

College of Architecture and Environmental Design

John Meunier, M.Arch.
Dean

PURPOSE

The practice of architecture and environmental design is the culturally responsible shaping of our environment—from the scale of the cities in which we live to the buildings and interiors we inhabit and the artifacts and products we use. What we design must be durable, useful, beautiful, appropriate to its context, and not be a waste of resources, energy, or materials. Designing our environment is an art, a technology, and a social science that has a history as long as human culture. The goals of the faculty include offering students an education that becomes the basis for life-long growth and improvement as professionals, advancing the discipline in both theory and practice, and improving the quality of the environment by making the expertise and knowledge of the faculty available to other professionals and to the public.

ORGANIZATION

Academic Organization. The college is composed of three academic units: the School of Architecture, the School of Design, and the School of Planning and Landscape Architecture. Administration of the college is the responsibility of the dean, who in turn is responsible to the president of the university through the senior vice president and provost.

College Facilities. With the opening of an award-winning 100,000-square-foot expansion to the existing building in 1989, all the college's programs are now housed in a single complex. Facilities include the Architecture and Environmental Design Library; computer laboratories; design studios; the Gallery of Design; lecture and seminar rooms; the Media Center; offices for faculty, administration, and student organizations; the shop; the slide collection; and technology laboratories. The bridge between the original building and the expansion places the college's review and display space at the heart of the complex.

Architecture and Environmental Design Library. As a branch of the university libraries, the Architecture and Environmental Design Library provides easy access to books, periodicals, and reference materials for students, faculty, and the professional community. The collection includes the Architecture Library, with more than 28,000

volumes, and special research collections on the work of Alfred Newman Beadle, Blaine Drake, Paul Schweikher, Paolo Soleri, and Frank Lloyd Wright.

Gallery of Design. The Gallery of Design is one of eight university galleries and museums. It provides space for traveling exhibitions and exhibitions of student and faculty work.

Special Facilities. College programs are supplemented by several kinds of special laboratories. New spaces include the computer-aided design and graphics lab, the high-bay research lab, the lighting lab, the solar research lab, the solar roofdeck work area, an extensive shop equipped to handle wood, plastic, and metal, the Materials Resource Library, and space for the college's community outreach activities and programs of the Herberger Center for Design Excellence. The college's photographic lab and darkroom provide high-quality equipment and space for research projects. The Media Center includes traditional graphics and audiovisual equipment as well as portable gear. The slide collection, with more than 90,000 images, is available for instructional use, and the college maintains an array of materials testing equipment. The college is also home to a computer site managed by Computing and Network Consulting Services.

ADMISSION

Lower-Division Programs. A new or transfer student who has been admitted to the university and has selected a college major is admitted to the lower-division program of his or her choice. A separate application procedure is required for entry to upper-division programs and graduate programs. Acceptance into lower-division programs does not guarantee acceptance to upper-division programs. Acceptance into lower-division programs requires a TOEFL score of 500 or higher for international students whose native language is not English.

Transfer Credits. While the university accepts credits transferred from other accredited institutions, transfer credits are not applied to specific degree programs until reviewed and accepted by the appropriate academic units. Transfer course work must be equivalent in both content and level of

offering. In addition, a review of samples of work (portfolio of work) from previous studio classes is required. Change of major transfers into the College of Architecture and Environmental Design, or one of its program areas, requires a minimum 2.50 cumulative GPA.

Upper-Division Programs. Admission to upper-division programs is competitive. Consult requirements of each major for details. Students applying to more than one program must make a separate application to each and must submit separate portfolios. Students not enrolled at ASU when they apply to upper-division programs must also make a separate application to the university. Students not admitted to the upper division are not dismissed from the university and may reapply or may transfer to other programs. Students who plan to reapply should contact the college academic advisor. Transfers into upper-division programs are considered only if vacancies occur, and such transfers are limited to students with equivalent course work who are competitive with continuing students. Acceptance into upper-division programs requires a TOEFL score of 550 or higher for international students whose native language is not English.

Graduate Programs. For admission to the graduate programs in the College of Architecture and Environmental Design, see requirements and procedures under the respective academic units in this catalog and in the *Graduate Catalog*. Students must make separate applications and be admitted by both the Graduate College and the academic unit administering the degree program selected.

ADVISEMENT

While the college and its academic units provide academic advising, *it is ultimately the responsibility of each student to fulfill academic and program requirements.* Advising and record-keeping for lower-division programs are the responsibility of the college academic advisor. Records for upper-division program students are kept in the appropriate academic units, and advising is by the faculty and the head of the academic unit. General career advising is available from all faculty members. Administration of program requirements is the responsibility of the head of the academic unit and the dean.

Appeals Procedures. Academic appeals and requests for variances are typically made first to the student's advisor and then, if necessary, to the head of the appropriate academic unit, the College Standards Committee, and, finally, the dean. A student who feels he or she has been unjustly treated in academic or other matters relating to his or her career as a student may contact the college academic advisor or may take the grievance to the college ombuds-person.

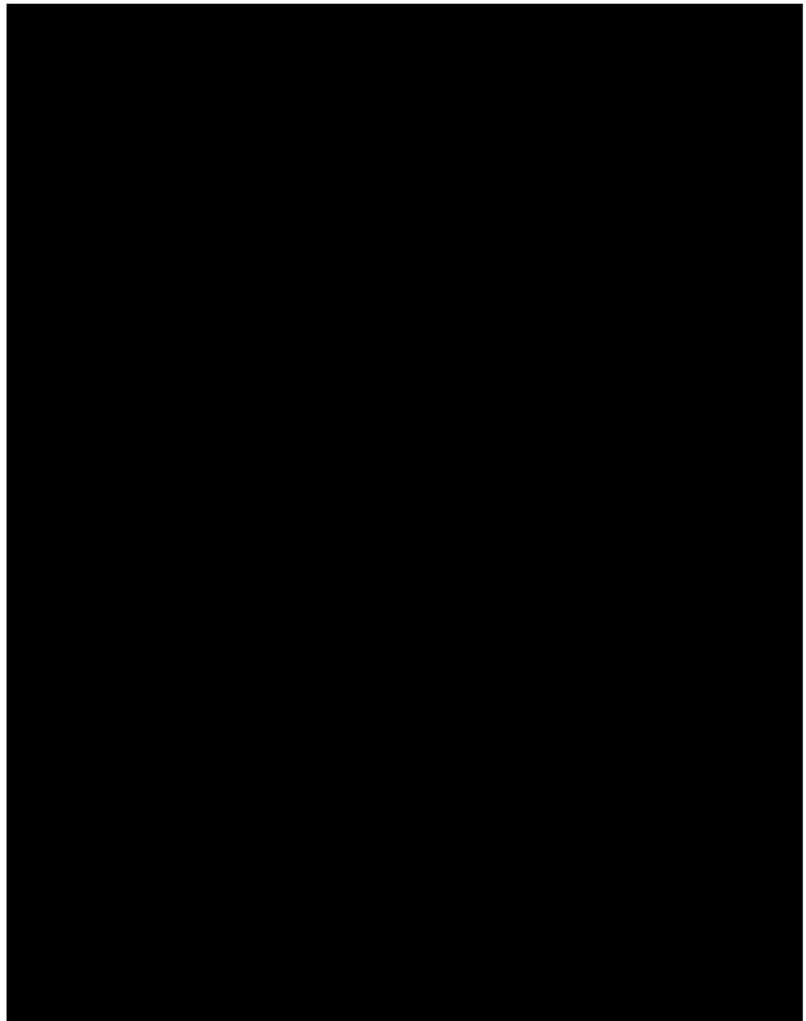
DEGREES

Undergraduate. The college offers curricula leading to four- or five-year undergraduate degrees: the Bachelor of Science in Design, the Bachelor of Science in Planning, and the Bachelor of Science in Landscape Architecture. A student selects one of the majors within the respective academic units shown in

the "College of Architecture and Environmental Design Degrees, Majors, and Concentrations" table, page 162.

Each undergraduate program is divided into a lower-division and an upper-division program. Completion of a lower-division program does not guarantee advancement to an upper-division program.

Graduate. The Graduate College awards the master's degree to candidates who have successfully completed graduate programs offered in this college. Four degrees are offered: the NAAB-accredited professional degree Master of Architecture (M.Arch.), the PAB-accredited professional degree Master of Environmental Planning (M.E.P.), the Master of Science (M.S.) degree with a major in Building Design, and the Master of Science in Design (M.S.D.) degree with majors in Industrial Design and Interior Design.



College of Architecture and Environmental Design Degrees, Majors, and Concentrations

Major	Degree	Administered by
Baccalaureate Degrees		
Architectural Studies	B.S.D.	School of Architecture
Design Science	B.S.D.*	School of Design
Housing and Urban Development	B.S.D.	School of Planning and Landscape Architecture
Industrial Design	B.S.D.	School of Design
Interior Design	B.S.D.	School of Design
Landscape Architecture	B.S.L.A.	School of Planning and Landscape Architecture
Urban Planning	B.S.P.	School of Planning and Landscape Architecture
Graduate Degrees		
Architecture	M.Arch.	School of Architecture
Building Design Concentrations: building energy performance, climate responsive architecture, computer-aided design, facilities development and management	M.S.	School of Architecture
Environmental Planning Concentration: urban planning	M.E.P.	School of Planning and Landscape Architecture
Industrial Design Concentrations: design methodology, theory, and criticism; facilities planning and management; human factors in design	M.S.D.	School of Design
Interior Design Concentrations: design methodology, theory, and criticism; facilities planning and management; human factors in design	M.S.D.	School of Design

* Applications are not being accepted.

DEGREE REQUIREMENTS

Students seeking the Bachelor of Science in Design degree must satisfactorily complete a curriculum of a minimum of 132 to 156 semester hours, depending on the major. The Bachelor of Science in Planning degree requires 128 semester hours, depending on the concentration. The Bachelor of Science in Landscape Architecture requires 125 semester hours. These requirements include six semester hours for English proficiency and meet or exceed the university general studies requirements.

Major	<i>Semester Hours</i>
Architectural Studies	133
Housing and Urban Development	134
Industrial Design	134
Interior Design	156
Landscape Architecture	125
Urban Planning	128

Dean's List. Undergraduate students who earn 12 or more graded semester hours ("A," "B," "C," "D," or "E") dur-

ing a semester in residence at ASU with a GPA of 3.50 or better are eligible for the Dean's List. A notation of achieving the distinction of being listed on the Dean's List appears on the final grade report for that semester.

Special Honors at Graduation. At the time of graduation, students with academic distinction are awarded the respective designation *cum laude*, *magna cum laude*, or *summa cum laude*. Also see university requirements for graduation with academic recognition, page 73.

