for submitting these transcripts by June 1 so that they may be added to their portfolios. The student is also responsible for getting an official transfer transcript sent directly to the Office of the Registrar.)

*Page 5.* A certificate of admission to ASU is necessary only for those students who have been newly admitted for fall 2001 and who are applying directly into an upper-division program. The certificate is not required for students currently attending ASU.

*Following Pages (Usually 10–20 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 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 departmental foundation 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 included in the profes-

sional program, which is coordinated by the faculty. Students intern in a variety of settings, including in-house corporate design, publication design, ad design agencies, and others.

**General Studies Requirement.** The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 87, 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 for this professional degree, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 83, and "College Degree Requirements," page 119.

### Graphic Design—B.S.D. Preprofessional Program Requirements<sup>1</sup>

#### First Year

<b>Fall</b>	
DSC 101 Design Awareness <i>HU, G</i> .....	3
DSC 121 Design Principles I .....	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

#### Spring

DSC 120 Design Drawing .....	3
DSC 122 Design Principles II .....	3
ENG 102 First-Year Composition .....	3
Approved elective <sup>2</sup> .....	3
SB elective .....	3
Total .....	15
Preprofessional program total .....	30

<sup>1</sup> Transfer credits for the lower-division program must be equivalent in both content and level of offering. Samples of studio work to be accepted for credit must be submitted for evaluation through the college's Academic Advising Office, ARCH 141.

<sup>2</sup> 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

<b>Fall</b>	
DSC 494 ST: Finding Purpose: Survival in Design .....	3
GRA 283 Letterform I <sup>1</sup> .....	3
GRA 284 Visual Communication I <sup>1</sup> .....	3
L elective .....	3
SB elective .....	3
Total .....	15
<b>Spring</b>	
GRA 286 Visual Communication II <sup>1</sup> .....	3
GRA 287 Letterform II <sup>1</sup> .....	3
Design elective .....	3
HU, H elective .....	3
SQ, SG elective with laboratory I .....	4
Total .....	16

**Third Year**

**Fall**  
 GRA 345 Design Rhetoric *L*<sup>1</sup> .....3  
 GRA 383 Typography I<sup>1</sup> .....3  
 GRA 386 Visual Communication III<sup>1</sup> .....3  
 Approved electives<sup>2</sup> .....6  
 Total .....15

**Spring**  
 DSC 483 Preinternship Seminar<sup>1</sup> .....1  
 GRA 318 History of Graphic Design *HU* .....3  
 GRA 385 Typography II<sup>1</sup> .....3  
 GRA 387 Visual Communication IV<sup>1</sup> .....3  
 C elective .....3  
 Upper-division design elective .....3  
 Total .....16

**Summer**  
 DSC 484 Internship<sup>1</sup> .....3  
 Total .....3

**Fourth Year**

**Fall**  
 GRA 481 Visual Communication V<sup>1</sup> .....3  
 GRA 494 ST: Graphic Design .....3  
 SQ, SG elective with laboratory II .....4  
 Upper-division design elective .....3  
 Total .....13

**Spring**  
 GRA 482 Visual Communication VI<sup>1</sup> .....3  
 GRA 494 ST: Graphic Design .....3  
 Approved elective<sup>2</sup> .....3  
 Upper-division approved elective<sup>2</sup> .....3  
 Total .....12  
 Professional program total .....90  
 B.S.D. minimum total .....120

<sup>1</sup> Most studio courses and some lecture courses are sequential. They must be taken in and may be offered only during the semester noted.  
<sup>2</sup> A list of courses that fulfill approved electives is 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):

Preprofessional program .....61  
 Professional program .....59  
 Total .....120

The preprofessional curriculum balances a foundation in academic subjects such as English, algebra and trigonometry, computing, and physics with 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, graphics, project development, and professional practice. Students also take a number of approved program electives. A supervised summer internship is part of the curriculum.

Upper-division studios emphasize projects that promote an interdisciplinary approach to solving problems and that develop the student’s intellectual understanding of the philosophy, methodology, and theories related to industrial design. Problems proceed from small consumer products with simple task functions to larger and more complex problems and systems. Studio projects also emphasize the design processes: problem resolution through concept ideation, dialogue with specialists in related areas, and product development, presentation, and marketing.

Graduates of the program accept positions in industry and with firms involved in industrial design. Designers may focus on consumer products, transportation, electronics, medical devices, health products, or recreational products, among others. Designers may also choose to continue their education with graduate studies to enrich their design skills, 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 87, 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 83, and “College Degree Requirements,” page 119.

**Industrial Design—B.S.D.  
 Preprofessional Program Requirements<sup>1</sup>**

**First Year**

**Fall**  
 DSC 101 Design Awareness *HU, G* .....3  
 DSC 121 Design Principles I .....3  
 ECN 112 Microeconomic Principles *SB*<sup>2</sup> .....3  
 ENG 101 First-Year Composition .....3  
 or ENG 105 Advanced First-Year Composition (3)  
 if qualified  
 PGS 101 Introduction to Psychology *SB*<sup>2</sup> .....3  
 Total .....15

**Spring**

DSC 120 Design Drawing .....3  
 DSC 122 Design Principles II .....3  
 ENG 102 First-Year Composition .....3  
 IND 194 ST: Drafting for Industrial Design .....3  
 MAT 170 Precalculus *MA* .....3  
 Total .....15

**Second Year**

**Fall**

DSC 236 Introduction to Computer Modeling *CS* .....3  
 IND 227 Visual Methods for Problem Solving .....3  
 IND 242 Materials and Design .....3  
 IND 260 Industrial Design I .....3  
 IND 316 20th-Century Design *I HU, H* .....3  
 Total .....15

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see “General Studies,” page 87. For graduation requirements, see “University Graduation Requirements,” page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see “Classification of Courses,” page 60.

**Spring**

COM 225 Public Speaking <i>L</i> .....	3
or approved program elective (3) .....	
IND 228 Imaging and Visualization .....	3
IND 243 Process and Design .....	3
IND 261 Industrial Design II .....	3
PHY 111 General Physics <i>SQ</i> <sup>3</sup> .....	3
PHY 113 General Physics Laboratory <i>SQ</i> <sup>3</sup> .....	1
Total .....	16
Preprofessional program total .....	61

<sup>1</sup> 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.

