

SCHOOL OF ARCHITECTURE AND PLANNING

The School of Architecture and Planning supports the education of future professionals in the practice of architecture and interior design. The graduate programs of the School of Architecture and Planning are directed to a terminal degree for qualification for professional licensure and architectural study for post-professionals and allied professionals. For its graduate programs, the School takes advantage of its unique location within downtown San Antonio, as well as South Texas and the borderlands of the western United States and Mexico.

- Master of Architecture - The Professional Program (p. 1)
- M.S. in Architecture - The Research Program (p. 2)
- M.S. in Urban and Regional Planning (p. 4)
- Dual Master of Architecture and M.S. in Architecture (p. 5)
- Dual Master of Architecture and M.S. Urban and Regional Planning (p. 5)

Master of Architecture Degree – The Professional Program

The School of Architecture and Planning offers the Master of Architecture (M.Arch.) as a STEM-designated, first professional degree (terminal degree) for those intending to enter the professional practice of architecture. The M.Arch. is currently accredited by NAAB, the National Architectural Accrediting Board, the sole agency authorized to accredit U.S. professional degree programs in architecture. According to the NAAB 2009 Conditions for Accreditation:

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

Doctor of Architecture and Master of Architecture degree programs may require a preprofessional undergraduate degree in architecture for admission. However, the preprofessional degree is not recognized as an accredited degree by itself.

The University of Texas at San Antonio, School of Architecture and Planning offers the following NAAB-accredited degree programs:

- M.Arch. 2 (preprofessional degree + 52 graduate semester credit hours).
- M.Arch. 3 (non-preprofessional degree + (up to) 37 preparatory graduate semester credit hours + 52 graduate semester credit hours = (up to) 89 graduate semester credit hours).

The Master of Architecture 2 Program

The M.Arch. 2 program is designed for students who have earned architectural degrees (such as B.A., B.S., and B.E.D.) and consists of studies focused on developing the next generation of critical practitioners. This studio-based professional program is normally two

years (52 semester credit hours) in length and is completed via an independently-derived, research-informed design project.

Master of Architecture 2 Program Admission Requirements

In addition to University-wide admission requirements, applicants must have completed a preprofessional bachelor's degree in architecture with a minimum grade point average of no less than 3.0 in the applicant's last 60 hours of coursework (including all graduate and postgraduate coursework taken).

A complete application package consists of the following:

- Completed application form,
- Official transcripts from all universities attended,
- Two (2) letters of recommendation,
- Letter of intent, that clearly and succinctly outlines the applicant's goals for graduate study, including the anticipated focus of study and impact on subsequent professional practice,
- Portfolio, documenting proficiency in design, graphic communications, and other creative work, and
- Test of English as a Foreign Language (TOEFL) scores for international applicants whose native language is not English.

An application fee and all application materials must be submitted on the application portal found on the Graduate Admissions website (<https://future.utsa.edu/graduate/admissions/>). Please consult the Architecture (M.Arch.) application website (<https://future.utsa.edu/programs/master/architecture-march/>) for application deadlines and contact information. Please consult the Klesse College of Engineering and Integrated Design's website for more information about the School of Architecture and Planning (<https://ceid.utsa.edu/architecture-planning/>) and its programs.

Master of Architecture 2 Program Requirements

Degree candidates must complete 52 semester credit hours of coursework exclusive of coursework or other study required to remove admission deficiencies. Credit toward the program is earned only for grades of "A," "B," and "C." Students must also maintain an overall grade point average of 3.0. Students who earn a grade of "CR" in ARC 6933 Inquiries and Methods will satisfy the comprehensive examination requirement.

Required coursework consists of:

Code	Title	Credit Hours
A. Required Courses		37
Select 37 semester credit hours from the following courses:		
ARC 5133	Professional Architectural Practice and Ethics	
ARC 5173 or ARC 5193	Architectural Theory and Criticism Principles of Global Architecture: Place, Context and Culture	
ARC 5724	Advanced Building Technology and Sustainability	
ARC 6126	Advanced Design Studio	
ARC 6136	Advanced Topics Studio	
ARC 6146	Advanced Technical Studio	
ARC 6933	Inquiries and Methods	
ARC 6996	Master's Project	
B. Electives		15

Select 15 semester credit hours of electives. No more than 6 semester credit hours of electives from outside of the School of Architecture and Planning will apply toward the Master of Architecture degree.