GENERAL STUDIES REQUIREMENTS

Each curriculum offered by the college meets or exceeds the university general studies requirements. Courses are regularly reviewed to determine whether they meet one or more general studies requirements. See the listing of courses, pages 53–71. The key to general studies credit abbreviations appears on page 52.

GRADUATION REQUIREMENTS

In addition to completing departmental degree requirements, students must fulfill university graduation requirements. Students must apply and pay a fee for a graduation requirements review.

ACADEMIC STANDARDS

Lower-Division Retention Standards.

A student in one of the college's lower-division programs is placed on probation when he or she fails to maintain a cumulative GPA of 2.00. Students on probation must observe rules or limitations the college Standards Committee imposes on their probation as a condition of retention. If, after one semester on probation, the overall GPA is not at least a 2.00 and the conditions of probation have not been met, the student is disqualified for a minimum of two full academic semesters. Appeals may be made to the college Standards Committee. Also see university retention standards, page 48.

Upper-Division Retention Standards.

Students in upper-division programs are placed on probation when they fail to meet *any* of the following requirements:

1. failure, incomplete, or withdrawal from any required course;
2. a semester GPA below 3.00;
3. a grade of “D” or “E” in a design studio or a design laboratory; or
4. violation of the college *Code of Student Responsibilities* or any admission agreement.

Students on probation must observe rules or limitations that the Standards Committees or an academic unit places on their probation as a condition of continuation. Students may be removed from a program (but not necessarily the university) if

1. after one semester on probation, the requirements imposed are not met or the probationary semester GPA is below 3.00;
2. failures or withdrawals in required courses are not resolved at the next offering of the course;
3. failures or withdrawals from required sequential courses are not resolved; or
4. incompletes in required sequential courses are not completed before the first day of class of the next semester.

A student removed from a program is not guaranteed reinstatement in the program even if probation requirements or requirements placed on readmission are fulfilled. Appeals may be made first to the appropriate academic unit and, if necessary, to the college Standards and Appeals Committee. Also see university retention standards, page 48.

Incompletes. It is the student’s responsibility to contact the instructor regarding the process of requesting and fulfilling an incomplete. Tardiness in contacting the instructor may result in a failing grade. Students must obtain an official “Request for Grade of Incomplete” form from their academic units. The completed form must include a justification, a listing of requirements that have not been fulfilled, and a proposed schedule of completion. The instructor reviews the request, proposes modifications if necessary, and submits a copy of the request to the appropriate pro-

gram head (for upper-division students) or the college academic advisor (for lower-division students). An incomplete in an upper-division course that is a prerequisite for sequential courses automatically places the student on probation and denies enrollment in subsequent courses. Also see university requirements on incompletes, page 45.

Withdrawals. University withdrawal regulations apply to lower-division courses. In addition, because the college’s upper-division curricula are modular and sequential and because space in the programs is limited, a student is expected to progress through the curriculum with his or her class. Withdrawal from a required upper-division course automatically places a student on probation. Withdrawal from a required upper-division course in a required sequence automatically removes the student from the program beginning the subsequent semester. Also see university requirements on withdrawals, page 46.

Credit/No Credit. The only courses accepted toward graduation with a grade of pass/fail or credit/no credit are internships and field studies.

Foreign Study. The College of Architecture and Environmental Design maintains active communications with several foreign institutions offering professional course work similar to the programs of the college. This opportunity is available for students who wish to pursue professional studies at a foreign institution in lieu of resident course work for up to a maximum of one academic year. Any interested student is encouraged to inform the head of his or her academic unit at the earliest possible date of any intentions for foreign study.

Exchange programs currently exist with the Universität Stuttgart, Germany; Wageningen Universiteit in de Landbouw en Milieu Wetenschappen, the Netherlands; and the Universidad Autónoma de Guadalajara, Mexico. Foreign study programs in France and Italy and summer off-campus courses are offered by the School of Architecture. The School of Planning and Landscape Architecture offers a summer landscape planning course in Europe.

Students are also encouraged to consider foreign travel for either a semester or an entire academic year. A leave of

absence must be requested for foreign study and foreign travel. Each academic unit reserves the right to evaluate the content and the student’s competency in each of the courses completed at foreign institutions.

Internships. Upper-division students in the college are required to complete an internship program during the summer, normally between the third and fourth years of study.

Code of Student Responsibility. The purpose of this code is to promulgate standards of conduct for students of the College of Architecture and Environmental Design and to establish procedures for reviewing violations. Students are expected to support and maintain the highest professional standards with regard to their individual conduct and their personal and common environments in the college. Copies of the *Code of Student Responsibilities* are available from the Office of the Dean and the college academic advisor.

Attendance. Attendance is expected at all classes, laboratories, and seminars and is a criterion for evaluating performance. Absences and missing work due to absences may result in failure of a course or academic probation. A student may not be excused from attending a class except for medical reasons or other serious personal conditions beyond his or her control. Requests for special consideration must be submitted in writing to the instructor. If accepted, a student may be allowed to take a late or special examination or submit missing work. Tardiness in contacting the instructor is cause for denying acceptance. Also see university policy regarding religious holidays, page 1.

Employment. It is difficult for students in professional programs to carry part-time employment while in school. Acceptance to any of the college’s upper-division programs presumes a commitment of a minimum of eight hours a day for professional studies. Prior work experience is not a requirement for admission to upper-division programs.

Retention of Student Work. The college reserves the right to retain any or all projects or work submitted to meet course requirements for the college’s future instructional, publication, and exhibition use.

Student Leave of Absence. Upper-division students who withdraw from classes or do not continue sequentially in enrollment must request both a leave of absence and readmission in writing from the head of the appropriate academic unit. Leaves of absence are for one-year increments and may be approved for personal reasons, travel, work, or additional study in other disciplines. A student on leave must make the written request for readmission before May 1 for the fall semester of the year of return or before November 1 for the spring semester so that a space may be reserved. Failure to request a leave of absence may result in removal from the program.

SPECIAL PROGRAMS

The college and its academic units regularly sponsor lecture series, symposia, and exhibits. In addition, there are regional and national meetings of educators and professionals that students and faculty attend. Academic units sponsor student awards programs and regularly invite professionals and critics to reviews of student projects. The college also participates with the University Honors College and offers courses accepted in that college.

GENERAL INFORMATION

Accreditation. See page 16 for information on the accreditation of programs in the College of Architecture and Environmental Design.

College of Architecture and Environmental Design Alumni Association.

The College Alumni Association encourages graduates to contribute to the college by acting as liaisons among the college community, students, and practicing professionals. The college also calls on the members of the Architecture Guild of Arizona State, the Arizona Design Institute, the Council for Design Excellence, and the Planning Advisory Committee for advice and to promote the goals of the college.

Council for Design Excellence. The Council for Design Excellence has been created to consolidate a partnership between the College of Architecture and Environmental Design and key

community leaders who share a vital interest in the development of high quality in the built environment of the Phoenix metropolitan area. By joining together professionals, business and civic leaders, students, and faculty in a common pursuit of design excellence, the council seeks to make a profound difference in the quality of life.

Affiliations. The College of Architecture and Environmental Design maintains active affiliations with the following organizations:

Architecture—Arizona Society of Architects, the Association of Collegiate Schools of Architecture, and the Central Arizona and the Rio Salado Chapters of the American Institute of Architects
Industrial Design—the Industrial Designers Society of America
Interior Design—the American Society of Interior Designers, the Institute of Business Designers, and the Interior Design Educators Council
Planning and Landscape Architecture—the American Planning Association, the American Society of Landscape Architects, the Association of Collegiate Schools of Planning, and the Council of Educators in Landscape Architecture

Student Professional Associations.

The purpose of the student associations is to assist students with the transition into professional life and to acquaint them with the profession relating to their program of study. These include the following associations:

American Institute of Architecture Students
College of Architecture and Environmental Design Pre-Studies Organization
Student Association of the College of Architecture and Environmental Design
Student Association of Interior Designers
Student Chapter/American Planning Association
Student Chapter/American Society of Landscape Architects
Student Chapter/Industrial Designers Society of America
Women in Architecture

School of Architecture

Michael Underhill
Director
(AED 162D) 602/965-3536

REGENTS' PROFESSOR COOK

PROFESSORS

BOYLE, MCSHEFFREY, MEUNIER,
PETERSON, RAPP,
SCHEATZLE, UNDERHILL

RESEARCH PROFESSOR JONES

ASSOCIATE PROFESSORS

EL DIASTY, FIFIELD, LOOPE,
MCGINTY, MCINTOSH, SHEYDAYI,
UNDERWOOD, ZYGAS

ASSISTANT PROFESSORS

BERTELSEN, BILN, CURRY, FIELDS,
HARDIN, HARTMAN, INABA,
KROLOFF, WOOLSEY

PROFESSORS EMERITI

CHRISTENSEN, ELLNER, HINSHAW,
JAKOB, OLIVER, RUMMEL,
STRAUB, WHIFFEN

PURPOSE

The architecture program at Arizona State University 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. It 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 AND MAJORS

The faculty of the School of Architecture offer three degrees: the Bachelor of Science in Design with a major in Architectural Studies, the Master of Architecture, and the Master of Science with a major in Building Design.

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

Admission to the professional program in architecture is competitive and begins after completion of lower-division requirements (see "Admission" and "Degree Requirements" below). The professional program includes two years of upper-division study leading to the Bachelor of Science in Design (with a major in Architectural Studies) and two years of graduate study leading to the Master of Architecture (see "Upper-Division Professional Program" below).

In cooperation with the University Honors College the school offers a special honors curriculum for students with University Honors College standing. Please consult the advising officers in each college for information.

In cooperation with the College of Business, a dual degree program, Master of Architecture/Master of Business Administration, has been established. Students contemplating dual matriculation should see an advisor for help in selecting electives appropriate to this program at the undergraduate level.

The Master of Science degree with a major in Building Design provides opportunities for advanced and specialized studies and research in building science. Concentrations include computer-aided design, energy performance of buildings, facilities development and management, and solar architecture. Students entering this program typically have the professional Bachelor of Architecture or Master of Architecture degrees or undergraduate degrees in areas such as physics, engineering, or design. For particulars, see the *Graduate Catalog*.

ADMISSION

Lower-Division Program. New and transfer students who have been admitted to the university and who have selected Architectural Studies are admitted to the lower-division architecture

program without separate application to the School of Architecture. Completion of lower-division requirements does not assure 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 the college academic advisor for an appointment.

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

Upper-Division Professional Program. Admission to the upper-division, professional program is competitive and limited by available resources. Admission is awarded to those applicants demonstrating the highest promise for professional success, including evidence of ability and prospect for significant public service.