<sup>2</sup> TGECC satisfied.

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

**Industrial Design—B.S.D.  
Professional Program Requirements**

**Third Year**

**Fall**

DSC 344 Human Factors in Design .....	3
IND 327 Presentation Graphics .....	3
IND 354 Principles of Product Design .....	3
IND 360 Industrial Design III .....	5
Total .....	14

**Spring**

IND 328 Graphics for Industrial Design .....	3
IND 361 Industrial Design IV .....	5
MKT 300 Principles of Marketing .....	3
SQ, SG elective with approved laboratory .....	4
Total .....	15

**Summer**

DSC 484 Internship .....	2
Total .....	2

**Fourth Year**

**Fall**

ENG 301 Writing for the Professions <i>L</i> .....	3
IND 460 Design Project I .....	5
IND 470 Professional Practice for Industrial Design <i>L</i> .....	3
Approved HU, SB elective .....	3
Total .....	14

**Spring**

IND 461 Design Project II .....	5
IND 474 Design Seminar .....	3
C elective* .....	3
Elective .....	3
Total .....	14
Professional program total .....	59
B.S.D. minimum total .....	120

\* 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 pre-professional program (first and second year) and a professional program (third, fourth, and fifth years):

Preprofessional program .....	56
Professional program .....	94
Total .....	150

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 87, 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 83, and "College Degree Requirements," page 119.

**Interior Design—B.S.D.  
Preprofessional Program Requirements<sup>1</sup>**

**First Year**

**Fall**

DSC 101 Design Awareness <i>HU, G</i> .....	3
DSC 121 Design Principles I <sup>1</sup> .....	3
ENG 101 First-Year Composition .....	3
or ENG 105 Advanced First-Year Composition (3) if qualified .....	
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 <sup>1</sup> .....	3
DSC 122 Design Principles II <sup>1</sup> .....	3
ENG 102 First-Year Composition .....	3
or HU elective if ENG 105 is taken (3) .....	
PHY 111 General Physics <i>SQ</i> <sup>2</sup> .....	3

PHY 113 General Physics Laboratory SQ <sup>2</sup> .....	1
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 HU .....	3
INT 235 User Needs and Behavior in Interior Design .....	3
Total .....	12

**Spring**

COM 225 Public Speaking L .....	3
or approved L elective (3)	
INT 220 Media for Design Development <sup>1</sup> .....	3
INT 231 Concepts for Interior Design .....	3
SQ or SG elective with laboratory .....	4
Total .....	13
Preprofessional program total .....	56

- <sup>1</sup> 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.
- <sup>2</sup> Both PHY 111 and 113 must be taken to secure SQ credit.

**Interior Design—B.S.D.  
Professional Program Requirements**

**Third Year**

**Fall**

DSC 344 Human Factors in Design .....	3
INT 310 History of Interior Design I HU, H .....	3
INT 340 Interior Codes: Public Welfare and Safety .....	3
INT 364 Interior Design Studio I .....	5
INT 366 Construction Methods in Interior Design .....	3
Total .....	17

**Spring**

DSC 483 Preinternship Seminar .....	1
INT 311 History of Interior Design II HU, H .....	3
INT 341 Interior Materials and Finishes .....	3
INT 365 Interior Design Studio II .....	5
INT 455 Environmental Control Systems .....	3
Total .....	15

**Summer**

DSC 484 Internship .....	3
Total .....	3

**Fourth Year**

**Fall**

ENG 301 Writing for the Professions L .....	3
INT 412 History of Decorative Arts in Interiors HU .....	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
Professional program total .....	94
B.S.D. minimum total .....	150

\* See "Fifth Year" below.

**Fifth Year.** During the fifth year, the student concentrates on research and application of that research related to the development of a comprehensive project. This year is self-directed in nature and prepares the student for independent thinking and creative problem solving. The fifth-year experience promotes high expectations for producing professional work that represents the culmination of the major's academic experience. 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.

**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 HU, G .....	3
INT 223 Interior Design Issues and Theories HU .....	3
INT 310 History of Interior Design I HU, H .....	3
INT 311 History of Interior Design II HU, H .....	3
INT 412 History of Decorative Arts in Interiors HU .....	3
INT 413 History of Textiles in Interior Design .....	3
Total .....	18

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

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) F, S  
Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as APH/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) F  
Survey of cultural, global, and historical context for the design professions. *General Studies: HU, G.*
- DSC 120 Design Drawing.** (3) S  
Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for design thinking. 1 hour lecture, 5 hours studio.
- DSC 121 Design Principles I.** (3) F  
Design as a language and process for creative thinking and realization. 1 hour lecture, 5 hours studio. Prerequisite: major in the College of Architecture and Environmental Design.
- DSC 122 Design Principles II.** (3) S  
Continued exploration of design as a language and process for creative thinking and realization. 1 hour lecture, 5 hours studio. Prerequisite: DSC 121.
- DSC 236 Introduction to Computer Modeling.** (3) F, S  
Fundamentals of computer operation, geographic information systems, geometric modeling of three-dimensional forms and rendering of light, mathematical modeling of processes using spreadsheets. Lab. Cross-listed as ANP/PUP 236. Credit is allowed for only ANP 236 or DSC 236 or PUP 236. Prerequisite: major in the College of Architecture and Environmental Design. *General Studies: CS.*
- DSC 344 Human Factors in Design.** (3) F  
Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.
- DSC 483 Preinternship Seminar.** (1) S  
Preparation of internship materials that produce and enhance a successful internship experience. Seminar. Prerequisite: 3rd-year major in the school.
- DSC 484 Internship.** (1–3) SS  
Full-time summer internship under supervision of practitioners in the Phoenix area or other locales. Prerequisite: instructor approval.
- DSC 494 Special Topics.** (3) F  
(a) Finding Purpose: Survival in Design
- DSC 500 Research Methods.** (1–12) N
- DSC 520 Contemporary Design Issues.** (3) F, S  
Projected applications in design production, planning, and decision-making processes. Lecture, seminar. Prerequisites: INT 310 and 311 or equivalents.
- DSC 524 Illumination and Acoustics.** (3) N  
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 equivalents.
- DSC 525 Design Methodologies.** (3) F  
Practical exercises and studies in problem-solving strategies; problem definition and supporting theory for the designer. Lectures, seminars, lab. Prerequisite: senior or graduate standing.
- DSC 527 Modern Design Theory.** (3) S  
Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies. Lectures, seminars. Prerequisite: DSC 525 or equivalent.
- DSC 529 Design Criticism.** (3) F  
Critical methods applied to design as material culture and human expression; evaluation of achievement versus intention. Lecture, seminar. Prerequisite: DSC 527 or equivalent.