Total Credit Hours 52

The Master of Architecture 3 Program

The M.Arch. 3 program is designed for students with undergraduate degrees in fields other than architecture. This STEM-designated, professional program includes one year of preparatory studies (up to 37 semester credit hours) in preparation for the following two years (52 semester credit hours) of the Master of Architecture (M.Arch. 2) program sequence. These preparatory studies are required to be completed in full, as a condition of admission. We encourage students from all disciplines to consider this program as a means of entering the profession of architecture.

Master of Architecture 3 Program Admission Requirements

In addition to University-wide admission requirements, applicants must have completed a bachelor's degree with a minimum grade point average of no less than 3.0 in the applicant's last 60 hours of coursework (including all graduate and postgraduate coursework taken).

A complete application package consists of the following:

- Completed application form,
- Official transcripts from all universities attended,
- Two (2) letters of recommendation,
- Letter of intent, that clearly and succinctly outlines the applicant's goals for graduate study, including the anticipated focus of study and impact on subsequent professional practice, and
- Test of English as a Foreign Language (TOEFL) scores for international applicants whose native language is not English.

An application fee and all application materials must be submitted on the application portal found on the Graduate Admissions website (<https://future.utsa.edu/graduate/admissions/>). Please consult the Architecture (M.Arch.) application website (<https://future.utsa.edu/programs/master/architecture-march/>) for application deadlines and contact information. Please consult the Klesse College of Engineering and Integrated Design's website for more information about the School of Architecture and Planning (<https://ceid.utsa.edu/architecture-planning/>) and its programs.

Master of Architecture 3 Program Requirements

The M.Arch. 3 program requires up to 37 semester credit hours of preparatory studies and 52 semester credit hours of the M.Arch. 2 program sequence for this degree, exclusive of coursework or other study required to remove admission deficiencies. Credit toward the program is earned only for grades of "A," "B," and "C." Students must also maintain an overall grade point average of 3.0.

The Master of Architecture 3 program in architecture consists of Preparatory Studies, Performance Evaluation, and Master of Architecture 2 program.

Code	Title	Credit Hours
A. Preparatory Studies		37
Select 37 semester credit hours from the following courses:		
ARC 5011	Introduction to Architecture and Design	
ARC 5156	Introductory Design Studio I	

ARC 5166	Introductory Design Studio II
ARC 5176	Introductory Design Studio III
ARC 5623	History of Modern Architecture
ARC 5913	Introduction to Construction Materials and Concepts
ARC 5923	Principles of Structures
ARC 5933	Structures
ARC 5953	Environmental Systems
ARC 6253	Architectural Graphics and Visual Communication

B. Performance Evaluation

Upon completion of preparatory studies, each student is subject to a performance evaluation intended to determine readiness to enter the M.Arch. 2 program sequence. The performance evaluation format is determined by the M.Arch. Graduate Program Committee. Normally, failure to pass the performance evaluation requires additional coursework or other work to remedy deficiencies or areas of weakness before entering the M.Arch. 2 program sequence.

C. M.Arch. 2 Program Sequence 52

Degree candidates must complete the 52 semester credit hours of the M.Arch. 2 sequence listed above.

Total Credit Hours 89

Master of Science Degree in Architecture – The Research Program

The Master of Science in Architecture (M.S. Arch.) program is a STEM-designated, research-oriented program intended to support post-professional work, professional consulting, teaching, and future graduate studies. Within the degree, UTSA offers two formal concentrations (Historic Preservation and Sustainable Architecture), but students are able to focus on any topic related to faculty expertise. The program offers Thesis and Non-Thesis Options. The Non-Thesis Option is recommended for students who are interested in "research in practice" topics.

Admission Requirements

In addition to University-wide admission requirements, applicants must have completed a bachelor's degree with a minimum grade point average of no less than 3.0 in the applicant's last 60 semester credit hours of undergraduate studies.

A complete application package consists of the following:

- Completed application form,
- Official transcripts from all universities attended,
- Two (2) letters of recommendation,
- Letter of Intent that clearly and succinctly outlines the applicant's goals for graduate study,
- Samples of expository writing and/or portfolio for Non-Thesis Option,
- and Test of English as a Foreign Language (TOEFL) scores for international applicants whose native language is not English.

An application fee and all application materials must be submitted on the application portal found on the Graduate Admissions website (<https://future.utsa.edu/graduate/admissions/>). Please consult the Architecture (M.S.) application website (<https://future.utsa.edu/programs/master/architecture-ms/>) for application deadlines and contact information. Please consult the Klesse College of Engineering and Integrated Design's

website for more information about the School of Architecture and Planning (<https://ceid.utsa.edu/architecture-planning/>) and its programs.

