School of Architecture

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REGENTS' PROFESSOR
COOK

PROFESSORS
HOFFMAN, McCOY, MEUNIER, OZEL, ROTONDI, SCHEATZLE, UNDERHILL, UNDERWOOD

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

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

PURPOSE

The architecture program at ASU offers an integrated curriculum of professional courses and focuses on the design laboratory. The program reflects an awareness of the complex factors affecting the quality of the built environment. The program seeks through scholarship, teaching, research, design, and community service to develop the discipline and the knowledge necessary to address the important environmental and design issues faced by society.

In addition to developing knowledge and skills in architectural design, building technology, and professional practice, students are encouraged to select electives from a broad range of approved courses both within the college and across the university. These electives may be selected to devise a minor, to further professional study, or in some other fashion to enrich the student's academic experience.

ORGANIZATION

The School of Architecture's program is organized by the faculty under the direction and administration of the director and standing committees of the faculty.

DEGREES

The faculty in the School of Architecture offer the Bachelor of Science in Design degree with a major in Architectural Studies.

The program in architecture culminates with the professional degree Master of Architecture, which is accredited by the National Architectural Accrediting Board (NAAB). Completion of the program is intended to take six years.

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The NAAB, which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree, which, when earned sequentially, compose an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

Admission to the professional program in architecture is competitive and begins after completion of lower-division requirements, as described in "Admission," on this page and "Degree Requirements," page 124. The professional program includes two years of upper-division study leading to the Bachelor of Science in Design (B.S.D.) and two years of graduate study leading to the Master of Architecture, as described in "Upper-Division Professional Program," on this page.

Applicants who already hold a bachelor's degree in another field should apply to the 3+ year Master of Architecture degree program. See the *Graduate Catalog* for more information.

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

ADMISSION

Lower-Division Program. New and transfer students who have been admitted to the university and who have selected Architectural Studies as their major are admitted to the lower-division architecture program without separate application to the School of Architecture. Completion of lower-division requirements does not ensure acceptance to the upper-division professional program.

Transfer credits for the lower-division program are reviewed by the college faculty. To be admissible to this curriculum, transfer courses must be equivalent in both content and level of offering. A review of samples of work is required for studio classes. Consult a college academic advisor for an appointment.

Entering lower-division students who are not prepared to enroll in some of the required courses are required to complete additional university course work. These additional prerequisite courses do not apply to the Bachelor of Science in Design degree requirements.

Upper-Division Professional Program. Admission to the upper-division professional program is competitive and limited by available resources. Admission is awarded to those applicants demonstrating the highest promise for professional success.

Transfer students who have completed the equivalent required lower-division course work may apply to the upper-division program. Prior attendance at ASU is not required for application to the upper-division program.

To be eligible for admission to the upper-division program, the following requirements must be met:

1. admission to ASU (note that application and admission to ASU are separate from application and admission to the upper-division program);
2. completion of lower-division requirements or equivalents as approved by a college academic advisor and the faculty of the school;

3. a minimum university cumulative GPA of 3.00 as well as a 3.00 GPA based only on the required lower-division courses or equivalents; and
4. submission of a portfolio (for detailed information about this requirement, see "Portfolio Format Requirements," on this page.

In an unusual circumstance, when the admission standard deficiency is slight, written evidence of extenuating circumstances is convincing, and promise for success is evident, a student may be granted admission to the upper division on a *provisional* basis.

Students not admitted to the upper-division program are not dismissed from the school and may reapply or may transfer to other programs. Students who intend to reapply should meet with a college academic advisor.

Applications for transfer into the upper-division professional program are considered only if vacancies occur. Transfer applicants must demonstrate that equivalent course work has been completed, and applicants must be academically competitive with continuing students.

Students who successfully complete the upper-division requirements receive the Bachelor of Science in Design degree in Architectural Studies. This is not a professional degree. To complete the professional architecture program, students must attain the NAAB-accredited Master of Architecture degree. Students who receive the B.S.D. are eligible to apply for the graduate program and should see the *Graduate Catalog* for proper application procedures. This application process is competitive and based on a thorough review of a student's undergraduate preparation and performance.

Students with the four-year Bachelor of Science in Design degree (with a major in Architectural Studies or an equivalent degree from another school that offers an accredited professional degree in architecture) should apply directly to the graduate program.

APPLICATION TO UPPER-DIVISION PROGRAMS

Upper-Division Application Procedures. Students should write to a college academic advisor for the application form well in advance of the application deadline. For more information on portfolios, ask for a copy of the *Portfolio Seminar* brochure from a college academic advisor. The following dates and procedures are for students applying to 2002–2003 upper-division programs.

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

June 3, 2002. If the spring 2002 semester includes transfer course work (i.e., course work taken at an institution other than ASU), a student must submit his or her transcripts to the school no later than June 3. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Undergraduate Admissions office. Application is not complete until the university receives official transcripts for transfer course work. For those transfer students whose academic term ends in June rather than May, this deadline may be extended upon the written request of the applicant.

July 1, 2002. Acceptance notices are mailed no later than July 1.

Return of Letter of Acceptance. A signed receipt of acceptance of admission must be received by the school by the date indicated on the Notice of Acceptance. Alternates may be accepted at a later date if space becomes available.

Matriculation. An accepted student is expected to begin his or her upper-division professional program at the beginning of the immediate fall term. There is no spring admission to the upper division.

Portfolio Format Requirements. Each applicant is responsible for obtaining the following documents and including them in the portfolio. Application materials are submitted at one time in a presentation binder (portfolio) with plastic sleeves (8.5" x 11" format only). Items must appear in the following order:

Page 1. The application form should be completely filled out with the first page visible. Application forms are available from the college Academic Advising Office.

Page 2. The second page of the application should be visible.

Page 3. Application Essay. The student's name should not appear on the essay.

Page 4. All college transcripts for both ASU and transfer work should be included through the fall 2001 semester. Copies are acceptable. An academic advisor forwards 2002 ASU transcripts. (Applicants wishing to transfer work are responsible for submitting these transcripts by June 3 so that they may be added to their portfolios. The student is also responsible for getting an official transfer transcript sent directly to the Office of the Registrar.)

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

Following Pages (Usually from 10 to 20 Sheets). Students should present work sufficient to demonstrate the depth and breadth of their creative activity. This work should include (but is not limited to) examples of two- and three-dimensional design and graphics. Each project should be clearly identified (course, length of project, etc.), with a concise accompanying description of the assignment.

Students should obtain a portfolio requirements addendum for their major from the college's Academic Advising Office, ARCH 141, at the beginning of the academic year in which they intend to apply to the upper-division program. Requirements or instructions indicated in the addendum for that academic year take precedence over any other printed material.

Students are encouraged to include additional materials, written or pictorial, that provide additional evidence of skills and abilities and of the aptitude and commitment to the major. When any work submitted is not completely original, the source must be given. When work is of a team

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

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 prepaid postage. Portfolios may be claimed in person after July 1, 2002. If the applicant provides written permission, another person may claim the portfolio. After one year, unclaimed portfolios are discarded. While care is taken in handling the portfolios, no liability for lost or damaged materials is assumed by the college or school.

ADVISING

Advising for the lower-division curriculum is through the college Academic Advising Office. Advising for upper-division students is by assigned faculty advisors and administrative personnel from the School of Architecture.

DEGREE REQUIREMENTS

The Bachelor of Science in Design degree in Architectural Studies requires a minimum of 120 hours of course work. Most lower-division students pursue option A; however, those who intend eventually to seek an advanced degree in either engineering or building science are encouraged to fulfill the requirements outlined in option B.

Option B students who intend to pursue graduate degrees in an engineering discipline should consult with the College of Engineering and Applied Sciences advising office for any additional requirements.

GENERAL STUDIES REQUIREMENT

The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses.

GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 118.

The accredited professional degree Master of Architecture requires an additional 56 hours of approved graduate-level course work. For more information, see the *Graduate Catalog.*

Architectural Studies—B.S.D.
Lower-Division Requirements
Option A[1]

First Year

Fall

APH	100	Introduction to Environmental Design *HU, G, H*	3
		or ADE 120 Design Fundamentals I[2] (3)	
ENG	101	First-Year Composition	3
		Approved elective	3
		Approved elective (MAT 170 Precalculus may be needed)	3
		SB elective	3
		Total	15

Spring

ADE	120	Design Fundamentals I[2]	3
		or APH 100 Introduction to Environmental Design *HU, G, H* (3)	
ENG	102	First-Year Composition	3
MAT	210	Brief Calculus *MA*	3
		Approved elective	3
		C elective	3
		Total	15

Second Year

Fall

ADE	221	Design Fundamentals II[2]	3
ADE	223	Design Fundamentals II Lecture	1
APH	200	Introduction to Architecture *HU, G*	3
PHY	111	General Physics *SQ*[3]	3
PHY	113	General Physics Laboratory *SQ*[3]	1
		L elective	3
		Total	14

Spring

ADE	222	Design Fundamentals III[2]	3
ADE	224	Design Fundamentals III Lecture	1
ANP	236	Introduction to Computer Modeling *CS*	3
		SB elective	3
		SG or SQ elective	4
		Total	14
		Option A lower-division total	58

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[1] Transfer credits are reviewed by the college and evaluated for applicability to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering.

[2] Portfolio review is required for transfer studio work. Submit the portfolio to the Academic Advising Office, ARCH 141.

[3] Both PHY 111 and 113 must be taken to secure SQ credit.

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

Third Year

Fall

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

Spring

ADE	322	Architectural Studio II	5
ANP	331	Programming for Design	3
APH	314	History of Western Architecture II *L/HU**	3
ATE	361	Building Structures I	3
		Total	14

Summer

ARP	484	Clinical Internship	3
		Total	3

Fourth Year

Fall

ADE	421	Architectural Studio III	5
ATE	451	Building Systems I	3
ATE	462	Building Structures II	3
		Approved elective*	3

Professional elective 3
Total 17

Spring
ADE 422 Architectural Studio IV 5
ATE 452 Building Systems II 3
Architectural history elective 3
Elective* 3
Total 14
Option A upper-division total 62
B.S.D. option A minimum total 120

* These courses may be completed before admission into the upper division.