Transfer students who have completed the equivalent required lower-division course work may apply to the upper-division program. Prior attendance at ASU is not required for application to the upper-division program. Applicants who already hold a bachelor's degree in another field may be accepted to the upper-division program if they have accomplished the lower-division requirements.

To be eligible for admission to the upper-division program, the following is required:

1. admission to ASU (note that application and admission to ASU is separate from application and admission to the upper-division program);
2. completion of lower-division requirements (a minimum of 63 semester hours) 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 page 166).

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 the college academic advisors.

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 (B.S.D.) with a major in Architectural Studies. This is not a professional degree. To complete the professional architecture program, students must attain the National Architectural Accrediting Board-accredited Master of Architecture degree. Students who receive the B.S.D. are eligible to apply for the graduate program and should consult 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 the college academic advisor for the application form well in advance of the application deadline. For additional information on portfolios, ask for a copy of the *Portfolio Seminar* brochure from the college academic advisor. The following dates and procedures are for students applying to 1995–96 upper-division programs.

Upper-Division Application Deadlines. *April 14, 1995.* Portfolio and application documents are due in the school office by 5:00 P.M.

June 9, 1995. If the spring 1995 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 9. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Office of Undergraduate Admissions. 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, 1995. 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 or department 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). The student's name is to be affixed to the outside. Items must appear in the following order:

Page 1. The application form should be completely filled out with the first page visible. Application forms are available from the college academic advising office.

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

Page 3. Application Essay.

Page 4. All high school transcripts should be put into one sleeve.

Page 5. All college transcripts for both ASU and transfer work should be in-

cluded through the fall 1994 semester. Copies are acceptable. The academic advisor forwards 1995 ASU transcripts. (Those wishing to transfer spring semester 1995 work are responsible for submitting these transcripts by June 12 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 6. A certificate of admission is necessary only for those students who have been newly admitted for fall 1995 and who are applying directly into an upper-division program. The certificate is not required for students currently attending ASU.

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

Students are encouraged to include additional materials, written or pictorial, that provide additional evidence of skills and abilities and of the aptitude and commitment to the major. When any work submitted is not completely original, the source must be given. When work is of a team nature, the applicant's role should be clearly indicated. Original examples or slides must not be submitted. All examples must be photographs or other reproduction graphic media.

Return of Portfolios. Application documents (pages 1 through 6) 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, 1995. 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.

ADVISEMENT

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 with a major in Architectural Studies requires a minimum of 134 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.

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

Architectural Studies—B.S.D. Lower-Division Requirements

Option A¹

Freshman Year

			<i>Semester Hours</i>
Fall (15)			
APH	100	Introduction to Environmental Design ²	3
ENG	101	First-Year Composition	3
MAT	118	Precalculus Algebra and Trigonometry	3
		or approved N1 elective ²	
PHI	103	Principles of Sound Reasoning	3
		or approved philosophy elective	
SB	elective	.....	3
Spring (16)			
ADE	120	Design Fundamentals I ³	3
ECN	112	Microeconomic Principles ²	3
		or ECN 111 Macroeconomic Principles	
ENG	102	First-Year Composition	3
MAT	210	Brief Calculus ²	3
HU	elective	.....	3

Sophomore Year

Fall (16)			
ADE	221	Design Fundamentals II ³	3
APH	200	Introduction to Architecture ²	3
PHY	111	General Physics ²	3
PHY	113	General Physics Laboratory ²	1
L1	elective ²	.....	3
	Approved elective	.....	3

Spring (16)

ADE 222	Design Fundamentals III ³	..... 3
CSE 181	Applied Problem Solving with BASIC	..... 3
PHY 112	General Physics ²	..... 3
PHY 114	General Physics Laboratory ²	..... 1
SB elective		..... 3
Approved elective		..... 3
Lower-division total		..... 62

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

² This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.

³ Portfolio review is required for transfer studio work. See the college academic advisor for an appointment.

**Architectural Studies—B.S.D.
Lower-Division Requirements
Option B¹**

English Proficiency (6)	<i>Semester Hours</i>
ENG 101, 102	First-Year Composition 6 or ENG 105 Advanced First-Year Composition (3) plus an HU elective ²

Literacy and critical inquiry (3)

Approved L1 elective 3
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Numeracy (9)

ECE 105	Introduction to Languages of Engineering 3
ECE 106	Introduction to Computer- Aided Engineering 3
MAT 274	Elementary Differential Equations	..... 3
MAT 290	Calculus I	..... 5
MAT 291	Calculus II	..... 5

Option B Engineering Requirement (3)

ECE 210	Engineering Mechanics I: Statics 3
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Humanities and Fine Arts (9)

APH 100	Introduction to Environmental Design ² 3
APH 200	Introduction to Architecture ²	..... 3
Approved HU elective ²		..... 3

Social and Behavioral Sciences (6)

ECN 112	Microeconomic Principles ² ... 3 or ECN 111 Macroeconomic Principles (3) or approved business course
Approved SB elective	..... 3

Natural Sciences (8)

PHY 121	University Physics I: Mechanics	..... 3
PHY 122	University Physics Laboratory I	..... 1
PHY 131	University Physics II: Electricity and Magnetism	..... 3
PHY 132	University Physics Laboratory II	..... 1

Studio Courses³ (10)

ADE 120	Design Fundamentals I ³	..... 3
ADE 221	Design Fundamentals II	..... 3
ADE 222	Design Fundamentals III	..... 3
Lower-division minimum total		..... 63

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

² This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.

³ Portfolio review is required for transfer studio work. See the college academic advisor for an appointment.

ECE 312, 313, and 383 may be taken at the upper-division level as approved electives and are not required before admission to the upper-division program. However, conflicts in course time can be avoided by taking them before applying to the upper division.

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

Fall (17)	<i>Semester Hours</i>	
ADE 321	Architectural Studio I	..... 5
APH 313	History of Western Architecture I ^{1, 2}	..... 3
ATE 353	Architectural Construction	..... 3
AVC 301	Architectural Communication	..... 3
Approved elective		..... 3

Spring (17)

ADE 322	Architectural Studio II	..... 5
ANP 331	Analysis and Programming	..... 3
APH 314	History of Western Architecture II ^{1, 2}	..... 3
ATE 361	Building Structures I ³ 3
Approved elective	 3

Summer (3)

ARP 484	Clinical Internship 3
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Senior Year

Fall (17)

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

Spring (17)

ADE 422	Architectural Studio IV	..... 5
ATE 452	Building Systems II	..... 3
Architectural history elective		..... 3
Approved L2 elective		..... 3
Professional elective		..... 3

Upper-division total	..... 71
B.S.D. minimum total	..... 133

¹ These courses may be completed before admission to the upper division. If already completed, a student may substitute an approved elective.

² This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.

³ Approved substitute courses are accepted from the College of Engineering and Applied Sciences for option B students.

**Master of Architecture
Graduate Division
Professional Program Requirements
Fifth Year**

Fall (14)	<i>Semester Hours</i>	
ADE 521	Advanced Architectural Studio I	..... 5
ATE 553	Building Systems III	..... 3
ATE 563	Building Structures III	..... 3
Professional elective		..... 3

Spring (14)

AAD 551	Architectural Management I	..... 3
ADE 522	Advanced Architectural Studio II	..... 5
APH 681	Architectural Theory	..... 3
Professional elective		..... 3

Sixth Year

Fall (14)

AAD 552	Architectural Management II	..... 3
ADE 621	Advanced Architectural Studio III	..... 5
ANP 681	Project Development	..... 3
Professional elective		..... 3

Spring (14)

AAD 681	Professional Seminar: Capstone	..... 3
ADE 622	Advanced Architectural Studio IV	..... 5
Approved elective	 3
Professional elective	 3

Graduate division total 56
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GENERAL INFORMATION

Professional Electives. A student, with the approval of his or her advisor, selects required upper-division professional emphasis electives from the following areas:

1. architectural office management (also courses in the College of Business);
2. construction technology and administration (also courses in the Del E. Webb School of Construction);
3. landscape architecture (also courses in the School of Planning and Landscape Architecture and the Department of Botany, and the School of Agribusiness and Environmental Resources);
4. structural systems design (also courses in the College of Engineering and Applied Sciences);
5. architectural history, theory, or preservation (also courses in art history in the College of Fine Arts or philosophy in the College of Liberal Arts and Sciences);
6. environmental research, analysis, and programming (also courses in the Departments of Psychology and Sociology);
7. solar design and technology (also courses in the College of Engineering and Applied Sciences);
8. energy conservation and adaptive reuse (also courses in the School of Planning and Landscape Architecture);
9. urban and regional planning, environmental psychology, and sociology; interior architecture (also courses in the School of Design);
10. computer-aided design (also courses in the Department of Computer Science and Engineering); and
11. advanced architectural communication.

GENERAL STUDIES REQUIREMENTS

The architecture curriculum exceeds the general studies requirements of the university. For more information about university general studies requirements, see pages 50–52. Specific courses in the curriculum that fulfill the required general studies distribution requirements are indicated with a letter

and number code. See page 52 for the key to general studies credit abbreviations.

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.

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 American and international.

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.

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 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.

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.

Those courses that are required in the upper-division and graduate levels of the professional program are not open to nonmajors or those not admitted to the upper-division program.

ARCHITECTURAL ADMINISTRATION AND MANAGEMENT

AAD 551 Architectural Management I. (3) S Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions. Lecture, discussion. Prerequisite: graduate-level standing. Corequisite: ADE 522.

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

553 Advanced Architectural Management. (3) A Current issues in the business and practice of architecture. Financial management, project management, and design delivery strategies. Includes case studies. Lecture, discussion. Prerequisite: AAD 551 or instructor approval.

554 Advanced Construction Contract Administration. (3) N Advanced topics and problems in construction contract administration. Prerequisite: AAD 552 or instructor approval.

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

558 Advanced Specifications and Cost Analysis. (3) N Coordination of working drawings, construction specifications, and cost estimates. Emphasis on methods, office procedures, contract conditions, bonds, and bidding procedures. Prerequisite: instructor approval.

560 Contemporary Architectural Practice. (3) A Advanced issues and directions in design delivery, firm and project management, global markets and expanding cultural responsibilities. Includes case studies. Seminar. Prerequisite: instructor approval.

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

Omnibus Courses: See page 44 for courses that may be offered.

ARCHITECTURAL DESIGN AND TECHNOLOGY STUDIOS

ADE 120 Design Fundamentals I. (3) F, S, SS

Development of visual literacy. Introduction to drawing and graphic representation as methods of seeing and problem solving. Studio. Prerequisite: major in College of Architecture and Environmental Design.

221 Design Fundamentals II. (3) F

Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design. Lecture, studio. Pre- or corequisite: ADE 120.