Degree Requirements

The minimum number of semester credit hours required for the Master of Science degree in Architecture, exclusive of coursework or other study required to remove admission deficiencies, is 33. Students may pursue a Thesis or Non-Thesis Option. Credit toward the program is earned only for grades of "A," "B," and "C." Students must also maintain an overall grade point average of 3.0.

Degree candidates must complete 33 credit hours of coursework consisting of the following:

Thesis Option

Code	Title	Credit Hours
A. 9-10 semester credit hours of the following required courses, followed by Master's Thesis:		9-10
ARC 6323	Master's Research Preparation	
ARC 6433	Research Methods	
One of the required technology courses below:		
ARC 5543	Advanced Digital Design and Fabrication Technologies in Architecture	
ARC 5724	Advanced Building Technology and Sustainability	
ARC 6413	Sustainable Preservation Technology	
B. Candidates following the Thesis Option must complete 6 semester credit hours of ARC 6981, ARC 6982, or ARC 6983 Master's Thesis (includes thesis defense).		6
C. Comprehensive Examination		
Degree candidates in the Thesis Option are required to pass a comprehensive examination. Enrollment in ARC 6961 Comprehensive Examination is required only if the student is not registered for any other courses in the semester in which the comprehensive exam will be taken. Comprehensive examinations are given with approval of the Graduate Advisor and the thesis committee chair to students who:		
- have satisfied all admission conditions		
- are in good academic standing		
- have an approved research topic		
D. Electives: 18 credit hours, to be selected in consultation with the assigned faculty mentor (first semester) or thesis committee chair (subsequent semesters).		18
Total Credit Hours		33

Non-Thesis Option (recommended for "research in practice" topics)

Code	Title	Credit Hours
A. 9-10 semester credit hours of the following required courses:		9-10
ARC 6323	Master's Research Preparation	
ARC 6433	Research Methods	
One of the required technology courses below:		
ARC 5543	Advanced Digital Design and Fabrication Technologies in Architecture	
ARC 5724	Advanced Building Technology and Sustainability	
ARC 6413	Sustainable Preservation Technology	

B. Candidates following the non-thesis option must complete 12 semester credit hours of the following course requirements:

ARC 6943	Professional Internship (repeated for a total of 9 semester credit hours)
ARC 6923	Professional Report

C. Comprehensive Examination

Degree candidates are required to pass a comprehensive examination. Enrollment in ARC 6961 Comprehensive Examination is required only if the student is not registered for any other courses in the semester in which the comprehensive exam will be taken. Comprehensive examinations are given with approval of the Graduate Advisor and the report committee chair to students who:

- have satisfied all admission conditions
- are in good academic standing
- have an approved research topic

D. Electives: 12 semester credit hours, to be selected in consultation with the assigned faculty mentor (first semester) or report committee chair (subsequent semesters).

Total Credit Hours **33**

Concentration in Sustainable Architecture

Code	Title	Credit Hours
A. 12 semester credit hours of the following required courses, including 6 semester credit hours of Master's Thesis:		12
ARC 6323	Master's Research Preparation	
ARC 6433	Research Methods	
ARC 6983	Master's Thesis	
B. Comprehensive Examination		
C. Required Concentration Electives (6-7 semester credit hours):		6-7
ARC 5713	Environmental Architecture and Sustainability	
ARC 5723	Applications in Sustainable Design	
ARC 5724	Advanced Building Technology and Sustainability	
D. Prescribed electives (6 semester credit hours) chosen from the following list:		6
ARC 5743	Building Performance Modeling and Simulation	
ARC 5753	Advanced Daylighting Design and Analysis	
ARC 5763	Post-Occupancy Evaluation of Buildings	
ARC 5773	Environmental Life Cycle Assessment of Buildings	
ARC 5783	Architectural Lighting Design	
E. Electives. 9 semester credit hours, to be selected in consultation with Thesis Committee chair.		9
Total Credit Hours		33

Concentration in Historic Preservation

Code	Title	Credit Hours
A. 12 semester credit hours of the following required courses, including 6 semester credit hours of Master's Thesis:		
ARC 6323	Master's Research Preparation	12
ARC 6433	Research Methods	
ARC 6983	Master's Thesis	

B. Comprehensive Examination	
C. Required Concentration Electives (9 semester credit hours):	
ARC 5203	History and Theory of Preservation
ARC 5423	Preservation Laws and Environmental Policy
ARC 6413	Sustainable Preservation Technology
D. Prescribed electives (6 semester credit hours) chosen from the following list:	
ARC 5233	Architectural Surveys and Measured Drawings
ARC 5403	Historic Preservation Seminar
ARC 5613	American Architecture
ARC 6003	Morphology of the Architecture of the Southwest
ARC 6423	Architectural Conservation Theory
E. Electives. 6 semester credit hours, to be selected in consultation with Thesis Committee chair.	
Total Credit Hours	
33	