Architectural Studies—B.S.D.
Lower-Division Requirements
Option B[1]

First Year

Fall
APH 100 Introduction to Environmental Design *HU, G, H* 3
ECE 100 Introduction to Engineering Design *CS* 4
ENG 101 First-Year Composition 3
MAT 270 Calculus with Analytic Geometry I *MA* 4
SB elective 3
Total 17

Spring
ADE 120 Design Fundamentals I[2] 3
ENG 102 First-Year Composition 3
MAT 271 Calculus with Analytic Geometry II *MA* 4
PHY 121 University Physics I: Mechanics *SQ*[3] 3
PHY 122 University Physics Laboratory I *SQ*[3] 1
Total 14

Second Year

Fall
ADE 221 Design Fundamentals II[2] 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*[3] 3
PHY 132 University Physics Laboratory II *SQ*[3] 1
Total 18

Spring
ADE 222 Design Fundamentals III[2] 3
ADE 224 Design Fundamentals III Lecture 1
ANP 236 Introduction to Computer Modeling *CS* 3
ECE 380 Probability and Statistics for Engineering Problem Solving *CS* 3
MAT 274 Elementary Differential Equations *MA* 3
Total 13
Option B lower-division total 62

[1] Transfer credits are reviewed by the college and evaluated for applicability to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering.

[2] Portfolio review is required for transfer studio work. Submit the portfolio to the Academic Advising Office, ARCH 141.

[3] Both PHY 131 and 132 must be taken to secure SQ credit.

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

Third Year

Fall
ADE 321 Architectural Studio I 5
APH 313 History of Western Architecture I *L/HU** 3
ATE 353 Architectural Construction 3
ECE 212 Engineering Mechanics II: Dynamics 3
Total 14

Spring
ADE 322 Architectural Studio II 5
ANP 331 Programming for Design 3
APH 314 History of Western Architecture II *L/HU** 3
ECE 313 Introduction to Deformable Solids 3
Total 14

Summer
ARP 484 Clinical Internship 1
Total 1

Fourth Year

Fall
ADE 421 Architectural Studio III 5
ATE 451 Building Systems I 3
ECE 300 Intermediate Engineering Design *L* 3
ECE 351 Civil Engineering Materials 3
Total 14

Spring
ADE 422 Architectural Studio IV 5
ATE 452 Building Systems II 3
ECE 384 Numerical Methods for Engineers 4
SB and C elective* 3
Total 15
Option B upper-division total 58
B.S.D. option B minimum total 120

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

Master of Architecture
Graduate-Level Professional Program Requirements

Fifth Year

Fall
ADE 521 Advanced Architectural Studio I 5
APH 505 Foundation Theory Seminar 3
ATE 553 Building Systems III 3
ATE 563 Building Structures III 3
Total 14

Spring
ADE 522 Advanced Architectural Studio II 5
APH 515 Current Issues and Topics 3
ATE 556 Building Development 3
Professional elective* 3
Total 14

Sixth Year

Fall
AAD 551 Architectural Management I 3

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

ADE 621 Advanced Architectural Studio III 5
ANP 681 Project Development 3
Professional elective* 3
Total 14

Spring
AAD 552 Architectural Management II 3
ADE 622 Advanced Architectural Studio IV 5
Approved elective 3
Professional elective* 3
Total 14
Graduate division total 56

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

COURSES

Subject matter within the school is categorized in the following instructional areas.

Architectural Administration and Management. AAD courses focus on the organizational and management aspects of architectural practice, including management coordination, administrative procedures, ethics, legal constraints, and the economics of practice.

Architectural Design and Technology Studios. ADE courses require the synthesis of knowledge and understanding gained from other course work and develop an understanding of design theory and design skill through a series of comprehensive design projects. Students apply analytical methods, compare alternative solutions, and develop sophisticated technical and conceptual results.

Environmental Analysis and Programming. ANP courses develop the ability to analyze and program environmental and human factors as preconditions for architectural design using existing and emerging methods of evaluation and analysis.

Architectural Philosophy and History. APH courses develop an understanding of architecture as both a determinant and a consequence of culture, technology, needs, and behavior in the past and present. Studies are concerned with the theory as well as the rationale behind methods and results of design and construction. Case studies are both domestic and international.

Architecture Professional Studies. ARP courses provide students with off-campus opportunities, educational experience in group and individual studies relative to specific student interests, and faculty expertise, including summer internships and field trips.

Architectural Technology. ATE courses develop knowledge of the technical determinants, resources, and processes of architecture. These studies focus on the science and technology of design and construction, including materials, building systems, acoustics, lighting, structural systems, environmental control systems, computer applications to design and technology, and both passive and active solar systems. Emphasis is on measurable and quantifiable aspects.

Architectural Communication. AVC courses develop the student's understanding of communication theory as it applies to architectural design and practice as well as skills in drawing, graphics, photography, presentation design, and the design process.

The courses required in the upper-division and graduate levels of the professional program are not open to nonmajors and students not admitted to the upper-division program.

GRADUATE PROGRAMS

The faculty of the School of Architecture offer a Master of Architecture and a M.S. degree in Building Design. Concurrent application to both degree programs is possible, and each application is evaluated by the respective admission committees separately. Also, a dual career program, Master of Architecture/Master of Business Administration, has been established in cooperation with the College of Business. Also offered is a collegewide, interdisciplinary Ph.D. degree in Environmental Design and Planning with concentrations in design; history, theory, and criticism; and planning. For more information, see the *Graduate Catalog.*

ENVIRONMENTAL DESIGN AND PLANNING (EPD)

See the *Graduate Catalog* for the EPD courses.

ARCHITECTURAL ADMINISTRATION AND MANAGEMENT (AAD)

AAD 551 Architectural Management I. (3)
fall
Design delivery, coordination of construction documents, cost estimating, bidding and negotiations, construction observation, and post construction services. Case studies. Lecture, discussion. Prerequisite: graduate-level standing. Corequisite: ADE 621.

AAD 552 Architectural Management II. (3)
spring
Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions. Lecture, discussion. Prerequisites: AAD 551; ADE 621.

AAD 555 Architect as Developer. (3)
once a year
Development building, real estate, construction funding, land acquisition, and the sources for capital. Prerequisite: instructor approval.

AAD 599 Thesis. (1–12)
not regularly offered
Fee.

AAD 681 Professional Seminar: Capstone. (3)
spring
Examination of ethical, political, social, economic, ecological, and cultural issues confronting the practice of architecture. Readings and case studies. Seminar. Prerequisite: AAD 552. Corequisite: ADE 622.

ARCHITECTURAL DESIGN AND TECHNOLOGY STUDIOS (ADE)

ADE 120 Design Fundamentals I. (3)
fall, spring, summer
Development of visual literacy. Introduction to drawing and graphic representation as methods of seeing and problem solving. Studio. Prerequisite: major in College of Architecture and Environmental Design.

ADE 221 Design Fundamentals II. (3)
fall
Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design. Lecture, studio. Prerequisite with a grade of "C" or higher: ADE 120.

ADE 222 Design Fundamentals III. (3)
spring
Application of design fundamentals with an emphasis on architectural issues. Lecture, studio. Prerequisite: APH 200. Prerequisite with a grade of "C" or higher: ADE 221.

ADE 223 Design Fundamentals II Lecture. (1)
fall
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)
spring
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)
fall
Introductory building design problems. Emphasis on design process, communication methods, aesthetics, construction, and technology. Lecture, studio, field trips. Fee. Prerequisite: admission to upper division. Corequisite: ATE 353.

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

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

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

ADE 510 Foundation Architectural Studio. (6)
summer
Fundamentals of architectural design, methodology, visualization, and representation. Lecture, studio, field trips. Fee. Prerequisite: admission to Master of Architecture degree program.

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

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

ADE 521 Advanced Architectural Studio I. (5)
fall
Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form. Lecture, studio, field trips. Fee. Prerequisite: admission to Master of Architecture degree program.

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

ADE 621 Advanced Architectural Studio III. (5)
fall
Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form. Lecture, studio, field trips. Fee. Prerequisite: instructor approval. Prerequisite with a grade of "C" or higher: ADE 522. Corequisite: AAD 551.

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

ADE 631 Building Systems Simulation Studio. (5)
fall
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)
once a year
Sustainable architectural and site synthesis at a variety of scales emphasizing bioclimatic criteria and the use of passive and low-energy systems. Prerequisite: professional degree or instructor approval. Corequisite: ATE 558.

ENVIRONMENTAL ANALYSIS AND PROGRAMMING (ANP)

ANP 236 Introduction to Computer Modeling. (3)
fall and spring
Fundamentals of computer operation, geographic information systems, geometric modeling of three-dimensional forms and rendering of light, mathematical modeling of processes using spreadsheets. Lab. Prerequisite: major in the School of Architecture.
General Studies: CS

ANP 331 Programming for Design. (3)
spring
Theory and methods for refracting "constraints" into opportunities for design excellence. Corequisite: ADE 322.

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

ANP 477 Computer Applications to Design Problems. (3)
fall
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)
not regularly offered
Fee.

ANP 530 Computer Graphics in Architecture. (3)
once a year
Fundamentals of computer graphics programming in architecture, including graphics hardware, device-independent packages, 2- and 3-dimensional transformations, and data structures. 2 hours lecture, 3 hours lab. Prerequisite: ANP 475 or instructor approval.

ANP 561 Architectural Information Processing Systems. (3)
once a year
Applications of information processing systems to architectural problems. Analysis of computing tools with respect to assumptions and theories. Lecture, lab. Prerequisites: graduate standing; instructor approval.

ANP 563 Methods in Architectural Design Computation. (3)
spring
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)
not regularly offered

ANP 598 Special Topics. (1–4)
not regularly offered
Possible topics:
(a) Computer-Aided Design Methods

ANP 599 Thesis. (1–12)
not regularly offered
Fee.

ANP 681 Project Development. (3)
fall
Definition and elaboration of major ideas for implementation in ADE 622 in relation to contemporary theory and practice. Seminar. Prerequisite: ADE 522.