222 Design Fundamentals III. (3) S

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

321 Architectural Studio I. (5) F

Introductory building design problems. Emphasis on design process, communication methods, aesthetics, construction, and technology. Lecture, studio, and field trips. Prerequisite: admission to upper division. Corequisites: ATE 353; AVC 301.

322 Architectural Studio II. (5) S

Site and building design problems. Emphasis on programmatic and environmental determinants and building in natural and urban contexts. Lecture, studio, and field trips. Prerequisite: ADE 321. Corequisite: ANP 331.

421 Architectural Studio III. (5) F

Topical design problems of intermediate complexity, including interdisciplinary problems. Lecture, studio, and field trips. Prerequisites: ADE 322 and ARP 484 for Architectural Studies majors; permission of the school director for other majors in the college.

422 Architectural Studio IV. (5) S

Topical design problems of intermediate complexity, including interdisciplinary problems. Lecture, studio, and field trips. Prerequisite: ADE 322 for Architectural Studies majors; permission of the school director for other majors in the college.

510 Foundation Architectural Studio. (6) SS

Fundamentals of architectural design, methodology, visualization, and representation. Lecture, studio, and field trips. Prerequisite: admission to graduate program.

511 Core Architectural Studio I. (6) F

Application of design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants. Lecture, studio, and field trips. Prerequisites: ADE 510; APH 200, 509. Corequisite: ATE 353.

512 Core Architectural Studio II. (6) S

Application of architectural design fundamentals to increasingly complex problems, including specific sites and activities. Lecture, studio, and field trips. Prerequisite: ADE 511.

521 Advanced Architectural Studio I. (5) F

Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form. Lecture, studio, and field trips. Prerequisite: admission to graduate program.

522 Advanced Architectural Studio II. (5) S

Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form. Lecture, studio, and field trips. Corequisites: AAD 551; ADE 521.

621 Advanced Architectural Studio III. (5) F

Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form. Lecture, studio, and field trips. Corequisites: AAD 552; ADE 522; instructor approval.

622 Advanced Architectural Studio IV. (5) S

Individual, student-initiated project reflecting a culminating synthesis of architectural ideas. Studio. Prerequisites: ADE 621; ANP 681. Corequisite: AAD 681.

661 Bioclimatic Design Studio. (6) A

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

Omnibus Courses: See page 44 for courses that may be offered.

ENVIRONMENTAL ANALYSIS AND PROGRAMMING

ANP 331 Analysis and Programming. (3) S

Analysis of natural and human environmental determinants as the basis of the programming and design of the built environment. Lecture, studio. Corequisite: ADE 322.

431 Architectural Programming Methods. (3) N

Theory and methods of architectural programming including determinants of architecture, information gathering techniques, program preparation, and methods of evaluation. Prerequisite: professional-level standing.

433 Building Codes and Ordinances. (3) N

Analysis of national, state, and local building codes and ordinances relative to their impact in architectural programming, design, and construction documentation.

442 Site Planning Principles and Analysis. (3) S

Effects of topography, climate, energy, zoning, and landscaping upon design development of external spaces. Programming and analysis and integration of architectural design to the site and site to the region.

475 Computer Programming in Architecture. (3) F, S

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

477 Computer Applications to Design Problems. (3) F

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

530 Computer Graphics in Architecture. (3) A

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

561 Architectural Information Processing Systems. (3) A

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

562 Information Systems for Facilities Management. (3) N

Introduction to database design and implementation. Assessment of facility management problems from information system points of view. Seminar, lab. Prerequisites: ANP 477 or 561; graduate standing.

576 Community Housing. (3) N

History, practices, trends, and forms of housing; includes growth of public programs, national and local programs, zoning law, housing distribution, planning principles and policies, design review, standards, and private development practice.

577 Housing Environments. (3) A

Contemporary housing environments, housing types, and life styles as determined by user preference, density, development and property standards, cost, community and privacy, security, identity, movement, and the need for open space.

581 Urban Structure and Design. (3) F

The nature and dynamics of urbanization and its relationship to architecture and urban design, including growth, decay, socialization, planning processes, and visual perception. Case studies. Prerequisite: professional-level standing.

Omnibus Courses: See page 44 for courses that may be offered.

ARCHITECTURAL PHILOSOPHY AND HISTORY

APH 100 Introduction to Environmental Design. (3) F, S, SS

Survey of environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as DSC/PUP 100. *General studies:* HU, G, H.

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

300 World Architecture I/Western Cultures. (3) F

Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants. Non-Architecture majors only. *General studies:* HU, G, H.

301 World Architecture II/Eastern Cultures. (3) S

Historical and contemporary built environments of Eastern civilizations: Mid-East, Central Asia, Far East, and South Pacific as manifestations of cultural history and responses to environmental determinants. *General studies:* G.

304 American Architecture. (3) N

Architecture in the United States from earliest colonial times to present. Non-Architecture majors only. *General studies:* HU.

- 305 Contemporary Architecture.** (3) N Europe and America from the foundations of the modern movement to the present. Non-Architecture majors only. *General studies: HU.*
- 313 History of Western Architecture I.** (3) F Representative buildings and sites with emphasis on their physical and social settings from antiquity through the Middle Ages. Prerequisite: junior standing or instructor approval. *General studies: HU.*
- 314 History of Western Architecture II.** (3) S Representative examples of architecture and urban design with emphasis on their social and historical contexts; from the Middle Ages to the present. Prerequisite: junior standing or instructor approval.
- 348 Theory of Built Environments.** (3) N Focused study of built environmental forms, their theoretical foundation, and their relation to social processes. Prerequisite: sophomore standing. *General studies: HU.*
- 411 History of Landscape Architecture.** (3) F The physical record of human attitudes toward the land. Selected examples of ancient through contemporary landscape planning and design. Cross-listed as PLA 310. *General studies: H.*
- 414 History of the City.** (3) F The city from its ancient origins to the present day with emphasis on cities of Europe and America during the last 5 centuries. Cross-listed as PUP 412.
- 441 Ancient Architecture.** (3) N Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites. Prerequisite: APH 313. *General studies: HU.*
- 442 Preservation Planning.** (3) F Principles and practices in planning for preservation, conservation and neighborhood redevelopment. Emphasis on evaluation of historic resources. Off-campus field practicum required. Prerequisite: instructor approval.
- 443 Renaissance Architecture.** (3) N Selected examples of Renaissance architecture and urbanism with emphasis on their historical and cultural settings. Prerequisite: APH 314. *General studies: HU.*
- 444 Baroque Architecture.** (3) N Selected examples of Baroque architecture and urbanism with emphasis on relationships between architecture and other arts. Prerequisite: APH 314. *General studies: HU.*
- 445 19th-Century Architecture.** (3) N Architecture and urbanism in Europe and North America from the French Revolution to Art Nouveau. Emphasis on the challenge of new materials and techniques in the context of revived and traditional architecture. Prerequisite: APH 314. *General studies: HU, H.*
- 446 20th-Century Architecture I.** (3) F Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style. Prerequisite: major in college. *General studies: HU.*
- 447 20th-Century Architecture II.** (3) S Developments in architecture since the international style. Prerequisite: APH 446. *General studies: HU.*
- 509 Foundation Seminar.** (3) SS Historical, technical, theoretical, environmental, and professional issues in architecture. Lecture, seminar, field trips. Prerequisite: ADE 510.
- 511 Energy Environment Theory.** (3) F Solar and other energy sources in designed and natural environments; architectural, urban, and regional implications of strategies using other renewable resources.
- 681 Architectural Theory.** (3) S An examination of architectural theory. Emphasis on application of theory to practice. Seminar. Prerequisite: instructor approval.
- 682 Architectural Criticism.** (3) F An examination of architectural criticism, emphasizing specific methods of criticism and their application for aesthetic judgment. Seminar. Prerequisite: instructor approval.
- 683 Critical Regionalism.** (3) N Critical inquiry in cultural grounding the definition of place in architectural theory and practice. Lecture, field studies. Prerequisite: APH 446 or 447.
- Omnibus Courses:** See page 44 for courses that may be offered.
- ### ARCHITECTURAL TECHNOLOGY
- ATE 353 Architectural Construction.** (3) F Materials and methods of construction. Aesthetic, code, and cost considerations. Lecture, lab. Corequisite: ADE 321.
- 361 Building Structures I.** (3) S Introduction to load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications. Lecture, lab. Prerequisite: admission to upper division.
- 451 Building Systems I.** (3) F Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy conscious design. Lecture, lab. Prerequisite: admission to upper division.
- 452 Building Systems II.** (3) S Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications. Lecture, lab. Prerequisite: ATE 451.
- 453 Advanced Architectural Construction.** (3) N Study of construction materials assembly and architectural detailing. Lecture, lab. Prerequisite: ATE 353.
- 462 Building Structures II.** (3) F Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems. Lecture, lab. Prerequisite: ATE 361.
- 501 Introduction to Solar Energy.** (3) N Introduction to theoretical and practical aspects of use of solar radiation and nocturnal cooling for control of building environments.
- 521 Building Environmental Science.** (3) F Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar/natural energies for heating, cooling, and lighting. Lecture, lab. Prerequisite: MAT 290 or equivalent.
- 522 Desert Habitation Technology.** (3) N Analysis of habitation approaches in nontechnological and technological societies arising from the nature of desert areas.
- 530 Daylighting Design.** (3) S Daylight analysis, availability, design sky measurements, modeling and simulation. Integration with passive heating, cooling, building design, and energy considerations. Lecture, lab.
- 533 Building Performance Simulation and Visualization.** (3) S Simulating, analyzing, and evaluating building energy, lighting, and acoustic systems using computer software packages. Lecture, lab.
- 534 Earth Sheltering.** (3) S Fundamentals of earth-atmosphere interaction, thermal and moisture effects, soil appraisal, underground passive techniques, comfort and energy efficiency. Lecture, lab.
- 544 Solar Thermal Subsystem Design.** (3) N Fundamental understanding and practical applications of solar subsystems such as controls, heat exchangers, heat transfer fluids in buildings is emphasized. Prerequisite: ATE 541.
- 550 Passive Cooling in Buildings.** (3) N Theory, analysis, and application of passive and low energy cooling systems for thermal comfort in buildings. Prerequisite: ATE 521.
- 551 Passive Heating in Buildings.** (3) N Theory, analysis, and application of passive and low energy heating systems for thermal comfort in buildings. Prerequisite: ATE 521.
- 552 Energy Parameters in Buildings.** (3) N Advanced modeling. Transient and multidimensional analysis of thermal and daylight performance using variable weather data. Prerequisite: ATE 551 or instructor approval.
- 553 Building Systems III.** (3) F Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation. Prerequisite: admission to upper division or instructor approval.
- 554 Building Energy Efficiency.** (3) S Impact of building design on energy performance. Climate responsiveness, operations dynamics, and subsystems integration in thermal comfort and efficiency. Prerequisite: ATE 452.
- 557 Construction Documents I.** (3) S Production of architectural working drawings; legal status, organization, layout, site survey plans, sections, elevations, details, schedules, and coordination. Lecture, Lab. Prerequisite: admission to upper division.
- 558 Bioclimatic Parameters.** (3) S Theory, analysis, and application of energy-related parameters of site, climate, human comfort, and building program for design synthesis.
- 560 Building Energy Analysis.** (3) F Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects. Lab. Prerequisites: ANP 475 or 477; ATE 582.
- 561 Energy Analysis Techniques.** (3) F Mathematical models of building envelope and comfort conditioning systems as bases for optimization techniques. Prerequisite: ATE 560.
- 562 Experimental Evaluation.** (3) A Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance. Prerequisite: ATE 521.