**DSC 544 Human Factors Systems and Documentation.** (3) F  
Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation. Lectures, seminars, lab. Prerequisite: DSC 344 or equivalent.

**DSC 552 Computer Simulation in Design.** (3) F  
The 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) S  
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) N  
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) F  
Background and development of design education theories. Concepts of studio teaching methods. Comprehensive student project development and evaluation methods. Prerequisite: graduate standing.

**DSC 593 Applied Project.** (1–12) N

**DSC 598 Special Topics.** (1–4) N

(a) Facilities Planning II

**DSC 599 Thesis.** (1–12) N

### GRAPHIC DESIGN (GRA)

- GRA 283 Letterform I.** (3) F  
Drawing of letterforms with focus on proportion and structure. Introduction to letterform nomenclature and classifications. 6 hours a week. Prerequisites: DSC 122; acceptance into Graphic Design program.
- GRA 284 Visual Communication I.** (3) F  
Theoretical and applied studies in shape, drawing, and color. 6 hours a week. Prerequisite: GRA 283.
- GRA 286 Visual Communication II.** (3) S  
Transition from theoretical to applied problems. Emphasis on refinement of visual skills. 6 hours a week. Prerequisites: GRA 284; acceptance into Graphic Design program. Corequisite: GRA 287.
- GRA 287 Letterform II.** (3) S  
Continuation of Letterform I with an emphasis on lowercase letters; basics of pen writing and font design. 6 hours per week. Prerequisites: GRA 284; acceptance into Graphic Design program. Corequisite: GRA 286.
- GRA 318 History of Graphic Design.** (3) S  
Survey of 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) F  
Development of critical thinking and expression of ideas in concise and persuasive written and spoken form. Prerequisites: ENG 101, 102. *General Studies: L.*
- GRA 382 Graphic Representation.** (3) F  
Studio practice in drawing with an application toward graphic communication. 6 hours a week. May be repeated once for credit. Prerequisite: GRA 284.
- GRA 383 Typography I.** (3) F  
Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week. Prerequisites: GRA 286, 287. Corequisite: GRA 386.
- GRA 385 Typography II.** (3) S  
Problems in composition, choice, and combinations of typefaces, formats, and their application to a variety of design projects. 6 hours a week. Prerequisite: GRA 383. Corequisite: GRA 387.
- GRA 386 Visual Communication III.** (3) F  
Problems in specific design applications such as poster, packaging, publications. Emphasis on development of concepts in visual communications. 6 hours a week. Prerequisites: GRA 286, 287. Corequisite: GRA 383.
- GRA 387 Visual Communication IV.** (3) S  
Client-oriented projects. Problems are multifaceted and the emphases are on continuity of design in more than one medium and format. 6 hours a week. Prerequisites: GRA 383, 386. Corequisite: GRA 385.

**GRA 481 Visual Communication V.** (3) F

Studio problems with an emphasis on analysis, problem solving, and professional portfolio preparation. 6 hours a week. Prerequisites: GRA 385, 387.

**GRA 482 Visual Communication VI.** (3) S

Individual and group projects with outside clients. All projects culminate in an exhibit. 6 hours a week. Prerequisite: GRA 481.

**GRA 485 Graphic Design Workshop.** (3) F, S, SS

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. Prerequisite: instructor approval.

**GRA 494 Special Topics.** (3) F, S

(a) Graphic Design

**INDUSTRIAL DESIGN (IND)****IND 194 Special Topics.** (3) S

(a) Drafting for Industrial Design  
Application of 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) F

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) S

Design activities stressing graphic language abstraction practiced for presentation. Structure of criticism, including description, interpretation, and evaluation are discussed. Seminar, studio. Prerequisite: IND 227.

**IND 242 Materials and Design.** (3) F

Materials application in design. Introduction to characteristics and properties of metals and organic materials, including plastics, and inorganic materials.

**IND 243 Process and Design.** (3) S

Influences of industrial processing on design. Introduction to basic materials processing and post-forming processes. Emphasis on appearance enhancement and design constraints of material processing. Prerequisite: IND 242.

**IND 260 Industrial Design I.** (3) F

Introduction to the method and process of the industrial designer. Determinants necessary in small product design. 1 hour lecture, 2 hours studio. Prerequisite: DSC 122.

**IND 261 Industrial Design II.** (3) S

Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics. 1 hour lecture, 2 hours studio. Prerequisite: IND 260 or equivalent.

**IND 316 20th-Century Design I.** (3) F

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) S

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) F

Methods for portfolio and professional product presentation using graphic media for information transfer are studied. Aesthetic judgment, organization, and craftsmanship are stressed. Seminar, studio. Prerequisite: IND 228.

**IND 328 Graphics for Industrial Design.** (3) S

Packaging applications and planning are investigated and applied to the development of an identity for a product line structured as a system. Lab. Prerequisite: IND 327.

**IND 354 Principles of Product Design.** (3) F

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) S

Mold design for part requirements; molded holes; threads; inserts; fastening and joining; decorating; reinforced plastics.

**IND 360 Industrial Design III.** (5) F

Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques. 10 hours studio. Prerequisite: school approval.

**IND 361 Industrial Design IV.** (5) S

Emphasis on developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing. 10 hours studio. Prerequisite: IND 360.