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ARCHITECTURAL PHILOSOPHY AND HISTORY (APH)

APH 100 Introduction to Environmental Design. (3)
fall and spring
Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as DSC100/PUP 100. Credit is allowed for only APH 100 or DSC 100 or PUP 100.
General Studies: HU, G, H

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

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

APH 301 World Architecture II/Eastern Cultures. (3)
spring
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)
not regularly offered
Architecture in the United States from earliest colonial times to present. Prerequisite: nonmajor.
General Studies: HU

APH 305 Contemporary Architecture. (3)
not regularly offered
Europe and America from the foundations of the modern movement to the present. Prerequisite: nonmajor.
General Studies: HU

APH 313 History of Western Architecture I. (3)
fall
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)
spring
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)
fall
Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design. Cross-listed as PLA 310. Credit is allowed for only APH 411 or PLA 310.
General Studies: H

APH 414 History of the City. (3)
fall
The city from its ancient origins to the present day. 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)
not regularly offered
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)
fall
Principles and practices in planning for preservation, conservation and neighborhood redevelopment. Emphasis on evaluation of historic resources. Off-campus field practicum required. Prerequisite: instructor approval.

APH 443 Renaissance Architecture. (3)
not regularly offered
Selected examples of Renaissance architecture and urbanism with emphasis on their historical and cultural settings. Prerequisite: APH 314.
General Studies: HU

APH 444 Baroque Architecture. (3)
not regularly offered
Selected examples of Baroque architecture and urbanism with emphasis on relationships between architecture and other arts. Prerequisite: APH 314.
General Studies: HU

APH 446 20th-Century Architecture I. (3)
fall
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)
spring
Developments in architecture since the international style. Prerequisite: APH 446.
General Studies: HU

APH 505 Foundation Theory Seminar. (3)
fall
Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory. Lecture, seminar. Corequisite: ADE 521.

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

APH 511 Energy Environment Theory. (3)
fall
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)
spring
Critical examination of current architectural issues, topics, and discourse. Prerequisite: APH 505.

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

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

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

APH 683 Critical Regionalism. (3)
not regularly offered
Critical inquiry in cultural grounding of the definition of place in architectural theory and practice. Lecture, field studies. Prerequisite: APH 446 or 447.

ARCHITECTURE PROFESSIONAL STUDIES (ARP)

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

ARP 484 Clinical Internship. (1–3)
summer
Full-time internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit. Prerequisite: instructor approval.

ARP 584 Clinical Internship. (1)
summer
Structured practical experience following a contract or plan, supervised by faculty and practitioners.

ARP 684 Professional Internship. (2–6)
spring
Field experience in an architectural firm specializing in an area directly related to the student's advanced study. Integration of theory and state-of-the-art practices. Credit/no credit. Prerequisite: instructor approval.

ARCHITECTURAL TECHNOLOGY (ATE)

ATE 353 Architectural Construction. (3)
fall
Materials and methods of construction. Aesthetic, code, and cost considerations. Lecture, lab. Corequisite: ADE 321.

ATE 361 Building Structures I. (3)
spring
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)
fall
Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design. Lecture, lab. Prerequisite: admission to upper division.

ATE 452 Building Systems II. (3)
spring
Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications. Lecture, lab. Prerequisite: ATE 451.

ATE 462 Building Structures II. (3)
fall
Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems. Lecture, lab. Prerequisite: ATE 361.

ATE 521 Building Environmental Science. (3)
fall
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 its equivalent).

ATE 530 Daylighting Design. (3)
spring
Daylight analysis, availability, design sky measurements, modeling and simulation. Integration with passive heating, cooling, building design, and energy considerations. Lecture, lab.

ATE 550 Passive Cooling and Heating I. (3)
spring
Theory, analysis, and application of passive and low-energy systems for thermal comfort in buildings emphasizing heating. Prerequisite: ATE 521.

ATE 551 Passive Cooling and Heating II. (3)
fall
Theory, analysis, and application of passive and low-energy heating systems for thermal comfort in buildings emphasizing cooling. Prerequisite: ATE 550.

ATE 552 Energy Parameters in Buildings. (3)
not regularly offered
Advanced modeling. Transient and multidimensional analysis of thermal and daylight performance using variable weather data. Prerequisite: ATE 551 or instructor approval.

ATE 553 Building Systems III. (3)
fall
Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation. Prerequisite: admission to upper division or instructor approval.

ATE 554 Building Energy Efficiency. (3)
spring
Impact of building design on energy performance. Climate responsiveness, operations dynamics, and subsystems integration in thermal comfort and efficiency. Prerequisite: ATE 452.

ATE 556 Building Development. (3)
spring
Comprehensive design development through the understanding and integration of building materials and systems. Lecture, seminar. Prerequisites: ATE 462, 553; CAD proficiency. Corequisite: ADE 522.

ATE 557 Construction Documents. (3)
spring
Production of architectural working drawings; 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)
spring
Theory, analysis, and application of energy-related parameters of site, climate, human comfort, and building program for design synthesis.

ATE 560 Building Energy Analysis. (3)
fall
Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects. Lab. Prerequisites: ANP 475 (or 477); ATE 582.

ATE 561 Energy Analysis Techniques. (3)
fall
Mathematical models of building envelope and comfort conditioning systems as bases for optimization techniques. Prerequisite: ATE 560.

ATE 562 Experimental Evaluation. (3)
once a year
Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance. Fee. Prerequisite: ATE 521.

ATE 563 Building Structures III. (3)
fall
Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems. Lecture, lab. Prerequisite: ATE 462 (or its equivalent).

ATE 564 Advanced Structures: Concrete. (3)
once a year
Analysis, design, and detailing of concrete systems, considering continuity, multistory frames and shear walls, and lateral analysis. Computer application. Prerequisite: ATE 563 or instructor approval.

ATE 565 Advanced Structures: High Rise. (3)
once a year
Developments in high-rise construction. Effects of wind and seismic forces. Preliminary analysis, design, and detailing considering code requirements. Lecture, lab. Prerequisite: ATE 563 or instructor approval.

ATE 582 Environmental Control Systems. (3)
once a year
Heating, ventilation, and air-conditioning systems. Loads, psychrometrics, 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)
not regularly offered
Fee.

ARCHITECTURAL COMMUNICATION (AVC)

AVC 161 Advanced Freehand Perspective Drawing. (2)
not regularly offered
Introduction to color media, and analytical and design drawing exercises. 4 hours studio. Prerequisite: major in the College of Architecture and Environmental Design.

AVC 294 Special Topics. (1–4)
fall and spring
Possible topics:
(a) Drawing Module. (1)

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

AVC 301 Architectural Communication. (2)
fall
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.

School of Design

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PROFESSORS
BRANDT, GIARD, KROELINGER

ASSOCIATE PROFESSORS
BERNARDI, CUTLER, DETRIE, JOHNSON, McDERMOTT, PATEL, RATNER, SANFT, WITT

ASSISTANT PROFESSORS
BORADKAR, HARMON-VAUGHAN, HERRING, McCOY, NIEDERHELMAN, RANDALL, ROTHSTEIN, WEED

PURPOSE

The School of Design educates people for the professional worlds of graphic design, industrial design, and interior design. The curricula focuses on the skills and knowledge that are necessary in these design professions and are undertaken in a learning environment that bridges the academic milieu to the professional world. This direction is further conditioned by the belief that designers have a responsibility to the public and communities they serve. Consequently, students are exposed to a full breadth of learning experiences, from theoretical courses in design history, human factors, and the theories of the profession, to the rigors and demands of the design studio. Students learn to integrate aesthetic values into their designs while considering contextual issues. The goal of the school's academic program is to graduate designers who are accomplished and visually sophisticated and who will continue to evolve in their chosen profession. To this end, the school provides an environment that is conducive to design excellence. It has a faculty of active professionals, excellent facilities and resources, and a network that is international in scope.

More information about the School of Design may be obtained via the Web address provided or by sending electronic mail to caed.advising@asu.edu.

ORGANIZATION

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

DEGREES

The faculty in the School of Design offer the Bachelor of Science in Design degree with three majors: Graphic Design, Industrial Design, and Interior Design. Applications are not being accepted to the major in Design Science.

Graphic Design. The Graphic Design program educates and develops students for both the graphic design profession and graduate work. The goal of the faculty is to offer the best graphic design education, allowing the graduating student every option available. Studio classroom projects are planned to strengthen and refine students' proficiency in the language, process, and technical aspects of the profession. Projects are intended to help students think critically, both as individuals and as members of a group. Students opting for the profession can expect to work in the areas of advertising design, brand identity, broadcast graphics, corporate identity, environmental graphics, informational graphics, in-house corporate design, museum informational design, publication design, and Web site design. Students pursuing graduate studies can expect to be equally well prepared with critical and analytical thinking skills coupled with a diversified portfolio. The program is dedicated to a comprehensive education in graphic design as it relates to the changing communication standards of today and in the future.

Industrial Design. The program in Industrial Design prepares creative individuals to design objects used by people on a daily basis. The industrial design profession serves the needs of consumers and manufacturers by developing products that are attractive, useful, safe, convenient, and comfortable to use. The designer's special talents and skills include a sense of the aesthetic, knowledge of materials and processes, and an understanding of the physical and psychological needs of the user. Designers often serve as a catalyst among management, marketing, and engineering.

By way of studio projects, students learn to visualize ideas, to communicate them to others, and to refine their skills in freehand sketching, computer-aided design, and model making. Assignments are a balance of conceptual aspects and practical techniques. Typical projects include electronics, toys, furniture, sports equipment, and packaging. Focus is placed on the role of the designer as a member of a team. Third-year students perform internships in a large corporation or in a consulting design agency.

Interior Design. The program in Interior Design is accredited by the Foundation for Interior Design Education Research, the national accrediting agency. The five-year curriculum emphasizes design process, technical skill development, problem solving, and the management skills needed to work in collaboration with the allied design professions. The goal of interior design is to create high-quality environments for human use.

Significant changes in the interior design profession over the last two decades are reflected in the program. The school is committed to integrating computer technology into each level of the curriculum. In doing so, the program offers an excellent environment for experimenting with and testing innovative applications of computer-aided design and simulation to interior design.

ADMISSION

Lower-Division Program. New and transfer students who have been admitted to the university and who have selected Graphic Design, Industrial Design, or Interior Design as a major are admitted to the appropriate lower-division program. Transfer credits for the lower-division program are reviewed by the college and evaluated for applicability to this curriculum. To be applicable, transfer courses must be

equivalent in both content and level of offering. A review of samples of work is required for studio classes; consult a college academic advisor.