563 Building Structures III. (3) F

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

564 Advanced Structures: Concrete. (3) A

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

565 Advanced Structures: High Rise. (3) A

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

582 Environmental Control Systems. (3) A

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

Omnibus Courses: See page 44 for omnibus courses that may be offered.

ARCHITECTURAL COMMUNICATION**AVC 141 Design Graphics.** (2) N

Orthographic, paraline, axonometric, and perspective projection, shades and shadows, and basic descriptive geometry for designers. 1 hour lecture, 4 hours studio. Prerequisite: major in college.

161 Advanced Freehand Perspective Drawing. (2) N

Introduction to color media, and analytical and design drawing exercises. 4 hours studio. Prerequisite: major in college.

301 Architectural Communication I. (3) F

Communication skills for architecture studios. Emphasis on graphics, drawing conventions, media, computer-aided design, design of presentations, and oral presentations. Lecture, studio. Corequisite: ADE 321.

410 Architectural Presentation Techniques. (3) F, S

Special techniques of graphic communications as preliminary presentation tools for the design professional. Prerequisite: AVC 301 or instructor approval.

411 Architectural Watercolor Presentation Techniques. (2) N

Introduction of architectural presentation techniques using watercolor as a primary media. Emphasis on color, composition, and technique. Prerequisite: AVC 301 or instructor approval.

444 Architectural Photography. (2-3) N

Use of photography as a means of architectural study, evaluation, and record. Introduction to 35mm camera and darkroom techniques. Lecture, lab. Prerequisite: instructor approval.

Omnibus Courses: See page 44 for omnibus courses that may be offered.

ARCHITECTURE PROFESSIONAL STUDIES**ARP 451 Architecture Field Studies.** (1-6) F, S, SS

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

484 Clinical Internship. (3) SS

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

684 Professional Internship. (2-6) S

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

Omnibus Courses: See page 44 for courses that may be offered.

School of Design

Robert L. Wolf

Director

(AED 154B) 602/965-4135

Fax 602/965-9717

PROFESSORS

BUSH, KROELINGER,
REZNIKOFF, WOLF

ASSOCIATE PROFESSORS

BRANDT, JOHNSON, NIELSEN, WITT

ASSISTANT PROFESSORS

CUTLER, DiCICCO, McDERMOTT,
RATNER, SADLER

PROFESSORS EMERITI

BENZINGER, KNIGHT,
QUESADA, STREUFERT

PURPOSE

The School of Design educates designers for a professional world that needs informed and developed talent. The curricula emphasize preparation in building bridges between the academic world and the professions. The faculty believe that the designers have a responsibility to the public and the communities that they serve; the student learns not only the history and theory of the professions and their practical application, but an understanding of systems, functions, scientific, and technical data related to public welfare, safety, and human factors. Students integrate aesthetic values into the products and spaces they design and consider the aspirations of the world in which they live. The goal is to create

the best design curricula possible and to develop technically accomplished and conceptually sophisticated graduates who continue to evolve as practicing professionals. With the help of an international network and a faculty of active design professionals, the aim is to educate creative individuals who will achieve a comprehensive understanding of both products and interiors as related to the different cultures in which they exist.

ORGANIZATION

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

DEGREES AND MAJORS

The faculty of the School of Design offer the Bachelor of Science in Design degree. Two majors are available: Industrial Design and Interior Design.

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

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

Interior Design. The program in Interior Design is accredited by the national accrediting agency, the Foundation for Interior Design Education Research. 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 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 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 as admissible to this curriculum. To be admissible, transfer courses must be equivalent in both content and level of offering. A review of samples of work is required for studio classes. Consult the college academic advisor for an appointment.

Entering lower-division students who are not ready to take some 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 these courses are needed, it may take an additional year to complete the lower-division program.

Completion of lower-division requirements does not assure 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 Industrial Design or Interior Design. In addition to the portfolio review, the faculty in charge of the interior design program conduct an eight-hour required design charette to measure minimum competency and understanding of the design process. The limited spaces available each year are awarded to applicants with the highest promise for professional success. The

faculty of the School of Design retain the right to admit any meritorious student who may be deficient in a published school criterion. Such admission requires an extraordinary review of the applicant by the school's admissions committee. Should the faculty choose to admit such an applicant, the student is placed automatically on a provisional admission status with stipulations as to what is required to be removed from probation. See "Application to Upper-Division Programs."

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

APPLICATION TO UPPER-DIVISION PROGRAMS

Upper-Division Application Procedures. Students should write to the college academic advisor for the application form well in advance of the application deadline. For additional information on portfolios, ask for a copy of the *Portfolio Seminar* brochure from the college academic advisor. The following dates and procedures are for students applying to 1995–96 upper-division programs.

Upper-Division Application Deadlines. *April 14, 1995.* Portfolio and application documents are due in the school office by 5:00 P.M. In addition to the portfolio submittal, the interior design faculty conducts a half-day *required* design charette to measure minimum competency and understanding of the design process. The date is announced when the portfolio is submitted. Students who do not complete the charette are not considered for upper-division admission.

June 9, 1995. If the spring 1995 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 9. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Office of Undergraduate Admissions. 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, 1995. 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 or department 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). The student's name is to be affixed to the outside. Items must appear in the following order:

Page 1. The application form should be completely filled out with the first page visible. Application forms are available from the college academic advising office.

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

Page 3. Application Essay.

Page 4. All college transcripts for both ASU and transfer work should be included through the fall 1994 semester. Copies are acceptable. The academic advisor forwards 1995 ASU transcripts. (Those wishing to transfer spring semester 1995 work are responsible for submitting these transcripts by June 12 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 1995 and who are applying directly into an upper-division program. The certificate is not required for students currently attending ASU.

Following Pages (usually 10–20 sheets). Students should present work sufficient to demonstrate the depth and breadth of their creative activity. This work should include (but is not limited to) examples of two- and three-dimensional design and graphics. Each

project should be clearly identified (course, length of project, etc.), with a concise accompanying description of the assignment.

Students are encouraged to include additional materials, written or pictorial, that provide additional evidence of skills and abilities and of the aptitude and commitment to the major. When any work submitted is not completely original, the source must be given. When work is of a team nature, the applicant's role should be clearly indicated. Original examples or slides must not be submitted. All examples must be photographs or other reproduction graphic media.

Return of Portfolios. Application documents (pages 1 through 6) 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, 1995. 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.

ADVISEMENT

Advising for the lower- and upper-division curricula is through the college academic advisor.

DEGREE REQUIREMENTS

The Bachelor of Science in Design degree requires the following minimum number of hours of required and approved courses for its majors:

Bachelor of Science in Design

Major	<i>Semester Hours</i>
Industrial Design	134
Interior Design	156

The program includes required field trips. Students are responsible for these additional costs. Foreign study opportunities are available for honors students. An internship is a required part of the program.

Industrial Design. The curriculum in Industrial Design is divided into a lower-division and an upper-division program:

	<i>Semester Hours</i>
Lower-division program	64
Upper-division program	70
Total	134

The lower-division curriculum balances a foundation in academic subjects such as English, algebra and trigonometry, computers, and physics with departmental courses that include history as well as studio courses in drawing, design fundamentals, human factors, and materials and processes.

The upper-division curriculum includes studio and laboratory work in industrial design, graphics, material design, professional practice, and a number of approved program electives. A supervised summer internship is part of the curriculum.

Upper-division studios emphasize projects which promote an interdisciplinary approach to solving problems and which develop the student's intellectual understanding of the philosophy and direction of methods 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 entry-level positions in industry and firms doing product and packaging design. They may focus on consumer products, transportation, electronics, medical devices, health products, recreational products, or materials application. Students may also choose to continue their education with graduate studies to enrich their design skills, to specialize, or to prepare for college-level teaching.

**Industrial Design—B.S.D.
Lower-Division Requirements¹**

		<i>Semester Hours</i>
Fall (15)		
CSE	180	Introduction to Computer Literacy
		or approved elective
		3
DSC	100	Introduction to Environmental Design ²
		3
DSC	160	Freehand Drawing for Industrial Design
		3
ENG	101	First-Year Composition
		or ENG 105 (3) if qualified
		3
MAT	117	College Algebra ²
		3

Spring (18)

DSC	101	Contemporary International Design/Theory ²	3
DSC	161	Technical Drawing for Industrial Design	3
ECN	112	Microeconomic Principles ²	3
ENG	102	First-Year Composition	3
MAT	118	Precalculus Algebra and Trigonometry ²	3
PGS	100	Introduction to Psychology ²	3

Sophomore Year

Fall (15)

DSC	227	Visual Methods for Problem Solving	3
DSC	242	Materials and Design	3
DSC	260	Industrial Design I	3
DSC	316	20th-Century Design I ²	3
DSC	344	Human Factors in Design	3

Spring (16)

DSC	228	Imaging and Visualization	3
DSC	243	Process and Design	3
DSC	261	Industrial Design II	3
DSC	317	20th-Century Design II ²	3
PHY	111	General Physics ²	3
PHY	113	General Physics Laboratory ²	1

Lower-division total	64
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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 the college academic advisor for an appointment.

² This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.

**Industrial Design—B.S.D.
Upper-Division Requirements**

Junior Year

		<i>Semester Hours</i>
Fall (17)		
COM	225	Public Speaking ²
		or approved elective (3)
		3
DSC	318	History of Graphic Design ¹
		3
DSC	327	Presentation Graphics
		3
DSC	354	Principles of Product Design
		3
DSC	360	Industrial Design III
		5
Spring (16)		
DSC	328	Graphic Design
		3
DSC	355	Plastics Design
		3
DSC	361	Industrial Design IV
		5
DSC	483	Pre-internship Seminar
		1
Approved S1		or S2 elective with approved laboratory ¹
		4
Summer (3)		
DSC	484	Internship
		3

Senior Year

Fall (17)	
DSC 460	Design Project I 5
DSC 470	Professional Practice for Industrial Design 3
ENG 301	Writing for the Professions ¹ ... 3
	Approved N1, N2 or N3 elective ¹ 3
	Approved technology elective 3
Spring (17)	
DSC 461	Design Project II 5
DSC 474	Industrial Design Seminar/ Studio 3
ICG 310	Computer Graphics Fundamentals 3
	C elective ¹ 3
	HU or SB electives ¹ 3
	Upper-division total 70
	B.S.D. minimum total 134

¹ This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.