**IND 460 Design Project I.** (5) F

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. Prerequisites: DSC 484; IND 361.

**IND 461 Design Project II.** (5) S

Product design, with emphasis in systems interaction. Culmination of design process and technique. Individual project direction is encouraged. 10 hours studio. Prerequisite: IND 361.

**IND 470 Professional Practice for Industrial Design.** (3) F

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) S

Manufacturer's 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) N

Application of mechanical drafting knowledge and skills. Manual drafting principles and techniques with transition to computer-aided industrial design.

**INTERIOR DESIGN (INT)****INT 194 Special Topics.** (3) F

(a) Drafting for Interior Design

**INT 220 Media for Design Development.** (3) S

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) F

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) S

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) F

Applications of 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) F

The design of interior spaces as an expression of cultural influences to 1835. *General Studies: HU, H.*

**INT 311 History of Interior Design II.** (3) S

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) F

Codes and regulations as performance criteria for interior design. Corequisite: INT 366.

**INT 341 Interior Materials and Finishes.** (3) S

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) F

Studio problems in interior design related to behavioral response in personal and small group spaces. 10 hours studio. Prerequisite: school approval.

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

**INT 365 Interior Design Studio II.** (5) S

Studio problems in interior design, with emphasis on issues of public and private use of interior places of assembly. 10 hours studio. Prerequisite: INT 364.

**INT 366 Construction Methods in Interior Design.** (3) F

Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design. Lecture, field trips. Corequisite: INT 340.

**INT 412 History of Decorative Arts in Interiors.** (3) F

The design of decorative arts as an expression of cultural influences and as an extension of interior spaces. Prerequisite: INT 311 or instructor approval. *General Studies: HU.*

**INT 413 History of Textiles in Interior Design.** (3) S

Cultural and historical expression of textiles as related to interiors. May include field trips. Prerequisite: INT 412 or instructor approval.

**INT 422 Facilities Planning and Management I.** (3) F

The facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs. Prerequisite: senior standing.

**INT 423 Facilities Planning and Management II.** (3) S

The formation of facilities policies, procedures, and standards. The facilities database, space allocations, and management process. Evaluation of programming criteria. Prerequisites: INT 422; senior standing.

**INT 442 Specifications and Documents for Interiors.** (3) F

Contract specifications, documents, schedules, and bidding procedures for interior design. Prerequisites: INT 341, 365. *General Studies: L.*

**INT 446 Furniture Design and Production.** (3) F

Design, construction, cost estimating, and installation in interior furniture and millwork. 1 hour lecture, 4 hours studio.

**INT 455 Environmental Control Systems.** (3) S

Survey of environmental control systems and their application in the design of building interiors. Lecture, field trips. Prerequisites: MAT 117, 170; PHY 111, 113; junior standing.

**INT 457 Acoustics for Interior Design.** (3) F

Physical properties of sound. Studies pertaining to sound-absorbing materials, constructions, and room acoustics. Prerequisites: MAT 170; PHY 111, 113.

**INT 458 Lighting for Interior Design.** (3) S

Light as an aspect of interior design. Evaluation of light sources for distribution, color, and cost.

**INT 464 Interior Design Studio III.** (5) F

Studio problems in interior design related to commercial spaces. 10 hours studio. Prerequisites: DSC 484; INT 365.

**INT 465 Interior Design Studio IV.** (5) S

Studio problems in interior design related to health and educational facilities. 10 hours studio. Prerequisite: INT 464.

**INT 466 Interior Design Studio V.** (5) F

Advanced interior design problem solving, design theory, and criticism. Thesis project development based upon the major's concentration. 10 hours studio. Prerequisite: school approval.

**INT 467 Interior Design Studio VI.** (5) S

Advanced series of specialized projects or continuation of thesis project based upon the major's concentration. 10 hours studio. Prerequisite: school approval.

**INT 472 Professional Practice for Interior Design.** (3) S

Business procedures, project control, fee structures, and professional product liabilities.

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## School of Planning and Landscape Architecture

Frederick Steiner

Director

(AED 158A) 480/965-7167

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

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### PROFESSORS

KIHL, LAI, MUSCHKATEL, PIJAWKA, STEINER

### ASSOCIATE PROFESSORS

COOK, KIM, McSHERRY, SAN MARTIN, YABES

### ASSISTANT PROFESSORS

CAMERON, CREWE, EWAN, FISH-EWAN, GUHATHAKURTA, MUSACCHIO

### PURPOSE

The faculty in the School of Planning and Landscape Architecture offer a curricula that provides 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 profession of planning 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 both private firms and government agencies. Their work typically involves fields such as land-use planning, housing, natural resource management, urban transportation, development controls, and environmental impact assessment.

### ORGANIZATION

The programs are organized by the faculty of the school under the direction and administration of the program coordinators and the school director.

### DEGREES

The faculty in the School of Planning and Landscape Architecture offer the Bachelor of Science in Planning degree in Urban Planning, Bachelor of Science in Landscape Architecture degree, and Bachelor of Science in Design degree in Housing and Urban Development.

### Bachelor of Science in Planning (B.S.P.)

The B.S.P. degree prepares students for careers in urban planning. Students take courses that include comprehensive planning, socioeconomic and environmental analysis, computer and analytical methods, planning law, site planning, landscape architecture, urban design, and public-policy formulation and administration. An internship or an approved elective is required between the third and fourth years. Many students continue to specialize in planning at the graduate level. Students in planning are exposed to the theories, methods, and practices of the profession of planning.

**Bachelor of Science in Landscape Architecture (B.S.L.A.)**

This degree prepares students to be professional landscape architects. Students explore the reasons for and the techniques involved in the analysis, planning, and design of the environment, both natural and built. The B.S.L.A. is an accredited program.

**Bachelor of Science in Design (B.S.D.)**

A B.S.D. degree with a major in Housing and Urban Development (HUD) educates and trains professionals to lead in the production of high-quality affordable housing, in the development of creatively designed and soundly planned neighborhoods and communities, in the revitalization of communities, and in the exemplification of social inclusiveness and environmental sensitivity in responsible land development. HUD graduates may pursue careers in the private home development industry, in publicly sponsored housing and community redevelopment, with nonprofit housing agencies, or in postgraduate housing and urban development research and education. The B.S.D. with a major in Housing and Urban Development is offered in conjunction with the College of Extended Education.