Lower-division students entering the program who are not prepared for certain courses in the curriculum (for example, algebra and trigonometry or a second course in computer programming) are required to take additional courses that do not apply to the Bachelor of Science in Design degree. If such courses are required, an additional year of study may be necessary to complete the lower-division program.

Completion of lower-division requirements does not ensure acceptance to an upper-division professional program.

Upper-Division Program. When students have completed the lower-division curriculum requirements, they may apply for acceptance to upper-division programs in Graphic Design, Industrial Design, or Interior Design. The limited spaces available each year are awarded to applicants with the highest promise for professional success, as determined by each program. The faculty of the School of Design retain the right to admit any meritorious student who may be deficient in a published school criterion. Such admission requires an extraordinary review of the applicant by the school's admissions committee. Should the faculty choose to admit such an applicant, the student is placed automatically on a provisional admission status with stipulations as to what is required to be removed from probation. See "Application to Upper-Division Programs," on this page.

Students not admitted to upper-division programs are not dismissed from the university and may reapply or transfer to other programs. Students who intend to reapply should meet with a college academic advisor.

GRADUATE PROGRAMS

The School of Design offers a Master of Science in Design degree with concentrations in graphic design, industrial design, and interior design. The faculty also participates in a collegewide, interdisciplinary Ph.D. degree in Environmental Design and Planning with concentrations in design; history, theory, and criticism; and planning. For more information, see the *Graduate Catalog.*

APPLICATION TO UPPER-DIVISION PROGRAMS

Upper-Division Application Procedures. Students should write to a college academic advisor for the application form well in advance of the application deadline. For more information on portfolios, ask for a copy of the *Portfolio Seminar* brochure from a college academic advisor. The following dates and procedures are for students applying to 2002–2003 upper-division programs.

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

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

June 3, 2002. If the spring 2002 semester includes transfer course work (i.e., course work taken at an institution other than ASU), a student must submit his or her transcripts to the school no later than June 3. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Undergraduate Admissions office. Application is not complete until the university receives official transcripts for transfer course work. For those transfer students whose academic term ends in June rather than May, this deadline may be extended upon the written request of the applicant.

July 1, 2002. Acceptance notices are mailed no later than July 1.

March 15, 2002. The application deadline for Graphic Design is March 15, 2002. 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 academic coordinator for Graphic Design at the end of the first week of April. Acceptance notices are mailed to admitted students.

Return of Letter of Acceptance. A signed receipt of acceptance of admission must be received by the school by the date indicated on the Notice of Acceptance. Alternates may be accepted at a later date if space becomes available.

Matriculation. An accepted student is expected to begin his or her upper-division professional program at the beginning of the immediate fall term. There is no spring admission to the upper division.

Graphic Design Application Requirements. Individual applicants are responsible for obtaining the Graphic Design Application Packet by visiting the College of Architecture and Environmental Design Academic Advising Office in ARCH 141. Application materials are submitted in a portfolio organized by the individual applicant. The student's name must be affixed to the outside, with completed materials appearing in the following order:

1. application to the Graphic Design upper-division program;
2. "Commonly Asked Questions" form; and
3. the Graphic Design Aptitude Test.

The packet contains complete instructions for completing the standard test. This test requires the completion of five problems that are reviewed by the faculty and that become the portfolio of materials considered for admission to the upper-division program.

Industrial and Interior Design Portfolio Format Requirements. Each applicant is responsible for obtaining the following documents and including them in the portfolio. Application materials are submitted at one time in a presentation binder (portfolio) with plastic sleeves (8.5" x 11" format only). The student's name must be affixed to the outside. Items must appear in the following order:

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

Page 1. The application form should be completely filled out with the first page visible. Application forms are available from the college Academic Advising Office.

Page 2. The second page of the application should be visible.

Page 3. Application Essay or Letter of Intent.

Page 4. All college transcripts for both ASU and transfer work should be included through the fall 2001 semester. Copies are acceptable. An academic advisor forwards 2002 ASU transcripts. (Applicants wishing to transfer spring semester 2002 work are responsible for submitting these transcripts by June 3 so that they may be added to their portfolios. The student is also responsible for getting an official transfer transcript sent directly to the Office of the Registrar.)

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

Following Pages (Usually from 10 to 20 Sheets). Students should present work sufficient to demonstrate the depth and breadth of their creative activity. This work should include (but is not limited to) examples of two- and three-dimensional design and graphics. Each project should be clearly identified (course, length of project, etc.), with a concise accompanying description of the assignment.

Students should obtain a portfolio requirements addendum for their major from the college's Academic Advising Office, ARCH 141, at the beginning of the academic year in which they intend to apply to the upper-division program. Requirements or instructions indicated in the addendum for that academic year take precedence over any other printed material.

Students are encouraged to include additional materials, written or pictorial, that provide further evidence of skills and abilities and of the aptitude and commitment to the major. When any work submitted is not completely original, the source must be given. When work is of a team nature, the applicant's role should be clearly indicated. Original examples or slides must not be submitted. 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 preprofessional (first year) and a professional program (second, third, and fourth years):

Preprofessional program	30
Professional program	90
Total	120

The lower-division curriculum balances a foundation in academic subjects such as English, numeracy, and computer technology with design courses that include history and theory, as well as studio courses in drawing and design fundamentals as they relate to conceptual design. Students apply for entry into the professional program after fulfilling the first year School of Design core foundation courses. The upper-division curriculum includes studio work in graphic design and its relationship to problem solving at multiple scales. Projects are intended to educate students to think critically as individuals and as team participants in small and large corporate facilities. A formal eight-week summer internship is required in the professional program. The internship is coordinated by the faculty. Students intern in a variety of settings, including in-house corporate design, publication design, and advertising design agencies.

General Studies Requirement. The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements for this professional degree, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 118.

Graphic Design—B.S.D.
Preprofessional Program Requirements[1]

First Year

Fall			
DSC	101	Design Awareness *HU, G*	3
DSC	121	Design Principles I[1]	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[1]	3
DSC	122	Design Principles II[1]	3
ENG	102	First-Year Composition	3

Approved elective[2] 3
SB elective 3
Total 15
Preprofessional program total 30

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

[2] 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

Fall
DSC 494 ST: Finding Purpose: Survival in Design 3
GRA 283 Letterform I[1] 3
GRA 284 Visual Communication I[1] 3
L elective[2] 3
SB elective[2] 3
Total 15

Spring
GRA 286 Visual Communication II[1] 3
GRA 287 Letterform II[1] 3
Design elective[2] 3
HU, H elective[2] 3
SQ, SG elective with laboratory I 4
Total 16

Third Year

Fall
GRA 345 Design Rhetoric *L*[1] 3
GRA 383 Typography I[1] 3
GRA 386 Visual Communication III[1] 3
Approved electives[2] 6
Total 15

Spring
DSC 483 Preinternship Seminar[1] 1
GRA 318 History of Graphic Design *HU* 3
GRA 385 Typography II[1] 3
GRA 387 Visual Communication IV[1] 3
C elective[2] 3
Upper-division design elective[2] 3
Total 16

Summer
DSC 484 Internship[1] 3
Total 3

Fourth Year

Fall
GRA 481 Visual Communication V[1] 3
GRA 494 ST: Graphic Design 3
SQ, SG elective with laboratory II 4
Upper-division design elective[2] 3
Total 13

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

[1] Most studio courses and some lecture courses are sequential. They must be taken in, and may be offered only during, the semester noted.

[2] A list of courses that fulfill approved electives is available from the college academic advisor.

Industrial Design

The curriculum in Industrial Design is divided into a preprofessional (first and second years) and a professional program (third and fourth years):

Preprofessional program 61
Professional program 59
Total 120

The preprofessional curriculum balances a foundation in academic subjects such as English, algebra and trigonometry, computing, and physics with 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 knowledge, to specialize, or to prepare for college-level teaching.

General Studies Requirement. The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult an advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 118.

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

Industrial Design—B.S.D.
Preprofessional Program Requirements[1]

First Year

Fall

DSC	101	Design Awareness *HU, G*	3
DSC	121	Design Principles I[1]	3
ENG	101	First-Year Composition	3
		or ENG 105 Advanced First-Year Composition (3) if qualified	
MAT	170	Precalculus *MA*	3
PGS	101	Introduction to Psychology *SB*[2]	3
Total			15

Spring

DSC	120	Design Drawing[1]	3
DSC	122	Design Principles II[1]	3
ECN	112	Microeconomic Principles *SB*[2]	3
ENG	102	First-Year Composition	3
PHY	111	General Physics *SQ*[3]	3
PHY	113	General Physics Laboratory *SQ*[3]	1
Total			16

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

Spring

COM	225	Public Speaking *L*	3
		or approved program elective (3)	
IND	228	Imaging and Visualization	3
IND	243	Process and Design	3
IND	261	Industrial Design II	3
IND	317	20th-Century Design II *HU, H*	3
Total			15
Preprofessional program total			61

[1] Transfer credits for the lower-division program must be equivalent in both content and level of offering. Samples of studio work must be provided for evaluation. See a college academic advisor for an appointment.

[2] TGECC satisfied.

[3] 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 *L*	3
IND	460	Design Project I	5
IND	470	Professional Practice for Industrial Design *L*	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 preprofessional 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 78, for requirements and a list of approved courses. Note that all

three General Studies awareness areas are required. Consult with your advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 118.

Interior Design—B.S.D.
Preprofessional Program Requirements[1]

First Year

Fall

DSC	101	Design Awareness *HU, G*	3
DSC	121	Design Principles I[1]	3
ENG	101	First-Year Composition	3
		or ENG 105 Advanced First-Year Composition (3) if qualified	
MAT	170	Precalculus *MA*	3
SB, C elective			3
Total			15

Spring

ARS	102	Art of the Western World II *HU, H*	3
DSC	120	Design Drawing[1]	3
DSC	122	Design Principles II[1]	3
ENG	102	First-Year Composition	3
		or HU elective if ENG 105 is taken (3)	
PHY	111	General Physics *SQ*[2]	3
PHY	113	General Physics Laboratory *SQ*[2]	1
Total			16

Second Year

Fall

DSC	236	Introduction to Computer Modeling *CS*	3
INT	194	ST: Drafting for Interior Design[1]	3
INT	223	Interior Design Issues and Theories *HU*[1]	3
INT	235	User Needs and Behavior in Interior Design[1]	3
Total			12

Spring

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

[1] 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.