² A list of courses that fulfill approved program and technology electives is available from the departmental academic advisor.

Interior Design. The curriculum in Interior Design is divided into a lower-division (first and second year) and an upper-division program (third, fourth, and fifth years):

	<i>Semester Hours</i>
Lower-division program	62
Upper-division program	94
Total	156

The lower-division 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 upper-division 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 a part of the curriculum. The fifth year is an interdisciplinary year in which students address real-life environmental problems.

Graduates from the program accept entry-level professional positions in a variety of settings, including interior design firms, department of space planning, or interior design in architectural firms, public institutions or 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.

Interior Design—B.S.D.

Lower-Division Requirements¹

First Year

		<i>Semester Hours</i>
Fall (15)		
COM 100	Introduction to Human Communication 3	
	or approved SB elective ² (3)	
DSC 100	Introduction to Environmental Design ² 3	
DSC 170	Visualization for Interior Design 3	
ENG 101	First-Year Composition 3	
	or ENG 105 (3) if qualified	
MAT 117	College Algebra ² 3	
Spring (15)		
DSC 171	Vocabulary for Interior Design 3	
DSC 223	Interior Design Issues and Theories ² 3	
ENG 102	First-Year Composition 3	
	or HU elective if ENG 105 is taken	
MAT 118	Precalculus Algebra and Trigonometry ² 3	
	Approved elective 3	

Second Year

Fall (16)		
CSE 180	Computer Literacy 3	
	or CSE 181 Applied Problem Solving with BASIC ² (3)	
DSC 220	Media for Design Development 3	
DSC 231	Concepts for Interior Design 3	
PHY 111	General Physics ² 3	
PHY 113	General Physics Laboratory ² 1	
	Approved elective 3	
Spring (16)		
ARS 102	Art of the Western World II ² 3	
COM 225	Public Speaking ² 3	
	or approved elective (3)	
DSC 235	User Needs and Behavior in Interior Design 3	
	S1 or S2 elective with laboratory ² 4	
	Approved elective 3	
	Lower-division total 62	

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 the college academic advisor for an appointment.

² This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.

**Interior Design—B.S.D.
Upper-Division Requirements**

Third Year

		<i>Semester Hours</i>
Fall (17)		
DSC 310	History of Interior Design I ... 3	
DSC 340	Interior Codes: Public Welfare and Safety 3	
DSC 344	Human Factors in Design 3	
DSC 364	Interior Design Studio I 5	
DSC 366	Construction Methods in Interior Design 3	
Spring (15)		
DSC 311	History of Interior Design II 3	
DSC 341	Interior Materials and Finishes 3	
DSC 365	Interior Design Studio II 5	
DSC 455	Environmental Control Systems 3	
DSC 483	Pre-internship Seminar 1	
Summer (3)		
DSC 484	Internship 3	

Fourth Year

Fall (17)		
DSC 412	History of Decorative Arts in Interiors 3	
DSC 442	Specifications and Documents for Interiors 3	
DSC 457	Acoustics for Interior Design 3	
DSC 464	Interior Design Studio III 5	
ENG 301	Writing for the Professions ... 3	
Spring (14)		
DSC 413	History of Textiles in Interior Design 3	
DSC 458	Lighting for Interior Design 3	
DSC 465	Interior Design Studio IV 5	
	SB elective ¹ 3	

Fifth Year²

Fall (14)		
DSC 422	Facilities Planning and Management I 3	
DSC 446	Furniture Design and Production 3	
DSC 466	Interior Design Studio V 5	
	Approved C elective ¹ 3	
Spring (14)		
DSC 423	Facilities Planning and Management II 3	
DSC 467	Interior Design Studio VI 5	
DSC 472	Professional Practice for Interior Design 3	
	Approved degree project elective 3	
	Upper-division total 94	
	B.S.D. minimum total 156	

¹ This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.

² During the fifth year, the student concentrates on 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, architecture, and planning, thus furthering a real-life interdisciplinary problem-solving experience.

GENERAL STUDIES REQUIREMENTS

The Interior Design and Industrial Design curricula meet the general studies requirements of the university. For more information about university general studies requirements, see pages 50–52. For the key to general studies credit abbreviations, see page 52.

DESIGN

DSC 100 Introduction to Environmental Design. (3) F, S, SS

Survey of environmental design, including historic examples and the theoretical, social, technical, and environmental forces that shape them. Cross-listed as APH/PUP 100. *General studies: HU, G, H.*

101 Contemporary International Design/Theory. (3) F, S

Survey of contemporary European, American, and Asian design in light of historical events, economic forces, cultural values, and aesthetic ideals. *General studies: HU, G.*

160 Freehand Drawing for Industrial Design. (3) F

Freehand perspective drawing techniques of objects. Observation and visualization experiences. Light and shade. 5 hours studio. Prerequisite: major in college.

161 Technical Drawing for Industrial Design. (3) S

Orthographic and perspective projection, dimensioning, and basic descriptive graphic methods for designers. Principles of organization, layout, and technical lettering. 5 hours studio. Prerequisite: DSC 160 or equivalent.

170 Visualization for Interior Design. (3) F

Development of an understanding of drawing space and product: sequential development of 2- and 3-dimensional drawing skills. 1 hour lecture, 4 hours lab. Prerequisite: major in college.

171 Vocabulary for Interior Design. (3) S

Projects in the vocabulary of design, including color, composition, character, and form as related to design. 2- and 3-dimensional graphic representation. 1 hour lecture, 4 hours lab. Prerequisite: DSC 170.

220 Media for Design Development. (3) F

Graphic representation methods used to describe and analyze space; emphasis on quick presentation techniques. 6 hours studio. Prerequisite: DSC 171.

223 Interior Design Issues and Theories. (3) F, S

Interiors issues, theories, and philosophies. Emphasis on unique social and cultural factors that shape 20th century design concepts. *General studies: HU.*

226 Color Sketching. (3) N

Felt markers; quick representational and concept communication sketching. Forms in space, light, and shade. Material reflectance properties. 6 hours studio. Prerequisites: DSC 161 or equivalent; Industrial Design major.

227 Visual Methods for Problem Solving. (3) F

Introduction to conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts. Seminar, studio. Prerequisite: DSC 161 or equivalent.

228 Imaging and Visualization. (3) S

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

231 Concepts for Interior Design. (3) F

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 171.

235 User Needs and Behavior in Interior Design. (3) S

Applications of conceptual design to issues of programming and space planning, user needs, and behavior. 1 hour lecture, 4 hours lab. Prerequisite: DSC 231.

242 Materials and Design. (3) F

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

243 Process and Design. (3) S

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

260 Industrial Design I. (3) F

Introduction to the method and process of the industrial designer. Determinants necessary in small product design. 1 hour lecture, 2 hours studio. Prerequisite: DSC 161 or equivalent.

261 Industrial Design II. (3) S

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

310 History of Interior Design I. (3) F

The design of interior spaces as an expression of cultural influences to 1835. Prerequisite: ARS 102 or instructor approval. *General studies: HU, H.*

311 History of Interior Design II. (3) S

Design of interiors as an expression of cultural influences from 1835 to the present. Prerequisite: DSC 310 or instructor approval. *General studies: HU, H.*

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

Modern European and American design from 1900 to 1940. Emphasis on transportation, product, furniture, exhibition, and graphic design. *General studies: HU, H.*

317 20th-Century Design II. (3) S

Modern European, Asian, and American design since 1940. Emphasis on transportation, product, furniture, exhibition, and graphic design. *General studies: HU, H.*

318 History of Graphic Design. (3) F

Survey of development in the graphic arts, innovative printing methods, aesthetic values, and social and cultural environments that shape them. *General studies: HU.*

327 Presentation Graphics. (3) F

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

328 Graphic Design. (3) S

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

340 Interior Codes: Public Welfare and Safety. (3) F

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

341 Interior Materials and Finishes. (3) F

General analysis of quality control measures relating to interior design materials, finishes, and performance criteria. Prerequisite: DSC 340.

344 Human Factors in Design. (3) F

Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.

354 Principles of Product Design. (3) F

Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics. Prerequisites: MAT 117; PHY 111.

355 Plastics Design. (3) S

Mold design for part requirements; molded holes; threads; inserts; fastening and joining; decorating; reinforced plastics. Prerequisite: DSC 354.

360 Industrial Design III. (5) F

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

361 Industrial Design IV. (5) S

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

364 Interior Design Studio I. (5) F

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

365 Interior Design Studio II. (5) S

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

366 Construction Methods in Interior Design. (3) F, S

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

367 Electronic Packaging. (3) N

Industrial design problems in packaging electronic devices. Emphasis is placed on packaging, displays, and controls. Prerequisite: instructor approval.

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

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

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

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

421 Concept and Style in Presentation Documents. (3) F

Methods of analyzing portfolio design for interiors. Forming presentation concepts and establishing a communications style. Prerequisite: senior standing.

422 Facilities Planning and Management I. (3) F

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

423 Facilities Planning and Management II. (3) S

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

442 Specifications and Documents for Interiors. (3) F

Contract specifications, documents, schedules, and bidding procedures for interior design. Prerequisites: DSC 341, 365. *General studies: L2.*

446 Furniture Design and Production. (3) F

Design, construction, cost estimating, and installation in interior furniture and millwork. 1 hour lecture, 4 hours studio. Prerequisite: DSC 465.

455 Environmental Control Systems. (3) S

Survey of environmental control systems and their application in the design of building interiors. Lecture, field trips. Prerequisites: MAT 117, 118; PHY 111, 113; junior standing.

457 Acoustics for Interior Design. (3) F

Physical properties of sound. Studies pertaining to sound-absorbing materials, constructions, and room acoustics. Prerequisites: MAT 118; PHY 111, 113; senior standing.

458 Lighting for Interior Design. (3) S

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

460 Design Project I. (5) F

Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasis on professional standards. 10 hours studio. Prerequisites: DSC 361, 484.

461 Design Project II. (5) S

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

464 Interior Design Studio III. (5) F

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

465 Interior Design Studio IV. (5) S

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

466 Interior Design Studio V. (5) F

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

467 Interior Design Studio VI. (5) S

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

470 Professional Practice for Industrial Design. (3) F

Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions. May be repeated for credit. Prerequisite: senior standing.