**MINOR**

**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 301 Introduction to Urban Planning L*	3
PUP 412 History of the City H	3
PUP 420 Theory of Urban Design HU	3
PUP 425 Urban Housing Analysis	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 510 Citizen Participation	3

\* PUP 301 Introduction to Urban Planning is required. Landscape Architecture students must choose another class with an advisor's approval since PUP 301 is already required for the B.S.L.A.

The minor is 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 specialization areas 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" below.

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 Seminar* brochure from a college academic advisor. The following dates and procedures are for students applying to 2001–2002 upper-division programs in Urban Planning and Housing and Urban Development. Applicants to the upper-division program in Landscape Architecture follow different procedures and have different deadline dates; see an advisor in the advising office for more information.

**Upper-Division Application Deadlines.** *April 16, 2001.* Portfolio and application documents are due in the school office by 5:00 P.M.

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

*June 1, 2001.* If the spring 2001 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 1. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Undergraduate Admissions office. Application is not complete until the university receives official transcripts for transfer course work. For those transfer students whose academic term ends in June rather than May, this deadline may be extended upon the written request of the applicant.

*July 2, 2001.* Acceptance notices are mailed no later than July 2.

*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 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);
5. samples of individual work; team work can be included, but the contribution of the candidate must be clarified;
6. students are strongly encouraged to submit evidence of other endeavors related to the major;
7. the applicant's GPA based on required courses and cumulative GPA is evaluated; and
8. 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 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, 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-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 core .....	57
Internship .....	2
Total .....	120

**General Studies Requirement.** The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 87, 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 83, and "College Degree Requirements," page 119.

### Bachelor of Science in Planning, Major in Urban Planning Preprofessional Program Requirements<sup>1</sup>

#### First Year

<b>Fall</b>	
ENG 101 First-Year Composition .....	3
or ENG 105 Advanced First-Year Composition (3) if qualified	
HUD 161 Graphic Communication .....	3
MAT 117 College Algebra <i>MA</i> .....	3
or approved more advanced <i>MA</i> elective (3)	
PUP 100 Introduction to Environmental Design <i>HU, G, H</i> .....	3
Approved <i>HU</i> or <i>SB</i> elective .....	3
Total .....	15

#### Spring

ECN 112 Microeconomic Principles <i>SB</i> .....	3
ENG 102 First-Year Composition .....	3
or <i>HU</i> elective if ENG 105 is taken (3)	
GPH 111 Introduction to Physical Geography <i>SQ</i> .....	4
Approved <i>HU</i> or <i>SB</i> elective .....	3
Approved <i>SB</i> elective .....	3
Total .....	16

#### Second Year

<b>Fall</b>	
ADE 120 Design Fundamentals I <sup>2</sup> .....	3
BIO 319 Environmental Science <i>G</i> .....	3
PLA 101 Landscape and Society <sup>2</sup> .....	3

PUP 261 Urban Planning I.....	4
PUP 301 Introduction to Urban Planning <i>L</i> .....	3
Total .....	16
<b>Spring</b>	
PUP 264 Urban Planning II.....	4
Approved HU elective.....	3
Approved CS elective .....	3
Approved SQ elective .....	4
Total .....	14
Preprofessional program total .....	61

- <sup>1</sup> 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.

**Bachelor of Science in Planning,  
Major in Urban Planning  
Professional Program Requirements  
Third Year**

<b>Fall</b>	
PUP 322 Planning Methods Using Computers .....	3
PUP 361 Urban Planning III .....	5
PUP 412 History of the City <i>H</i> .....	3
PUP 424 Planning Methods .....	3
PUP 442 Environmental Planning.....	3
Minimum total .....	17
<b>Spring</b>	
GCU 361 Urban Geography <i>SB</i> .....	3
PUP 362 Urban Planning IV .....	5
PUP 420 Theory of Urban Design <i>HU</i> .....	3
PUP 430 Transportation Planning and the Environment .....	3
Total .....	14
<b>Summer</b>	
PUP 484 Internship .....	1-12
PUP 485 International Field Studies in Planning and Landscape Architecture (optional).....	1-12
Minimum total .....	2

**Fourth Year**

<b>Fall</b>	
PUP 425 Urban Housing Analysis .....	3
PUP 432 Planning and Development Control Law.....	3
PUP 452 Ethics and Professional Practice <i>L</i> .....	3
PUP 461 Urban Planning V.....	5
PUP 498 PS: Senior Pro-Seminar .....	1
Total .....	15
<b>Spring</b>	
PUP 462 Urban Planning VI .....	5
PUP 475 Environmental Impact Assessment .....	3
PUP 494 ST: Environmental Planning Economics .....	3
Total .....	11
Professional program total .....	59
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
Total .....	120

**General Studies Requirement.** The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See “General Studies,” page 87, 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 83, and “College Degree Requirements,” page 119.

**Bachelor of Science in Landscape Architecture  
Preprofessional Requirements<sup>1</sup>**

**First Year**

<b>Fall</b>	
ENG 101 First-Year Composition .....	3
or ENG 105 Advanced First-Year Composition (3)	
MAT 117 College Algebra <i>MA</i> .....	3
PLA 101 Landscape and Society.....	3
PLA 161 Graphic Communication.....	3
PUP 100 Introduction to Environmental Design <i>HU, G, H</i> .....	3
Total .....	15
<b>Spring</b>	
ADE 120 Design Fundamentals I <sup>2</sup> .....	3
ARS 101 Art of the Western World I <i>HU, H</i> .....	3
ENG 102 First-Year Composition .....	3
GPH 111 Introduction to Physical Geography <i>SQ</i> .....	4
HIS 101 Western Civilization <i>SB, H</i> .....	3
Total .....	16

**Second Year**

<b>Fall</b>	
PLA 240 Landscape Survey Techniques .....	3
PLA 261 Landscape Architecture I <sup>2</sup> .....	4
PLA 310 History of Landscape Architecture <i>H</i> .....	3
PLA 494 ST: Plant Materials.....	3
PUP 301 Introduction to Urban Planning <i>L</i> .....	3
Total .....	16
Preprofessional program total .....	47

- <sup>1</sup> 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.
- <sup>2</sup> Portfolio review is required for transfer studio work. See a 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 .....	3

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see “General Studies,” page 87. For graduation requirements, see “University Graduation Requirements,” page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see “Classification of Courses,” page 60.