[2] Both PHY 111 and 113 must be taken to secure SQ credit.

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

Third Year

Fall

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

Spring

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

Summer

DSC	484	Internship	3
Total			3

Fourth Year

Fall

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," on this page.

Fifth Year. During the fifth year, the student concentrates on research and application of that research related to the development of a comprehensive project. This year is self-directed in nature and prepares the student for independent thinking and creative problem solving. The fifth-year experience promotes high expectations for producing professional work that represents the culmination of the major's academic experience. It should be noted that the fifth-year studio sequence is designed to draw majors from the upper-division programs of industrial design, graphic design, and architecture, thus furthering a real-life interdisciplinary problem-solving experience.

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

MINOR

Interior Design History

The minor in Interior Design History is available to students interested in design and culture. The courses designated for the minor are part of the professional studies in interior design within the School of Design. Moreover, the courses serve to inform the students about the importance of the global community, especially sociocultural groups, and the impact of the global community on the design of the interior environment.

The selected courses satisfy the minimum requirement (18 semester hours) for the minor. To enhance the understanding of the subject matter, the selected courses are sequential in nature and require certain prerequisites. Consequently, students should carefully note the semester in which any of these courses is offered. The only exception to this rule is INT 223.

Required Courses

DSC	101	Design Awareness *HU, G*	3
INT	223	Interior Design Issues and Theories *HU*	3
INT	310	History of Interior Design I *HU, H*	3
INT	311	History of Interior Design II *HU, H*	3
INT	412	History of Decorative Arts in Interiors *HU*	3
INT	413	History of Textiles in Interior Design	3
Total			18

The minor in Interior Design History is open to students majoring in Architectural Studies, Art, Communication, Psychology, or Sociology and students in any 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)
fall and spring
Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as APH 100/PUP 100. Credit is allowed for only APH 100 or DSC 100 or PUP 100.
General Studies: HU, G, H

DSC 101 Design Awareness. (3)
fall
Survey of cultural, global, and historical context for the design professions.
General Studies: HU, G

DSC 120 Design Drawing. (3)
spring
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)
fall
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)
spring
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)
fall and spring
Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation. Lab. Prerequisite: Design major.
General Studies: CS

DSC 344 Human Factors in Design. (3)
fall
Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.

DSC 483 Preinternship Seminar. (1)
spring
Preparation of internship materials that produce and enhance a successful internship experience. Seminar. Prerequisite: 3rd-year major in the School of Design.

DSC 484 Internship. (1–3)
summer
Full-time summer internship under supervision of practitioners in the Phoenix area or other locales. Prerequisite: instructor approval.

DSC 494 Special Topics. (1–4)
fall
Possible topics:
(a) Finding Purpose: Survival in Design. (3)

DSC 500 Research Methods. (1–12)
not regularly offered
Fee.

DSC 520 Contemporary Design Issues. (3)
fall and spring
Projected applications in design production, planning, and decision-making processes. Lecture, seminar. Prerequisites: INT 310 and 311 (or their equivalents).

DSC 524 Illumination and Acoustics. (3)
not regularly offered
Research and laboratory investigation of advanced illumination and acoustics issues of facility design. Emphasis on human factors and performance aspects. Prerequisites: INT 457 and 458 (or their equivalents).

DSC 525 Design Methodologies. (3)
fall
Practical exercises and studies in problem-solving strategies; problem definition and supporting theory for the designer. Lecture, seminar, lab. Fee. Prerequisite: senior or graduate standing.

DSC 527 Modern Design Theory. (3)
spring
Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies. Lecture, seminar. Prerequisite: DSC 525 (or its equivalent).

DSC 529 Design Criticism. (3)
fall
Critical methods applied to design as material culture and human expression; evaluation of achievement versus intention. Lecture, seminar. Prerequisite: DSC 527 (or its equivalent).

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

DSC 552 Computer Simulation in Design. (3)
fall
Use of computer graphics as a medium to develop and present images of the environment for analysis and perception. Lecture, lab. Prerequisite: senior or graduate standing.

DSC 553 Computer Imaging and Visual Perception. (3)
spring
Issues and applications of computer simulation as a tool for describing and testing human interface with the environment. Lecture, lab. Prerequisite: senior or graduate standing.

DSC 558 Daylighting. (3)
not regularly offered
Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies. Lecture, studio. Prerequisite: senior or graduate standing.

DSC 580 Practicum: Methods of Teaching Design. (3)
fall
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)
not regularly offered
Fee.

DSC 598 Special Topics. (1–4)
not regularly offered
Possible topics:
(a) Facilities Planning II
Fee.

DSC 599 Thesis. (1–12)
not regularly offered
Fee.

GRAPHIC DESIGN (GRA)

GRA 283 Letterform I. (3)
fall
Drawing of letterforms with focus on proportion and structure. Introduction to letterform nomenclature and classifications. 6 hours a week. Fee. Prerequisites: DSC 122; acceptance into Graphic Design program.

GRA 284 Visual Communication I. (3)
fall
Theoretical and applied studies in shape, drawing, and color. 6 hours a week. Fee. Prerequisite: GRA 283.

GRA 286 Visual Communication II. (3)
spring
Transition from theoretical to applied problems. Emphasis on refinement of visual skills. 6 hours a week. Fee. Prerequisites: GRA 284; acceptance into Graphic Design program. Corequisite: GRA 287.

GRA 287 Letterform II. (3)
spring
Continuation of GRA 283 with emphasis on lowercase letters; basics of pen writing and font design. 6 hours per week. Fee. Prerequisites: GRA 284; acceptance into Graphic Design program. Corequisite: GRA 286.

GRA 318 History of Graphic Design. (3)
spring
Surveys development in the graphic arts, innovative printing methods, aesthetic values, and social and cultural environments that shape them.
General Studies: HU

GRA 345 Design Rhetoric. (3)
fall
Develops critical thinking and expression of ideas in concise and persuasive written and spoken form. Prerequisites: ENG 101, 102.
General Studies: L

GRA 382 Graphic Representation. (3)
fall
Studio practice in drawing with an application toward graphic communication. 6 hours a week. May be repeated once for credit. Fee. Prerequisite: GRA 284.

GRA 383 Typography I. (3)
fall
Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week. Fee. Prerequisites: GRA 286, 287. Corequisite: GRA 386.

GRA 385 Typography II. (3)
spring
Problems in composition, choice, and combinations of typefaces, formats, and their application to a variety of design projects. 6 hours a week. Fee. Prerequisite: GRA 383. Corequisite: GRA 387.

GRA 386 Visual Communication III. (3)
fall
Problems in specific design applications such as poster, packaging, publications. Emphasis on development of concepts in visual communications. 6 hours a week. Fee. Prerequisites: GRA 286, 287. Corequisite: GRA 383.

GRA 387 Visual Communication IV. (3)
spring
Client-oriented projects. Multifaceted problems with emphases on continuity of design in more than one medium and format. 6 hours a week. Fee. Prerequisites: GRA 383, 386. Corequisite: GRA 385.

GRA 481 Visual Communication V. (3)
fall
Studio problems with emphasis on analysis, problem solving, and professional portfolio preparation. 6 hours a week. Fee. Prerequisites: GRA 385, 387.

GRA 482 Visual Communication VI. (3)
spring
Individual and group projects with outside clients. All projects culminate in an exhibit. 6 hours a week. Fee. Prerequisite: GRA 481.

GRA 485 Graphic Design Workshop. (3)
fall, spring, summer
Preprofessional client/designer situations from concept to printed work. Studio workshop and internships for selected students. 6 hours a week. May be repeated once for credit. Fee. Prerequisite: instructor approval.

GRA 494 Special Topics. (1–4)
fall and spring
Possible topics:
(a) Graphic Design. (3)

INDUSTRIAL DESIGN (IND)

IND 194 Special Topics. (1–4)
spring
Possible topics:
(a) Drafting for Industrial Design. (3)
Applies 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)
fall
Introduction to conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts. Seminar, studio. Prerequisite: DSC 122.

IND 228 Imaging and Visualization. (3)
spring
Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation. Seminar, studio. Prerequisite: IND 227.

IND 242 Materials and Design. (3)
fall
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)
spring
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)
fall
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.

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

IND 261 Industrial Design II. (3)
spring
Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics. 1 hour lecture, 2 hours studio. Prerequisite: IND 260 (or its equivalent).

IND 316 20th-Century Design I. (3)
fall
Modern European and American design from 1900 to 1940. Emphasis on transportation, product, furniture, exhibition, and graphic design.
General Studies: HU, H

IND 317 20th-Century Design II. (3)
spring
Modern European, Asian, and American design since 1940. Emphasis on transportation, product, furniture, exhibition, and graphic design.
General Studies: HU, H

IND 327 Presentation Graphics. (3)
fall
Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship. Seminar, studio. Prerequisite: IND 228.

IND 328 Graphics for Industrial Design. (3)
spring
Investigates and applies packaging applications and planning to the development of an identity for a product line structured as a system. Lab. Prerequisite: IND 327.

IND 354 Principles of Product Design. (3)
fall
Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics. Prerequisite: PHY 111.

IND 355 Plastics Design. (3)
spring
Mold design for part requirements; molded holes; threads; inserts; fastening and joining; decorating; reinforced plastics.

IND 360 Industrial Design III. (5)
fall
Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques. 10 hours studio. Fee. Prerequisite: school approval.

IND 361 Industrial Design IV. (5)
spring
Emphasis on developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing. 10 hours studio. Fee. Prerequisite: IND 360.

IND 460 Design Project I. (5)
fall
Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasis on professional standards. 10 hours studio. Fee. Prerequisites: DSC 484; IND 361.

IND 461 Design Project II. (5)
spring
Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction. 10 hours studio. Fee. Prerequisite: IND 361.

IND 470 Professional Practice for Industrial Design. (3)
fall
Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions. May be repeated for credit. Prerequisite: senior standing.
General Studies: L

IND 474 Design Seminar. (3)
spring
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)
not regularly offered
Applies mechanical drafting knowledge and skills. Manual drafting principles and techniques with transition to computer-aided industrial design.