472 Professional Practice for Interior Design. (3) S

Business procedures, project control, fee structures, and professional product liabilities. Prerequisite: senior standing.

474 Industrial Design Seminar/Studio. (3) S

Large-scale interdisciplinary class project involving project planning and control, design prototype development, feasibility study, and reporting. Seminar, studio. Prerequisites: senior standing; instructor approval.

483 Pre-internship Seminar. (1) S

Preparation of internship materials that produce and enhance a successful internship experience. Seminar. Prerequisite: 3rd-year major in the department.

484 Internship. (3) SS

Full-time summer internship under supervision of practitioners in the Phoenix area or other locales. Prerequisite: instructor approval.

520 Design Forecasting: Methods and Applications. (3) F, S

Projected applications in design production, planning, and decision-making processes. Lecture, seminar. Prerequisites: DSC 310 and 311 or equivalents.

524 Illumination and Acoustics. (3) N

Research and laboratory investigation of advanced illumination and acoustics issues of facility design. Emphasis on human factors and performance aspects. Prerequisites: DSC 457 and 458 or equivalents.

525 Design Methodologies. (3) F

Practical exercises and studies in problem-solving strategies; problem definition and supporting theory for the designer. Lectures, seminars, lab. Prerequisite: senior or graduate standing.

527 Modern Design Theory. (3) S

Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies. Lectures, seminars. Prerequisite: DSC 525 or equivalent.

529 Design Criticism. (3) F

Critical methods applied to design as material culture and human expression; evaluation of achievement versus intention. Lecture, seminar. Prerequisite: DSC 527 or equivalent.

544 Human Factors Systems and Documentation. (3) F

Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation. Lectures, seminars, lab. Prerequisite: DSC 344 or equivalent.

552 Computer Simulation in Design. (3) F

The use of computer graphics as a medium to develop and present images of the environment for analysis and perception. Lecture, lab. Prerequisite: senior or graduate standing.

553 Computer Imaging and Visual Perception. (3) S

Issues and applications of computer simulation as a tool for describing and testing human interface with the environment. Lecture, lab. Prerequisite: senior or graduate standing.

558 Daylighting. (3) N

Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies. Lecture, studio. Prerequisite: senior or graduate standing.

580 Practicum: Methods of Teaching Design. (3) F

Background and development of design education theories. Concepts of studio teaching methods. Comprehensive student project development and evaluation methods. Prerequisite: graduate standing.

591 Seminar: Graduate Design. (3) F

Introduction to the School of Design graduate programs; professional career planning. Current problems and topics in the design professions. Prerequisite: graduate standing.

Omnibus Courses: See page 44 for omnibus courses that may be offered.

School of Planning and Landscape Architecture

Frederick Steiner

Director

(AED 158A) 602/965-7167

PROFESSORS

LAI, PIJAWKA, STEINER

ASSOCIATE PROFESSORS

COOK, KIM, SAN MARTIN

ASSISTANT PROFESSORS

McSHERRY, WASSERMAN, YABES

PROFESSOR EMERITUS

ELMORE

PURPOSE

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

Planners 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 graduates work for both private firms and government agencies. Their work typically involves fields such as land-use planning, housing, natural resource management, urban transportation, development controls, and environmental impact assessment.

ORGANIZATION

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

DEGREES AND MAJORS

The faculty of the School of Planning and Landscape Architecture offer the undergraduate degrees Bachelor of Science in Planning, Bachelor of Science in Landscape Architecture, and Bachelor of Science in Design and the graduate degree Master of Environmental Planning. The Bachelor of Science in Planning degree offers the major in Urban Planning. The Bachelor of Science in Design degree offers the major in Housing and Urban Development.

Urban Planning. The Bachelor of Science in Planning (B.S.P.) degree with a major in Urban Planning requires four years of study. Following two years of preparatory work, students take two years of courses that include site planning, landscape architecture, urban design, comprehensive planning, socioeconomic and environmental analysis, computer and analytical methods, planning law, and public-policy formulation and administration. An internship is required between the third and fourth years. Many students continue to specialize in planning at the graduate level. Students in Urban Planning are exposed to the theories, methods, and interdisciplinary approaches of the profession of planning.

Landscape Architecture. The new Bachelor of Science in Landscape Architecture (B.S.L.A.) degree prepares students to be professional landscape architects. Students explore the reasons for and the techniques involved in the analysis, planning, and design of the environment, both natural and built.

Housing and Urban Development. The Bachelor of Science in Design degree with a major in Housing and Ur-

ban Development familiarizes students with housing planning and development in both the public and private sectors. Students interested in this upper-division program should contact the school director for more information. The lower-division program is the same for the Bachelor of Science in Planning degree.

Master of Environmental Planning.

The School of Planning and Landscape Architecture offers specialization areas in urban and regional development, urban design, and landscape ecological planning, under the Master of Environmental Planning degree (M.E.P.), a professional planning degree. This degree is a two-year program and includes 25 hours of core courses, 15 hours in an area of specialization, an optional three-hour internship, three hours of approved electives, and a five-hour thesis, for a total of 51 semester hours or 48 without the internship. For further 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 as a major are admitted to the lower-division program. Transfer credits for the lower-division program are reviewed by the college and evaluated for admission to this curriculum. To be admissible, transfer courses must be equivalent in both content and level of offering. A review of samples of work is required for studio classes. See the college academic advisor for an appointment.

Completion of lower-division requirements does not assure 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 lower-division program GPA of 3.00 may be required. See "Application to Upper-Division Programs" below.

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

Applications for admission to the upper-division Housing and Urban Development program are made directly to the school director. Applications must include a proposed curriculum developed in conjunction with a faculty advisor and acceptable to the department faculty.

APPLICATION TO UPPER-DIVISION PROGRAMS

Upper-Division Application Procedures. Students should write to the college academic advisor for the application form well in advance of the application deadline. For additional information on portfolios, ask for a copy of the *Portfolio Seminar* brochure from the college academic advisor. The following dates and procedures are for students applying to 1995-96 upper-division programs.

Upper-Division Application Dead-

lines. *April 14, 1995.* Portfolio and application documents are due in the school office by 5:00 P.M.

June 9, 1995. If the spring 1995 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 9. These transcripts may be unofficial copies. A second set of official transcripts must be sent to the university Office of Undergraduate Admissions. 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, 1995. 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). The student's name is to be affixed to the outside. Items must appear in the following order:

Page 1. The application form should be completely filled out with the first page visible. Application forms are available from the college academic advising office.

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

Page 3. Application Essay.

Page 4. All high school transcripts should be put into one sleeve.

Page 5. All college transcripts for both ASU and transfer work should be included through the fall 1992 semester. Copies are acceptable. The academic advisor forwards 1995 ASU transcripts. (Those wishing to transfer spring semester 1995 work are responsible for submitting these transcripts by June 12 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 6. A certificate of admission is necessary only for those students who have been newly admitted for fall 1995 and who are applying directly into an upper-division program. The certificate is not required for students currently attending ASU.

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

Students are encouraged to include additional materials, written or pictorial, that provide additional evidence of skills and abilities and of the aptitude

and commitment to the major. When any work submitted is not completely original, the source must be given. When work is of a team nature, the applicant's role should be clearly indicated. Original examples or slides must not be submitted. All examples must be photographs or other reproduction graphic media.

Return of Portfolios. Application documents (pages 1 through 6) 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, 1995. 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.

ADVISEMENT

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

DEGREE REQUIREMENTS

The Bachelor of Science in Planning degree requires the following minimum number of hours of required and approved courses for its majors.

**Bachelor of Science in Planning,
Major in Urban Planning**

	<i>Semester Hours</i>
Lower-division courses	61
Upper-division courses core	57
Approved electives	6
Internship	3
Total	127

**Bachelor of Science in Planning,
Major in Urban Planning
Lower-Division Major in Urban
Planning Requirements**

	<i>Semester Hours</i>
English Proficiency (6)	
ENG 101, 102 First-Year Composition	6
or ENG 105 Advanced First-Year Composition (3) plus an HU elective ²	

Literacy and Critical Inquiry (3)

PUP 301 Introduction to Urban Planning	3
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Numeracy (6)

MAT 117 College Algebra	3
or MAT 118 Precalculus Algebra and Trigonometry (3) ²	
Approved N2 elective ²	3

Humanities and Fine Arts (9)

APH/PUP 100 Introduction to Environmental Design ²	3
Approved HU or SB elective ²	3
Approved HU elective ²	3

Social and Behavioral Sciences (6)

ECN 112 Microeconomic Principles ² ...	3
Approved SB elective ²	3

Natural Sciences (11)

BIO 100 The Living World ²	4
BIO 330 Ecology and Conservation ² ...	3
GPH 111 Introduction to Physical Geography ²	4

General studies electives (3)

HU or SB elective ²	3
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Studio and Planning Courses³ (18)

First Year

ADE 120 Design Fundamentals I ³	3
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Second Year

ADE 221 Design Fundamentals II ³	3
PLA 201 Landscape Architecture and Society ³	3
PUP 261 Urban Planning I: Reading the Landscape ³	4
PUP 264 Urban Planning II: Planning Communication ³	4

Lower-division minimum total	61
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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 This course satisfies a general studies requirement. See course description for specific requirement(s) each course fulfills.

³ Portfolio review is required for transfer studio work. See the college academic advisor for an appointment.

**Bachelor of Science in Planning
Major in Urban Planning
Upper-Division Major
in Urban Planning**

**Professional Program Requirements
Junior Year**

	<i>Semester Hours</i>
Fall (17)	
GCU 361 Urban Geography ¹	3
PUP 322 Planning Methods Using Computers	3
PUP 361 Urban Planning III	5
PUP 412 History of the City ¹ (H)	3
PUP 424 Planning Methods I: Planning Research Methods ..	3

Spring (17)
 PLM 405 Urban Transportation 3
 PUP 362 Urban Planning IV 5
 PUP 420 Theory of Urban Design 3
 PUP 442 Environmental Planning 3
 Approved elective² 3

Summer (3)
 PUP 484 Internship 3
 or approved elective²
 PUP 485 International Field Studies
 in Planning and Landscape
 Architecture
 (elective credit) 1-12

Senior Year

Fall (15)
 PUP 425 Urban Housing Analysis 3
 PUP 432 Planning and Development
 Control Law 3
 PUP 461 Urban Planning V 5
 PUP 494 Environmental Planning
 Economics 3
 PUP 498 Senior Pro-Seminar 1

Spring (14)
 PUP 452 Ethics and Professional
 Practice (L2)¹ 3
 PUP 462 Urban Planning VI 5
 PUP 475 Environmental Impact
 Assessment 3
 Approved elective² 3
 Upper-division minimum total 66
 B.S.P. in Urban Planning
 minimum total 127

¹ This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.
² Courses that fulfill approved electives should be selected in consultation with departmental advisors.