PLA 242 Landscape Construction I .....	4
PLA 262 Landscape Architecture II .....	4
SQ or SG elective with laboratory .....	4
Total .....	15

**Third Year**

**Fall**

PLA 311 Contemporary Landscape Architecture.....	3
PLA 344 Landscape Construction II .....	4
PLA 361 Landscape Architecture III.....	4
C elective.....	3
Elective.....	3
Total .....	17

**Spring**

PLA 345 Professional Practice Seminar.....	1
PLA 362 Landscape Architecture IV .....	4
PLA 363 Landscape Planting Design.....	4
PUP 420 Theory of Urban Design <i>HU</i> .....	3
Electives .....	3
Minimum total .....	15

**Summer**

PLA 484 Internship (optional).....	3
or PLA 485 International Field Studies in Planning and Landscape Architecture (6) (optional)*	

**Fourth Year**

**Fall**

PLA 410 Social Factors in Landscape and Urban Planning.....	3
PLA 461 Landscape Architecture V .....	4
PUP 432 Planning and Development Control Law .....	3
Elective.....	3
Total .....	13

**Spring**

PLA 411 Landscape Architecture Theory and Criticism .....	3
PLA 462 Landscape Architecture VI.....	4
Electives .....	6
Total .....	13
Professional program total .....	73
B.S.L.A. minimum total.....	120

\* PLA 484 or PLA 485 would be used as an elective in the fourth year.

**Housing and Urban Development**

The Bachelor of Science in Design degree in Housing and Urban Development requires a total of 120 semester hours.

Preprofessional program courses .....	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 87, 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 83, and “College Degree Requirements,” page 119.



Charlie's Café on the second story of the CAED/North building provides an aesthetically pleasing environment in which to study.

**Bachelor of Science in Design,  
Major in Housing and Urban Development  
Preprofessional Program Requirements<sup>1</sup>**

**First Year**

**Fall**

ECN 112	Microeconomic Principles <i>SB</i> .....	3
ENG 101	First-Year Composition.....	3
GPH 111	Introduction to Physical Geography <i>SQ</i> .....	4
HUD 161	Graphic Communication.....	3
PUP 100	Introduction to Environmental Design <i>HU, G, H<sup>2</sup></i> .....	3
Total	.....	16

**Spring**

ECN 111	Macroeconomic Principles <i>SB</i> .....	3
	or any <i>SB</i> elective (3)	
ENG 102	First-Year Composition.....	3
HUD 201	Introduction to Housing and Urban Development.....	3
MAT 117	College Algebra <i>MA</i> .....	3
	or MAT 170 Precalculus <i>MA</i> (3)	
	or MAT 210 Brief Calculus <i>MA</i> (3)	
	Approved CS elective in computers.....	3
Total	.....	15

**Second Year**

**Fall**

APH 200	Introduction to Architecture <i>HU, G</i> .....	3
	or any CAED history course listed below (3) <sup>2,3</sup>	
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**

PUP 301	Introduction to Urban Planning <i>L</i> .....	3
ACC elective.....		3
Natural science with lab.....		4
REA elective.....		3
Upper-division HUM elective.....		3
Total	.....	16
Preprofessional program total	.....	63

<sup>1</sup> 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> See "HU/SB Note" below.

<sup>3</sup> See the "CAED History Courses," on this page.

*HU/SB Note.* Students not taking PUP 100 and APH 200 should note that courses in the humanities and social/behavioral sciences areas must total at least 15 semester hours with at least six semester hours in each area; two courses must be from the same department; at least two departments must be represented in the total selection, and at least one course must be in the upper division. Courses chosen must also fulfill one of the following awareness areas: historical (H), global (G), or cultural diversity in the United States (C); all three awareness areas must be fulfilled.

*CAED History Courses.* These CAED history courses also fulfill HU. See the course listings for prerequisites.

APH 300	World Architecture I/Western Cultures <i>HU, G, H</i> .....	3
APH 305	Contemporary Architecture <i>HU</i> .....	3
APH 313	History of Western Architecture I <i>L/HU</i> .....	3
APH 446	20th-Century Architecture I <i>HU</i> .....	3
DSC 101	Design Awareness <i>HU, G</i> .....	3
GRA 318	History of Graphic Design <i>HU</i> .....	3
IND 316	20th-Century Design I <i>HU, H</i> .....	3
INT 223	Interior Design Issues and Theories <i>HU</i> .....	3
INT 310	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
PUP 200	The Planned Environment <i>HU, H</i> .....	3
PUP 420	Theory of Urban Design <i>HU</i> .....	3

Select a minimum of nine semester hours of electives from PLA, PUP, or HUD prefix courses.

**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 361	Housing and Urban Development Studio I: Residential Design and Development.....	2
HUD 363	Housing and Urban Development Seminar I: Residential Design and Development.....	3
MKT 394	ST: Marketing and Selling.....	3
Total	.....	14

**Spring**

CON 389	Construction Cost Accounting and Control <i>CS</i> .....	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
Approved elective in computers*.....		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 <i>CS</i> .....	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

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

PUP 433 Zoning Ordinances, Subdivision Regulations, and Building Codes.....	3
or PUP 432 Planning and Development Control Law (3)	
Total .....	14
<b>Spring</b>	
HUD 402 Community Revitalization: Problems and Strategies .....	3
HUD 403 Advanced Topics in Housing and Urban Development .....	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 452 Ethics and Professional Practice L.....	3
Total .....	14
Professional program total .....	57
B.S.D.-HUD minimum total .....	120

\* 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

### ENVIRONMENTAL DESIGN AND PLANNING (EPD)

See the *Graduate Catalog* for EPD courses.