INTERIOR DESIGN (INT)

INT 194 Special Topics. (1–4)
fall
Possible topics:
(a) Drafting for Interior Design. (3)

INT 220 Media for Design Development. (3)
spring
Graphic representation methods used to describe and analyze space; emphasis on quick presentation techniques. 6 hours studio. Prerequisite: DSC 122.

INT 223 Interior Design Issues and Theories. (3)
fall
Interiors issues, theories, and philosophies. Emphasis on unique social and cultural factors that shape 20th-century design concepts.
General Studies: HU

INT 231 Concepts for Interior Design. (3)
spring
Conceptual design development, including scale and proportion, light, texture, form, volume, and spatial hierarchy; passage and repose. 1 hour lecture, 4 hours lab. Prerequisite: DSC 236.

INT 235 User Needs and Behavior in Interior Design. (3)
fall
Applies conceptual design to issues of programming and space planning, user needs, and behavior. 1 hour lecture, 4 hours lab. Prerequisite: DSC 122.

INT 310 History of Interior Design I. (3)
fall
Design of interior spaces as an expression of cultural influences to 1835.
General Studies: HU, H

INT 311 History of Interior Design II. (3)
spring
Design of interiors as an expression of cultural influences from 1835 to the present. Prerequisite: INT 310 or instructor approval.
General Studies: HU, H

INT 340 Interior Codes: Public Welfare and Safety. (3)
fall
Codes and regulations as performance criteria for interior design. Corequisite: INT 366.

INT 341 Interior Materials and Finishes. (3)
spring
General analysis of quality control measures relating to interior design materials, finishes, and performance criteria. Prerequisites: INT 340, 366.

INT 364 Interior Design Studio I. (5)
fall
Studio problems in interior design related to behavioral response in personal and small group spaces. 10 hours studio. Fee. Prerequisite: school approval.

INT 365 Interior Design Studio II. (5)
spring
Studio problems in interior design, with emphasis on issues of public and private use of interior places of assembly. 10 hours studio. Fee. Prerequisite: INT 364.

INT 366 Construction Methods in Interior Design. (3)
fall
Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design. Lecture, field trips. Corequisite: INT 340.

INT 412 History of Decorative Arts in Interiors. (3)
fall
Design of decorative arts as an expression of cultural influences and as an extension of interior spaces. Prerequisite: INT 311 or instructor approval.
General Studies: HU

INT 413 History of Textiles in Interior Design. (3)
spring
Cultural and historical expression of textiles as related to interiors. May include field trips. Prerequisite: INT 412 or instructor approval.

INT 422 Facilities Planning and Management I. (3)
fall
Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs. Prerequisite: senior standing.

INT 423 Facilities Planning and Management II. (3)
spring
Formation of facilities policies, procedures, and standards. Facilities database, space allocations, and management process. Evaluation of programming criteria. Prerequisites: INT 422; senior standing.

INT 442 Specifications and Documents for Interiors. (3)
fall
Contract specifications, documents, schedules, and bidding procedures for interior design. Prerequisites: INT 341, 365.
General Studies: L

INT 446 Furniture Design and Production. (3)
fall
Design, construction, cost estimating, and installation in interior furniture and millwork. 1 hour lecture, 4 hours studio.

INT 455 Environmental Control Systems. (3)
spring
Survey of environmental control systems and their application in the design of building interiors. Lecture, field trips. Prerequisites: MAT 117, 170; PHY 111, 113; junior standing.

INT 457 Acoustics for Interior Design. (3)
fall
Physical properties of sound. Studies pertaining to sound-absorbing materials, constructions, and room acoustics. Prerequisites: MAT 170; PHY 111, 113.

INT 458 Lighting for Interior Design. (3)
spring
Light as an aspect of interior design. Evaluation of light sources for distribution, color, and cost.

INT 464 Interior Design Studio III. (5)
fall
Studio problems in interior design related to commercial spaces. 10 hours studio. Fee. Prerequisites: DSC 484; INT 365.

INT 465 Interior Design Studio IV. (5)
spring
Studio problems in interior design related to health and educational facilities. 10 hours studio. Fee. Prerequisite: INT 464.

INT 466 Interior Design Studio V. (5)
fall
Advanced interior design problem solving, design theory, and criticism. Thesis project development based upon the major's concentration. 10 hours studio. Fee. Prerequisite: school approval.

INT 467 Interior Design Studio VI. (5)
spring
Advanced series of specialized projects or continuation of thesis project based upon the major's concentration. 10 hours studio. Fee. Prerequisite: school approval.

INT 472 Professional Practice for Interior Design. (3)
spring
Business procedures, project control, fee structures, and professional product liabilities.

School of Planning and Landscape Architecture

Frederick Steiner
Director
(AED 158A) 480/965-7167
www.asu.edu/caed/planning

PROFESSORS
KIHL, LAI, MUSHKATEL, PIJAWKA, STEINER

ASSOCIATE PROFESSORS
CAMERON, COOK, GUHATHAKURTA, KIM, McSHERRY, SAN MARTIN, YABES

ASSISTANT PROFESSORS
CREWE, EWAN, FISH-EWAN, LARSEN, MUSACCHIO

FACULTY ASSOCIATE
DOLLIN

PURPOSE

The faculty in the School of Planning and Landscape Architecture offer curricula that provide an education for careers in environmental planning, housing and urban development, landscape architecture, urban and regional planning, and urban design. The goal of the faculty is to advance the professions of planning and landscape architecture through scholarship, teaching, research, and community service.

Planners and landscape architects work on projects that range in scale from site and landscape development to the design of entire communities and the formulation of policies that shape urban and regional growth. Planning and landscape architecture graduates work for private firms and government agencies. Their work typically involves fields such as land-use planning, housing, natural resource management, urban transportation, development controls, and environmental impact assessment.

ORGANIZATION

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

DEGREES

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

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

The B.S.P. degree prepares students for careers in urban planning. Students take courses that include comprehensive planning, socioeconomic and environmental analysis, computer and analytical methods, planning law, site planning,

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landscape architecture, urban design, and public-policy formulation and administration. An internship or an approved elective is required between the third and fourth years. Many students continue to specialize in planning at the graduate level. Students in planning are exposed to the theories, methods, and practices of the profession of planning.

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

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

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

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

MINORS

Landscape Studies

For more information, call 480/965-7167.

Urban Planning

The minor in Urban Planning is designed for students who are interested in the field but who wish to pursue other majors. The course selection is designed to provide an overview of the field and offer information with broad appeal.

All students must complete a minimum of 15 semester hours from the following courses:

PUP	200	The Planned Environment *HU, H*	3
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	430	Transportation Planning and the Environment	3
PUP	432	Planning and Development Control Law	3
PUP	433	Zoning Ordinances, Subdivision Regulations, and Building Codes	3
PUP	442	Environmental Planning	3
PUP	444	Preservation Planning	3
PUP	475	Environmental Impact Assessment	3
PUP	494	Special Topics	3
PUP	510	Citizen Participation	3

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

Touring the ballroom during the restoration of Old Main

Tim Trumble photo

The minor is automatically open to students from the following majors: Architectural Studies, Civil Engineering, Environmental Resources, Geography, Housing and Urban Development, Landscape Architecture, and Real Estate. Students pursuing other majors will be considered on an individual basis. To pursue a minor in Urban Planning, students must have a minimum cumulative GPA of 3.00. These students must submit a letter of application to the School of Planning and Landscape Architecture seeking approval to enter the minor program.

GRADUATE PROGRAMS

The faculty in the School of Planning and Landscape Architecture offer concentrations in landscape ecological planning, urban and regional development, and urban design under the Master of Environmental Planning (M.E.P.) degree and a collegewide, interdisciplinary Ph.D. degree in Environmental Design and Planning with concentrations in design; history, theory, and criticism; and planning. For more information, see the *Graduate Catalog.*

ADMISSION

Lower-Division Program. New and transfer students who have been admitted to the university and who have selected a program in the School of Planning and Landscape Architecture are admitted to the lower-division program. Transfer credits for the lower-division program are reviewed by the college and evaluated for applicability to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering. A review of samples of work is required for studio classes. See a college academic advisor for an appointment.

Completion of lower-division requirements does not ensure acceptance to the upper-division professional program. Admission to the upper division is competitive and limited to the space available. Admission requires formal application and acceptance.

Upper-Division Program. Admission to the upper-division programs of the School of Planning and Landscape Architecture is limited to applicants who have completed the lower-division program requirements and who are determined by the admissions committee to have the best potential for academic success. Spaces in the program are limited by available facilities, faculty, and qualified applicants. A minimum lower-division program GPA of 3.00 may be required. See "Application to Upper-Division Programs," on this page.

Students not admitted to upper-division programs are not dismissed from the university and may reapply later or may transfer to other programs. Students who plan to reapply should meet with a college academic advisor.

APPLICATION TO UPPER-DIVISION PROGRAMS

Upper-Division Application Procedures. Students should write to a college academic advisor for the application form well in advance of the application deadline. For more information on portfolios, ask for a copy of the portfolio guidelines from a college academic advisor. The following dates and procedures are for students applying to 2002–2003 upper-division programs in Housing and Urban Development. Applicants to the upper-division programs in Landscape Architecture and Urban Planning follow different procedures and have different deadline dates; see an advisor in the advising office for more information.

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

June 3, 2002. If the spring 2002 semester includes transfer course work (i.e., course work taken at an institution other than ASU), a student must submit his or her transcripts to the school no later than June 3. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Undergraduate Admissions office. Application is not complete until the university receives official transcripts for transfer course work. For those transfer students whose academic term ends in June rather than May, this deadline may be extended upon the written request of the applicant.

July 1, 2002. Acceptance notices are mailed no later than July 1.

Return of Letter of Acceptance. A signed receipt of acceptance of admission must be received by the school by the date indicated on the Notice of Acceptance. 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); and
5. samples of individual work; team work can be included, but the contribution of the candidate must be clarified.

Students are also strongly encouraged to submit evidence of other endeavors related to the major. The applicant's GPA based on required courses and cumulative GPA is evaluated. Students completing the Phoenix Community College (PCC) articulation program with the B.S.D.-HUD program should submit similar material from PCC.

Students should obtain a portfolio requirements addendum for their major from the college's Academic Advising Office, ARCH 141, at the beginning of the academic year in

which they intend to apply to the upper-division program. Requirements or instructions indicated in the addendum for that academic year take precedence over any other printed material.