**Bachelor of Science in
 Landscape Architecture**

	<i>Semester Hours</i>
Lower-division courses	61
Upper-division courses core	57
Approved electives	3
Internship	3
Total	124

**Bachelor of Science in
 Landscape Architecture
 Lower-Division Requirements¹**

	<i>Semester Hours</i>
English Proficiency (6)	
ENG 101, 102 First-Year Composition 6 or ENG 105 Advanced First-Year Composition (3) plus an HU elective ²	6

Numeracy (9)
 MAT 117 College Algebra² 3
 MAT 118 Precalculus Algebra and
 Trigonometry² 3
 Approved N2 elective² 3

Humanities and Fine Arts (9)
 APH/PUP 100 Introduction to
 Environmental
 Design² 3
 ARS 101 Art of the Western
 World I² 3
 or approved elective
 ARS 102 Art of the Western
 World II² 3
 or approved elective

Social and Behavioral Sciences (6)
 HIS 101 Western Civilization² 3
 or HIS 102 Western
 Civilization or approved
 elective
 Approved SB elective² 3

Natural Sciences (11)
 BIO 100 The Living World² 4
 or approved elective
 BIO 330 Ecology and Conservation² ... 3
 GPH 111 Introduction to
 Physical Geography² 4
 or approved elective

Studio and Planning Courses³ (21)

First Year
 ADE 120 Design Fundamentals I 3

Second Year
 ADE 221 Design Fundamentals II³ 3
 PLA 201 Landscape Architecture
 and Society 3
 PLA 261 Landscape Architecture I:
 Reading the Landscape 4
 PLA 264 Landscape Architecture II:
 Landscape
 Communication³ 4
 PUP 301 Introduction to Urban
 Planning 3
 Lower-division minimum total 61

¹ Transfer credits are reviewed by the college and evaluated as admissible to this curriculum. To be admissible, transfer courses must be equivalent in both content and level of offering.
² This course satisfies a general studies requirement. See course description for specific requirement(s) each course fulfills.
³ Portfolio review is required for transfer studio work. See the college academic advisor for an appointment.

**Bachelor of Science in
 Landscape Architecture
 Upper-Division Professional
 Program Requirements**

	<i>Semester Hours</i>
Fall (17)	
PLA 310 History of Landscape Architecture ^{1, 2} 3	3
PLA 361 Landscape Architecture III 5	5
PLA 442 Landscape Construction I 3	3
PUP 322 Planning Methods Using Computers 3	3
PUP 412 History of the City ¹ 3	3

Spring (14)
 BOT 380 Landscape Plants 3
 or PLA 432 Plant
 Materials (3)
 PLA 362 Landscape Architecture IV 5
 PLA 420 Theory of Urban Design 3
 PLA 444 Landscape Construction II 3

Summer (3)
 PLA 484 Internship 3
 or approved elective³
 PLA 485 International Field Studies
 in Planning and
 Landscape Architecture
 (elective credit) 1-12

Senior Year

Fall (15)
 PLA 363 Landscape Planting Design ... 3
 PLA 461 Landscape Architecture V 5
 PLA 498 Senior Professional
 Seminar 1
 PUP 432 Planning and Development
 Control Law 3
 Approved HU or SB elective¹ 3

Spring (14)
 PLA 443 Landscape Architecture
 Theory and Criticism³ 3
 PLA 452 Ethics and Professional
 Practice¹ 3
 PLA 462 Landscape Architecture VI 5
 PUP 442 Environmental Planning 3
 or PUP 546 Urban
 Design Policy (3)

Upper-division minimum total 63
 B.S.L.A. minimum graduation total 124

¹ This course satisfies a general studies requirement. See the course description for specific requirement(s) the course fulfills.
² This course is offered every other year. The next time it will be offered will be fall 1995. Fall 1994 juniors should select an approved elective and plan to take PLA 310 in their senior year.
³ Courses that fulfill approved electives should be selected in consultation with departmental advisors.

**Major in Landscape
 Architecture (PLA)**

Students in the new B.S.L.A. program explore the reasons for and the techniques involved in the analysis, planning, and design of land and the exterior environment, both natural and built.

Major in Urban Planning (PUP)

The major in Urban Planning exposes the student to the theories, methods, and interdisciplinary concerns of the urban planning field.

GENERAL STUDIES REQUIREMENTS

The curricula for the majors in Urban Planning and Landscape Architecture meet the general studies requirements of the university. For more information about university general studies requirements, see pages 50–52. For the key to general studies credit abbreviations, see page 52.

INQUIRIES

For further information on the lower-division or upper-division programs in planning, contact the college academic advisor:

COLLEGE OF ARCHITECTURE AND
ENVIRONMENTAL DESIGN
ARIZONA STATE UNIVERSITY
Box 871605
TEMPE AZ 85287–1605

URBAN PLANNING

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

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

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

264 Urban Planning II. (4) S
Planning communication: communication techniques for urban planning and landscape architecture communication. Cross-listed as PLA 264. Prerequisites: ADE 120; PLA/PUP 261.

301 Introduction to Urban Planning. (3) F, S, SS
Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society. *General studies:* L1.

322 Planning Methods Using Computers. (3) F
Planning methods using database, word processors, spreadsheets, CAD, and mapping packages on microcomputers. Lecture, lab. Cross-listed as PLA 322.

361 Urban Planning III. (5) F
Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. Studio. Cross-listed as PLA 361. Prerequisite: department major or instructor approval.

362 Urban Planning IV. (5) S
Planning elements: one or more factors addressed, including land use, housing, environment, transportation, circulation, open space, economic development, urban design. Studio. Cross-listed as PLA 362. Prerequisite: department major or instructor approval.

412 History of the City. (3) F
The city from its ancient origins to the present day. Emphasis on European and American cities during the last five centuries. Cross-listed as APH 414. *General studies:* H.

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

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

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

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

433 Zoning Ordinances, Subdivision Regulations, and Building Codes. (3) F, S
Analysis of zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.

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

444 Preservation Planning. (3) S
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.

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

452 Ethics and Professional Practice. (3) S
Ethical problems and issues in planning, professional practice, and decision making. Prerequisite: department major or instructor approval. *General studies:* L2.

461 Urban Planning V. (5) F
Comprehensive planning: collection and analysis of economic, social, and environmental data relevant to urban planning; development of land-use plans. Studio. Prerequisite: PLA/PUP 362 or instructor approval.

462 Urban Planning VI. (5) S
Final planning or design project: students select and develop projects relating to topics of individual interest or desired specialization. Studio. Prerequisite: PUP 461 or instructor approval.

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

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

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

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

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

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

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

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

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

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

546 Urban Design Policy. (3) F, S
Advanced study of local, state, and federal urban design policy. Cross-listed as PLA 546. Prerequisite: PLA/PUP 420.

561 Urban Design Studio. (4) N
Current urban form and urban landscape design problems within the Phoenix-centered region. Studio. Prerequisite: PLA/PUP 420 or instructor approval.

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

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

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

575 Environmental Impact Assessment. (3) S

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

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

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

622 Planning Methods II: Quantitative Planning Analysis. (3) S

Methods and models used as the basic quantitative techniques of urban, regional, and environmental planning and policy analysis. Prerequisites: PUP 424; statistics; instructor approval.

642 Land Economics. (3) F

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

644 Public Sector Planning. (3) N

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

Omnibus Courses: See page 44 for omnibus courses that may be offered.

LANDSCAPE ARCHITECTURE**PLA 201 Landscape Architecture and Society.** (3) F, S

The relevance of landscape architecture to the creation of humanized environments, with emphasis on natural factors.

261 Landscape Architecture I. (4) F

Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes. Studio. Cross-listed as PUP 261. Prerequisites: ADE 120; GPH 111.

264 Landscape Architecture II. (4) S

Landscape communication: communication techniques for urban planning and landscape architecture communication. Cross-listed as PUP 264. Prerequisites: ADE 120; PLA/PUP 261.

310 History of Landscape Architecture. (3) F

Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design. Cross-listed as APH 411. *General studies: H.*

322 Planning Methods Using Computers. (3) F

Planning methods using database, word processors, spreadsheets, CAD, and mapping packages on microcomputers. Lecture, lab. Cross-listed as PUP 322.

359 Resort Planning and Recreation Design. (3) F

Interrelationships of social, economic, and physical aspects of total tourist resort design; emphasis on physical development of tourist centers and resort areas.

361 Landscape Architecture III. (5) F

Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. Studio. Cross-listed as PUP 361. Prerequisite: department major or instructor approval.

362 Landscape Architecture IV. (5) S

Site design: site specific design of configured space by the creative development of form. Studio. Prerequisite: department major or instructor approval.

363 Landscape Planting Design. (3) F

Functional and aesthetic use of plants in arid region landscape design. Design philosophies are explored through planting design problems. Studio. Prerequisite: PLA/PUP 362 or instructor approval.

420 Theory of Urban Design. (3) F

Analysis of the visual and cultural aspects of urban design. Theories and techniques applied to selected study models. Cross-listed as PUP 420. Prerequisite: Junior standing. *General studies: HU.*

432 Plant Materials. (3) N

Natural components of landscape design; characteristics, applications, selection, and use. Field trips.

442 Landscape Construction I. (3) F

Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork. Studio. Prerequisite: admission to department's professional level or instructor approval.

443 Landscape Architecture Theory and Criticism. (3) S

Landscape architecture theories and projects are critically analyzed to evaluate validity of design and contribution to society. Prerequisites: PLA 310, 361, 420; PUP 412.

444 Landscape Construction II. (3) S

Characteristics of materials and methods used in landscape architectural construction. Studio. Prerequisite: PLA 442 or instructor approval.

461 Landscape Architecture V. (5) F

Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale. Studio. Prerequisite: PLA/PUP 362 or instructor approval.

462 Landscape Architecture VI. (5) S

Urban design: Analysis and design of the contemporary city emphasizing cultural and environmental influences of urban form. Prerequisite: department major or instructor approval.

484 Internship. (3) F, S, SS (SS1 only)

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

485 International Field Studies in Planning and Landscape Architecture. (1-12) F, S, SS

Organized field study of planning and landscape architecture in specified international locations. May be repeated for credit with department approval. Study abroad. Cross-listed as PUP 485.

546 Urban Design Policy. (3) F

Advanced study of local, state, and federal urban design policy. Cross-listed as PUP 546. Prerequisite: PLA/PUP 420.

Omnibus Courses: See page 44 for omnibus courses that may be offered.