### HOUSING AND URBAN DEVELOPMENT (HUD)

- HUD 161 Graphic Communication.** (3) F, S  
Development of drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions. Studio. Cross-listed as PLA 161. Credit is allowed for only HUD 161 or PLA 161.
- HUD 201 Introduction to Housing and Urban Development.** (3) S  
Perspectives and issues concerning HUD. Guest lectures by interdisciplinary faculty and private, public, and nonprofit practitioners.
- HUD 301 Housing and Community Design and Development.** (3) F  
Single and multi-family 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) S  
Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.
- HUD 361 Housing and Urban Development Studio I: Residential Design and Development.** (2) F  
Affordable residential design, development, and production process. Studio. Pre- or corequisites: HUD 301, 363; upper-division HUD major.
- HUD 362 Housing and Urban Development Studio II: Community Design and Development.** (2) S  
Neighborhood and new community design and development process. Studio. Pre- or corequisites: HUD 301, 361, 363, 364; upper-division HUD major.
- HUD 363 Housing and Urban Development Seminar I: Residential Design and Development.** (3) F  
Affordable residential design, development, and production process. Seminar. Pre- or corequisites: HUD 301, 361; upper-division HUD major.

**HUD 364 Housing and Urban Development Seminar II: Community Design and Development.** (3) S  
Neighborhood and new community design and development process. Seminar. Pre- or corequisites: HUD 301, 361, 362, 363; upper-division HUD major.

**HUD 401 Assisted Housing.** (3) F  
Publicly-subsidized and non-profit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.

**HUD 402 Community Revitalization: Problems and Strategies.** (3) S  
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) F, S  
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) F  
Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing. Studio. Pre- or corequisites: HUD 302, 463; upper-division HUD major.

**HUD 462 Housing and Urban Development Studio IV: Neighborhood Revitalization Process.** (2) S  
Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation, etc. Studio. Pre- or corequisites: HUD 401, 402, 464; upper-division HUD major.

**HUD 463 Housing and Urban Development Seminar III: Comprehensive Housing Development Process.** (3) F  
Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing. Seminar. Pre- or corequisites: HUD 302, 461; upper-division HUD major.

**HUD 464 Housing and Urban Development Seminar IV: Neighborhood Revitalization Process.** (3) S  
Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation, etc. Seminar. Pre- or corequisites: HUD 401, 402, 462; upper-division HUD major.

**HUD 484 Internship.** (1) SS

### LANDSCAPE ARCHITECTURE (PLA)

- PLA 101 Landscape and Society.** (3) F  
Examination of interrelationship between society and the landscape with emphasis on human involvement in shaping the landscape. *General Studies: HU, G.*
- PLA 161 Graphic Communication.** (3) F, S  
Development of drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions. Studio. Cross-listed as HUD 161. Credit is allowed for only HUD 161 or PLA 161.
- PLA 222 Computers in Landscape Architecture.** (3) S  
Computer applications in landscape architecture including CAD, GIS, graphics, and visualization. Lab. *General Studies: CS.*
- PLA 240 Landscape Survey Techniques.** (3) F  
Development of landscape survey skills including aerial photography, satellite images, geo-referencing, landscape surveys, and field data collection. Lecture, lab.
- PLA 242 Landscape Construction I.** (4) S  
Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork. Studio. Prerequisite: admission to professional program.
- PLA 261 Landscape Architecture I.** (4) F  
Landscape communication: communication techniques for urban planning and landscape architecture. Studio. Prerequisites: ADE 120; GPH 111.
- PLA 262 Landscape Architecture II.** (4) S  
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) F  
Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design. Cross-listed as APH 411. Credit is allowed for only APH 411 or PLA 310. *General Studies:* H.

**PLA 311 Contemporary Landscape Architecture.** (3) F  
Exploration of concerns, projects, and movements in landscape architecture of late 20th-century understanding social, ecological, regional, and historical influences.

**PLA 322 Planning Methods Using Computers.** (3) F  
Planning methods using database, word processors, spreadsheets, CAD, and mapping packages on microcomputers. Lecture, lab. Cross-listed as PUP 322. Credit is allowed for only PLA 322 or PUP 322.

**PLA 344 Landscape Construction II.** (4) F  
Characteristics of materials and methods used in landscape architectural construction. Studio. Prerequisite: PLA 242 or instructor approval.

**PLA 345 Professional Practice Seminar.** (1) S  
Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.

**PLA 361 Landscape Architecture III.** (4) F  
Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. Studio. Prerequisite: admission to professional program.

**PLA 362 Landscape Architecture IV.** (4) S  
Site design: site specific design of configured space by the creative development of form. Studio. Prerequisite: admission to professional program.

**PLA 363 Landscape Planting Design.** (4) S  
Functional and aesthetic use of plants in arid region landscape design. Design philosophies are explored through planting design problems. Studio. Prerequisite: admission to professional program.

**PLA 410 Social Factors in Landscape and Urban Planning.** (3) F  
Examination of the influence of social factors in landscape architecture and urban planning.

**PLA 411 Landscape Architecture Theory and Criticism.** (3) S  
Landscape architecture theories and projects are critically analyzed to evaluate validity of design and contribution to society. Prerequisites: PLA 310, 361, 362, 420, 461.

**PLA 412 Landscape Ecology and Planning.** (3) S  
Review of the evolution of landscape ecology and landscape planning and examination of use and value.

**PLA 413 Southwest Landscape Interpretation.** (3) S  
Explorations in methods and implications of landscape interpretation within the American Southwest.

**PLA 420 Theory of Urban Design.** (3) S  
Analysis of the visual and cultural aspects of urban design. Theories and techniques applied to selected study models. Prerequisite: junior standing. *General Studies:* HU.

**PLA 446 Landscape Construction III.** (3) S  
Landscape construction focusing on low technology, biotechnical, regional, and experimental techniques or systems. Lecture, studio.

**PLA 461 Landscape Architecture V.** (4) F  
Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale. Studio. Prerequisite: PLA 362.