Return of Portfolios. Application documents remain the property of the School of Planning and Landscape Architecture. However, the remainder of the portfolio is returned after the admissions review, provided the applicant encloses a self-addressed return mailer with sufficient prepaid postage. Portfolios may be claimed in person after August 15, 2002. If the applicant provides written permission, another person may claim the portfolio. After one year, unclaimed portfolios are discarded. While care is taken in handling the portfolios, no liability for lost or damaged materials is assumed by the college or school.

ADVISING

Advising for the lower-division curriculum is provided through a college academic advisor. Advising for the upper-division curriculum is provided by the school director and faculty advisors.

DEGREE REQUIREMENTS

Urban Planning

The Bachelor of Science in Planning degree requires a total of 120 semester hours.

Preprofessional program courses	61
Professional program courses 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 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult your advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See “University Graduation Requirements,” page 74, and “College Degree Requirements,” page 118.

Bachelor of Science in Planning,
Major in Urban Planning
Preprofessional Program Requirements[1]

First Year

Fall

ENG	101	First-Year Composition	3
		or ENG 105 Advanced First-Year Composition (3) if qualified	
ERS	130	Introduction to Environmental Science *SQ*	4
		or any SQ, SG elective	
MAT	117	College Algebra *MA*	3
		or approved more advanced MA elective (3)	
PUP	100	Introduction to Environmental Design *HU, G, H*	3
PUP	161	Graphic Communication[2]	3
Total			16

Spring

ECN	112	Microeconomic Principles *SB*	3
		or economics elective *SB*	
ENG	102	First-Year Composition	3
		HU elective if ENG 105 is taken (3)	
GPH	111	Introduction to Physical Geography *SQ*	4
		or any SQ, SG elective	
C elective			3
Elective			3
Total			16

Second Year

Fall

PLA	101	Landscape and Society[2] *HU, G*	3
		or any HU or SB elective	
PUP	261	Urban Planning I[2]	4
PUP	301	Introduction to Urban Planning *L*	3
Approved elective			3
SB elective			3
Total			16

Spring

PUP	262	Urban Planning II[2]	4
PUP	322	Computers in Planning	3
PUP	363	History of Planning	3
Approved HU elective			3
Approved statistics elective or quantitative reasoning elective			3
Total			16
Preprofessional program total			64

[1] Transfer credits are reviewed by the college and evaluated as admissible to this curriculum. To be admissible, transfer courses must be equivalent in both content and level of offering.

[2] Portfolio review is required for transfer studio work. See a college academic advisor for an appointment.

The first round of admission to the upper division takes place after the fall semester of the second year. The second round, if needed, takes place after the spring semester.

Bachelor of Science in Planning,
Major in Urban Planning
Professional Program Requirements

Third Year

Fall

PUP	361	Urban Planning III	4
PUP	424	Planning Methods I	4
PUP	452	Ethics and Theory in Planning	3
Approved elective			3
Minimum total			14

Spring

PUP	362	Urban Planning IV	4
PUP	436	City Structure and Planning	3
PUP	510	Citizen Participation	3
Elective			3
Total			13

Summer

PUP	484	Internship or Study Abroad (use elective credit)	3
		or approved elective (3)	
Total			3

Fourth Year

Fall

PUP	432	Planning and Development Control Law	3
PUP	442	Environmental Planning	3
PUP	461	Urban Planning V	4
Elective			3
Total			13

Spring

PUP	420	Theory of Urban Design *HU*	3
PUP	434	Urban Land Economics or elective (3)	3
PUP	462	Urban Planning VI	4
Elective			3
Total			13

Select a minimum of nine semester hours from approved SPLA elective list.

Professional program total	56
B.S.P. minimum total	120

Landscape Architecture

The Bachelor of Science in Landscape Architecture degree requires a total of 120 semester hours.

Preprofessional program courses	47
Professional program courses	73
Total	120

General Studies Requirement. The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult your advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 118.

Bachelor of Science in Landscape Architecture
Preprofessional Requirements[1]

First Year

Fall

ENG	101	First-Year Composition or ENG 105 Advanced First-Year Composition (3)	3
MAT	117	College Algebra *MA*	3
PLA	101	Landscape and Society *HU, G*	3
PLA	161	Graphic Communication[2]	3
PUP	100	Introduction to Environmental Design *HU, G, H*	3
Total			15

Spring

ADE	120	Design Fundamentals I[2]	3
ARS	101	Art of the Western World I *HU, H*	3
ENG	102	First-Year Composition	3
GPH	111	Introduction to Physical Geography *SQ*	4
HST	102	Western Civilization *SB, H*	3
Total			16

Second Year

Fall

PLA	240	Landscape Survey Techniques	3
PLA	261	Landscape Architecture I[2]	4
PLA	310	History of Landscape Architecture *H*	3
PLA	494	ST: Plant Materials	3
PUP	301	Introduction to Urban Planning *L*	3
Total			16

Preprofessional program total	47

[1] Transfer credits are reviewed by the college and evaluated as applicable to this curriculum. To be applicable, transfer courses must be equivalent in both content and level of offering.

[2] Portfolio review is required for transfer studio work. See a college academic advisor for an appointment.

Bachelor of Science in Landscape Architecture
Professional Program Requirements

Second Year

Spring

PLA	222	Computers in Landscape Architecture *CS*	3
PLA	242	Landscape Construction I	4
PLA	262	Landscape Architecture II	4
SQ or SG elective 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 *HU*	3
Electives			3
Minimum total			15

Summer

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

Fourth Year

Fall

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

Spring

PLA	411	Landscape Architecture Theory and Criticism *L*	3
PLA	462	Landscape Architecture VI	4

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

Electives 6
Total 13
Professional program total 73
B.S.L.A. minimum total 120

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

Housing and Urban Development

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

Preprofessional program courses 63
Professional program courses core 56
Internship 1
Total 120

General Studies Requirements

The following curriculum includes sufficient approved course work to fulfill the General Studies requirement. See "General Studies," page 78, for requirements and a list of approved courses. Note that all three General Studies awareness areas are required. Consult your advisor for an approved list of courses.

Graduation Requirements. In addition to fulfilling college and major requirements, students must meet all university graduation and college degree requirements. See "University Graduation Requirements," page 74, and "College Degree Requirements," page 118.

Bachelor of Science in Design, Major in Housing and Urban Development Preprofessional Program Requirements[1]

First Year

Fall

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

Spring

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

Second Year

Fall

APH 200 Introduction to Architecture *HU, G* 3
or any CAED history course listed below (3)[2]
CON 252 Building Construction Methods, Materials, and Equipment 3
PLA 261 Landscape Architecture I 4
or PUP 261 Urban Planning I (4)
C elective 3
CS statistics elective 3
Total 16

Spring

ACC 230 Uses of Accounting Information I 3
PUP 301 Introduction to Urban Planning *L* 3
Natural science with lab 4
REA elective 3
Upper-division HU elective 3
Total 16
Preprofessional program total 63

[1] Transfer credits are reviewed by the college and evaluated as admissible to this curriculum. To be admissible, transfer courses must be equivalent in both content and level of offering.

[2] See "CAED History Courses," on this page.

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

APH 300 World Architecture I/Western Cultures *HU, G, H* 3
APH 305 Contemporary Architecture *HU* 3
APH 313 History of Western Architecture I *L/HU* 3
APH 446 20th-Century Architecture I *HU* 3
DSC 101 Design Awareness *HU, G* 3
GRA 318 History of Graphic Design *HU* 3
IND 316 20th-Century Design I *HU, H* 3
INT 223 Interior Design Issues and Theories *HU* 3
INT 310 History of Interior Design I *HU, H* 3
INT 311 History of Interior Design II *HU, H* 3
INT 412 History of Decorative Arts in Interiors *HU* 3
PUP 200 The Planned Environment *HU, H* 3
PUP 420 Theory of Urban Design *HU* 3

Bachelor of Science in Design, Major in Housing and Urban Development Professional Program Requirements

Third Year

Fall

CON 383 Construction Estimating 3
HUD 301 Housing and Community Design and Development 3
or CON 477 Residential Construction Business Practices (3)
HUD 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
or approved business elective
Total 14

Spring

CON 389 Construction Cost Accounting and Control *CS* 3
HUD 302 Housing Production Process 3
HUD 362 Housing and Urban Development Studio II: Community Design and Development 2
HUD 364 Housing and Urban Development Seminar II: Community Design and Development 3
HUD 403 Advanced Topics in Housing and Urban Development 3
Total 14

Summer

HUD 484 Internship 1
PUP 485 International Field Studies in Planning and Landscape Architecture (optional) 1–12
Minimum total 1

Fourth Year

Fall

CON	495	Construction Planning and Scheduling *CS* 3
HUD	401	Assisted Housing 3
HUD	461	Housing and Urban Development Studio III: Comprehensive Housing Development Process 2
HUD	463	Housing and Urban Development Seminar III: Comprehensive Housing Development Process 3
PUP	452	Ethics and Theory in Planning *L*....3
Total		14

Spring

HUD	402	Community Revitalization: Problems and Strategies 3
HUD	462	Housing and Urban Development Studio IV: Neighborhood Revitalization Process....2
HUD	464	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process....3
PUP	433	Zoning Ordinances, Subdivision Regulations, and Building Codes....3 or PUP 432 Planning and Development Control Law (3)
Approved elective in computers*....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

HOUSING AND URBAN DEVELOPMENT (HUD)

HUD 161 Graphic Communication. (3)
fall and spring
Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions. Studio. Cross-listed as PLA 161/PUP 161. Credit is allowed for only HUD 161 or PLA 161 or PUP 161.

HUD 201 Introduction to Housing and Urban Development. (3)
spring
Perspectives and issues concerning HUD. Guest lectures by interdisciplinary faculty and private, public, and nonprofit practitioners.

HUD 301 Housing and Community Design and Development. (3)
fall
Single and multi-family housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.

HUD 302 Housing Production Process. (3)
spring
Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.

HUD 361 Housing and Urban Development Studio I: Residential Design and Development. (2)
fall
Affordable residential design, development, and production process. Studio. Pre- or corequisites: HUD 301, 363; upper-division HUD major.

HUD 362 Housing and Urban Development Studio II: Community Design and Development. (2)
spring
Neighborhood and new community design and development process. Studio. Pre- or corequisites: HUD 301, 361, 363, 364; upper-division HUD major.

HUD 363 Housing and Urban Development Seminar I: Residential Design and Development. (3)
fall
Affordable residential design, development, and production process. Seminar. Pre- or corequisites: HUD 301, 361; upper-division HUD major.

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

HUD 401 Assisted Housing. (3)
fall
Publicly-subsidized and 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)
spring
Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.

HUD 403 Advanced Topics in Housing and Urban Development. (3)
fall and spring
Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.

HUD 461 Housing and Urban Development Studio III: Comprehensive Housing Development Process. (2)
fall
Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing. Studio. Pre- or corequisites: HUD 302, 463; upper-division HUD major.

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

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

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

HUD 484 Internship. (1)
summer

LANDSCAPE ARCHITECTURE (PLA)

PLA 101 Landscape and Society. (3)
fall
Examines interrelationship between society and the landscape with emphasis on human involvement in shaping the landscape.
General Studies: HU, G

PLA 161 Graphic Communication. (3)
fall and spring
Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions. Studio. Cross-listed as HUD 161/PUP 161. Credit is allowed for only HUD 161 or PLA 161 or PUP 161.

PLA 222 Computers in Landscape Architecture. (3)
spring
Computer applications in landscape architecture including CAD, GIS, graphics, and visualization. Lab.
General Studies: CS

PLA 240 Landscape Survey Techniques. (3)
fall
Develops landscape survey skills including aerial photography, satellite images, geo-referencing, landscape surveys, and field data collection. Lecture, lab.

PLA 242 Landscape Construction I. (4)
spring
Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork. Studio. Prerequisite: admission to professional program.

PLA 261 Landscape Architecture I. (4)
fall
Landscape communication: communication techniques for urban planning and landscape architecture. Studio. Prerequisites: ADE 120; GPH 111.

PLA 262 Landscape Architecture II. (4)
spring
Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes. Prerequisites: ADE 120; PLA 261; admission to professional program.

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

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

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

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

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

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

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

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

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

PLA 411 Landscape Architecture Theory and Criticism. (3)
spring
Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society. Prerequisites: PLA 310, 361, 362, 420, 461.
General Studies: L

PLA 412 Landscape Ecology and Planning. (3)
spring
Reviews the evolution of landscape ecology and landscape planning and examines use and value.

PLA 413 Southwest Landscape Interpretation. (3)
spring
Explores methods and implications of landscape interpretation within the American Southwest.

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

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

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

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

PLA 484 Internship. (3)
fall, spring, summer session 1
Full-time internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit. Prerequisite: school major or instructor approval.

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

PLA 494 Special Topics. (1–4)
fall and spring
Possible topics:
(a) Plant Materials. (3)

PLA 498 Pro-Seminar. (1–7)
spring
Possible topics:
(a) Professional Senior Seminar. (1)

URBAN AND ENVIRONMENTAL PLANNING (PUP)

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

PUP 161 Graphic Communication. (3)
fall and spring
Develops drawing skills and understanding of the graphic communication systems used by planning, home building, and landscape architecture professions. Studio. Cross-listed as HUD 161/PLA 161. Credit is allowed for only HUD 161 or PLA 161 or PUP 161.

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

PUP 236 Introduction to Computer Modeling. (3)
fall and spring
Fundamentals of computer operation, geographic information systems, geometric modeling of three-dimensional forms and rendering of light, mathematical modeling of processes using spreadsheets. Lab. Prerequisite: major in the College of Architecture and Environmental Design.
General Studies: CS

PUP 261 Urban Planning I. (4)
fall
Planning communication: communication techniques for urban planning and landscape architecture communication. Prerequisites: ADE 120; PLA 261 (or PUP 262).

PUP 262 Urban Planning II. (4)
spring
Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes. Studio. Prerequisites: ADE 120; GPH 111.

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

PUP 322 Computers in Planning. (3)
spring
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. (4)
fall
Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. Studio. Fee. Prerequisite: school major or instructor approval.

PUP 362 Urban Planning IV. (4)
spring
Neighborhood planning: local community plan making; urban development and neighborhood improvement. Studio. Fee. Prerequisite: PUP 361 or instructor approval.

PUP 363 History of Planning. (3)
spring
Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.

PUP 412 History of the City. (3)
fall
The city from its ancient origins to the present day. 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)
spring
Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models. Prerequisite: junior standing.
General Studies: HU

PUP 424 Planning Methods. (4)
fall
Tools useful for urban planning research; emphasis on research design and survey methods. Studio. Prerequisite: PUP 301 or instructor approval.

PUP 425 Urban Housing Analysis. (3)
fall
Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.

PUP 430 Transportation Planning and the Environment. (3)
spring
Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs. Lecture, discussion. Prerequisite: junior standing or instructor approval.

PUP 432 Planning and Development Control Law. (3)
fall
Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.

PUP 433 Zoning Ordinances, Subdivision Regulations, and Building Codes. (3)
fall and spring
Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.

PUP 434 Urban Land Economics. (3)
spring
Interaction between space and economic behavior. Examines the use and value of land through economic theories.

PUP 436 City Structure and Planning. (3)
spring
Political structure and organization of government as it relates to planning. Prerequisite: PUP 301.

PUP 442 Environmental Planning. (3)
fall
Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise. Field trips. Prerequisite: PUP 301 or instructor approval.

PUP 444 Preservation Planning. (3)
spring
History, theory, and principles of historic preservation. Emphasis on legal framework and methods practiced. Lecture, off-campus field study. Prerequisite: instructor approval.

PUP 445 Women and Environments. (3)
fall
Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples. Prerequisite: upper-division or graduate status.
General Studies: C

PUP 450 Environmental Planning Economics. (3)
fall
Introductory course in the applications and limitations of economics in environmental planning and policy making. Emphasizes applications rather than theoretical details, the importance of ecological knowledge.

PUP 452 Ethics and Theory in Planning. (3)
fall
Ethics and theory of professional planning practice in urban and regional communities. Prerequisite: upper-division standing or instructor approval.
General Studies: L

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

PUP 461 Urban Planning V. (4)
fall
Comprehensive planning: collection and analysis of economic, social, and environmental data relevant to urban planning; development of land-use plans. Studio. Fee. Prerequisite: PLA 362 or PUP 362 or instructor approval.

PUP 462 Urban Planning VI. (4)
spring
Capstone studio: project focusing on synthesis aspects of plan making. Studio. Fee. Prerequisite: PUP 461 or instructor approval.

PUP 475 Environmental Impact Assessment. (3)
spring
Criteria and methods for compliance with environmental laws; development of skills and techniques needed to prepare environmental impact statements/assessments.

PUP 484 Internship. (1–12)
fall, spring, summer session 1
Full-time internship under the supervision of practitioners in the Phoenix area or other locale. Credit/no credit. Prerequisite: school major or instructor approval.

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

PUP 494 Special Topics. (1–4)
fall and spring
Possible topics:
(a) Environmental Planning Economics. (3)

PUP 498 Pro-Seminar. (1–7)
fall
Possible topics:
(a) Senior Pro-Seminar. (1)

PUP 501 The Idea of Planning. (3)
fall
Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.

PUP 510 Citizen Participation. (3)
spring
Theory and practice of citizen participation in planning. Examines and critiques participation techniques and roles of planners. Prerequisite: instructor approval.

PUP 520 Planning Theories and Processes. (3)
fall
Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners. Prerequisite: instructor approval.

PUP 524 Planning Methods I: Planning Research Methods. (3)
fall
Tools useful for urban planning research; emphasis on research design and survey methods. Prerequisite: PUP 301 or instructor approval.

PUP 525 Urban Housing Analysis. (3)
fall
Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.

PUP 531 Planning and Development Control Law. (3)
spring
Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.

PUP 532 Advanced Urban Planning Law. (3)
spring
Advanced study on selected issues in planning law, such as urban design controls, exclusionary practices, compensable regulation, and tax policy. Prerequisite: PUP 432 or instructor approval.

PUP 542 Environmental Administration and Planning. (3)
spring
Environmental administration of policies and their relationship to environmental planning practices. Prerequisite: PUP 442.

PUP 544 Urban Land Use Planning. (3)
spring
Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans. Prerequisite: PUP 301 or instructor approval.

PUP 546 Urban Design Policy. (3)
not regularly offered
Advanced study of local, state, and federal urban design policy. Prerequisite: PLA 420 or PUP 420.

PUP 550 Environmental Planning Economics. (3)
fall
Introductory course in the applications and limitations of economics in environmental planning and policy making. Emphasizes applications rather than theoretical details, the importance of ecological knowledge.

PUP 561 Urban Design Studio. (4)
not regularly offered
Current urban form and urban landscape design problems within the Phoenix-centered region. Studio. Prerequisite: PLA 420 or PUP 420 or instructor approval.

PUP 572 Planning Studio I: Data Inventory and Analysis. (4)
fall
Comprehensive planning workshop dealing with real community problems. Focuses on the data gathering and analysis steps of the planning process. Fee. Prerequisite: Master of Environmental Planning major or instructor approval.

PUP 574 Planning Studio II: Options and Implementation. (4)
spring
Comprehensive planning workshop dealing with real community problems. Focuses on the development of options, plan making, and plan implementation. Studio. Fee. Prerequisite: PUP 572 or instructor approval.

PUP 575 Environmental Impact Assessment. (3)
spring
Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.

PUP 576 GIS Studio. (3)
spring
GIS as a tool to address large, multifaceted planning problems. Prerequisites: a combination of GPH 373 (or 598) and PAF 591 and PUP 322 or only instructor approval.

PUP 584 Internship. (3)
fall, spring, summer session 1
Internship under the supervision of practitioners in the Phoenix area or other locales. Credit/no credit.

PUP 599 Thesis. (1–12)
not regularly offered
Fee.

PUP 622 Planning Methods II: Quantitative Planning Analysis. (3)
spring
Methods and models used as the basic quantitative techniques of urban, regional, and environmental planning and policy analysis. Prerequisites: PUP 424; statistics; instructor approval.

PUP 642 Land Economics. (3)
fall
Land use and locational impact of economic activity and the urban real property market. Prerequisite: instructor approval.

PUP 644 Public Sector Planning. (3)
spring
Urban fiscal problems and public goods provision in state and local governments. Prerequisites: 1 course in microeconomics; instructor approval.