**PLA 462 Landscape Architecture VI.** (4) S  
Advanced landscape architecture: integrative capstone studio with multifaceted design problems. Prerequisite: PLA 461.

**PLA 484 Internship.** (3) F, S, SS (SS1 only)  
Full-time internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit. Prerequisite: school major or instructor approval.

**PLA 485 International Field Studies in Planning and Landscape Architecture.** (1–12) F, S, SS  
Organized field study of planning and landscape architecture in specified international locations. May be repeated for credit with school approval. Study abroad. Cross-listed as PUP 485. Credit is allowed for only PLA 485 or PUP 485.

**PLA 494 Special Topics.** (3) F, S  
(a) Plant Materials

**PLA 498 Pro-Seminar.** (1) S  
(a) Professional Senior Seminar

### URBAN AND ENVIRONMENTAL PLANNING (PUP)

**PUP 100 Introduction to Environmental Design.** (3) F, S  
Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as APH/DSC 100. Credit is allowed for only APH 100 or DSC 100 or PUP 100. *General Studies:* HU, G, H.

**PUP 200 The Planned Environment.** (3) F  
Environmental, aesthetic, social, economic, political, and other factors influencing urban development. *General Studies:* HU, H.

**PUP 236 Introduction to Computer Modeling.** (3) F, S  
Fundamentals of computer operation, geographic information systems, geometric modeling of three-dimensional forms and rendering of light, mathematical modeling of processes using spreadsheets. Lab. Cross-listed as ANP/DSC 236. Credit is allowed for only ANP 236 or DSC 236 or PUP 236. Prerequisite: major in the College of Architecture and Environmental Design. *General Studies:* CS.

**PUP 261 Urban Planning I.** (4) F  
Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes. Studio. Prerequisites: ADE 120; GPH 111.

**PUP 264 Urban Planning II.** (4) S  
Planning communication: communication techniques for urban planning and landscape architecture communication. Prerequisites: ADE 120; PLA 261 (or PUP 261).

**PUP 301 Introduction to Urban Planning.** (3) F, S, SS  
Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society. *General Studies:* L.

**PUP 322 Planning Methods Using Computers.** (3) F  
Planning methods using database, word processors, spreadsheets, CAD, and mapping packages on microcomputers. Lecture, lab. Cross-listed as PLA 322. Credit is allowed for only PLA 322 or PUP 322.

**PUP 361 Urban Planning III.** (5) F  
Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. Studio. Prerequisite: school major or instructor approval.

**PUP 362 Urban Planning IV.** (5) S  
Planning elements: one or more factors addressed, including land use, housing, environment, transportation, circulation, open space, economic development, urban design. Studio. Prerequisite: school major or instructor approval.

**PUP 412 History of the City.** (3) F  
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 allowed for only APH 414 or PUP 412. *General Studies:* H.

**PUP 420 Theory of Urban Design.** (3) S  
Analysis of 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.** (3) F  
Tools useful for urban planning research; emphasis on research design and survey methods. Prerequisite: PUP 301 or instructor approval.

**PUP 425 Urban Housing Analysis.** (3) F  
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) S  
Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs. Lecture, discussion. Prerequisite: junior standing or instructor approval.

**NOTE:** For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

**PUP 432 Planning and Development Control Law.** (3) F

Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.

**PUP 433 Zoning Ordinances, Subdivision Regulations, and Building Codes.** (3) F, S

Analysis of zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.

**PUP 442 Environmental Planning.** (3) F

Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise. Field trips. Prerequisite: PUP 301 or instructor approval.

**PUP 444 Preservation Planning.** (3) S

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) F

Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focus on contemporary U.S. examples. Prerequisite: upper division or graduate status. *General Studies: C.*

**PUP 452 Ethics and Professional Practice.** (3) F

Ethical problems and issues in planning, professional practice, and decision making. Prerequisite: school major or instructor approval. *General Studies: L.*

**PUP 461 Urban Planning V.** (5) F

Comprehensive planning: collection and analysis of economic, social, and environmental data relevant to urban planning; development of land-use plans. Studio. Prerequisite: PLA 362 or PUP 362 or instructor approval.

**PUP 462 Urban Planning VI.** (5) S

Capstone studio: project focusing on synthesis aspects of plan making. Studio. Prerequisite: PUP 461 or instructor approval.

**PUP 475 Environmental Impact Assessment.** (3) S

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) F, S, SS (SS1 only)

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) F, S, SS

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.

**PUP 494 Special Topics.** (3) F, S

(a) Environmental Planning Economics

**PUP 498 Pro-Seminar.** (1) F

(a) Senior Pro-Seminar

**PUP 501 The Idea of Planning.** (3) F

Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.

**PUP 510 Citizen Participation.** (3) S

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) F

Review of 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) F

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) F

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) S

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) S

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 544 Urban Land Use Planning.** (3) S

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) N

Advanced study of local, state, and federal urban design policy. Prerequisite: PLA 420 or PUP 420.

**PUP 561 Urban Design Studio.** (4) N

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) F

Comprehensive planning workshop dealing with real community problems. Focus on the data gathering and analysis steps of the planning process. Prerequisite: Master of Environmental Planning major or instructor approval.

**PUP 574 Planning Studio II: Options and Implementation.** (4) S

Comprehensive planning workshop dealing with real community problems. Focus on the development of options, plan making, and plan implementation. Studio. Prerequisite: PUP 572 or instructor approval.

**PUP 575 Environmental Impact Assessment.** (3) S

Criteria and methods for compliance with environmental laws; development of skills and techniques needed to prepare environmental impact statements/assessments.

**PUP 584 Internship.** (3) F, S, SS (SS1 only)

Internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit.

**PUP 599 Thesis.** (1–12) N**PUP 622 Planning Methods II: Quantitative Planning Analysis.** (3) S

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) F

Land use and locational impact of economic activity and the urban real property market. Prerequisite: instructor approval.

**PUP 644 Public Sector Planning.** (3) S

Urban fiscal problems and public goods provision in state and local governments. Prerequisites: instructor approval; 1 course in microeconomics.