Master of Science Degree in Urban and Regional Planning

The Master of Science degree in Urban and Regional Planning is designed to prepare students for leadership roles and careers in the public and private sectors planning and designing communities and regions. The degree is in collaboration with the School of Architecture and Planning and the Department of Public Administration in the College for Health, Community and Policy. The program offers two specializations—Urban Policy and Urban Design—though students may graduate as generalist planners with no prescribed specialization. The program’s primary focus is to prepare students to become practitioners in the planning profession and takes an interdisciplinary perspective on understanding modern urban challenges, including growth management, equitable development, healthy cities, placemaking, transportation, and community development. Emphasis is placed upon developing research and analytic communication skills in the classroom, with professional practice skills developed through engaged learning experiences.

Admission Requirements

Applicants must satisfy University-wide graduate admission requirements.

A complete application package consists of the following:

- Completed application form,
- Official transcripts from all universities attended,
- Two letters of recommendation addressing the applicant’s academic and/or professional skills,
- Letter of intent, outlining the applicant’s reasons for pursuing the Master of Science degree in Urban and Regional Planning and career plans,
- A current résumé,
- and Test of English as a Foreign Language (TOEFL) scores for international applicants whose native language is not English.

Applicants may be admitted as unconditional or conditional, degree-seeking graduate students, or as special graduate students. Admission as a special graduate (non-degree-seeking) student does not guarantee subsequent admission as a degree-seeking student; such students must reapply for degree-seeking status.

An application fee and all application materials must be submitted on the application portal found on the Graduate Admissions website (<https://future.utsa.edu/graduate/admissions/>). Please consult the Urban and Regional Planning (M.S.) application website (<https://future.utsa.edu/programs/master/urban-regional-planning/>) for application deadlines and contact information.

Degree Requirements

The minimum number of semester credit hours required for the Master of Science degree in Urban and Regional Planning, exclusive of coursework or other study required to remove deficiencies, is 48. Students may pursue a Thesis or Non-Thesis Option.

Degree candidates must complete 48 semester credit hours of coursework consisting of the following requirements:

Code	Title	Credit Hours
A. Required Courses		
Select 27 semester credit hours of the following required courses:		
1. 21 semester credit hours of the following required courses:		21
URP 5333	Introduction to Urban and Regional Planning	
URP 5343	History and Theory of Urban and Regional Planning	
URP 5363	Urban Planning Methods I	
URP 5393	Urban Planning Methods II	
or URP 5513	Public Participation and Qualitative Analysis	
URP 5413	Planning Practice and Ethics	
URP 5453	Urban and Regional Sustainability	
URP 5483	Planning Workshop	
2. 6 semester credit hours of public administration courses in the College for Health, Community and Policy:		6
PAD 5103	Planning and Land Use Law	
PAD 5513	Urban and Regional Economic Development	
B. Electives		15
Select 15 semester credit hours of electives, chosen in consultation with and approved by the Urban and Regional Planning Graduate Advisor of Record to meet degree candidates’ individual needs. Students can select an area of specialization or take courses from a variety of areas that pertain to urban and regional planning. Electives may also be taken in other graduate programs with approval of the Graduate Advisor. The specialization areas include: Urban Policy and Urban Design.		
Urban Policy Specialization		
To satisfy the major area coursework for the Urban Policy specialization, a student must complete 12 semester credit hours from the following public administration courses from the Department of Public Administration in the College for Health, Community and Policy:		
PAD 5003	Introduction to Public Service Leadership and Management	

PAD 5223	Urban Management
PAD 5313	Public Policy Analysis
PAD 5323	Public Policy Process
PAD 5473	Land Use Policy

Urban Design Specialization

To satisfy the major area coursework for the Urban Design specialization, a student must complete 12 semester credit hours from the following courses:

URP 5233	GIS for Urban Studies
URP 5373	Site Planning and Design
URP 5423	Graphic Communication for Planners
URP 6976	Special Topics (Urban Design Studio)
ARC 5163	Current Issues and Topics in Contemporary Architecture (content approved by GAR)
ARC 5713	Environmental Architecture and Sustainability
ARC 6453	Cultural Landscapes and Urban Conservation
ARC 6973	Special Topics (content approved by GAR)

C. Capstone Coursework

6

Select 6 semester credit hours of the following “capstone” coursework consisting of either the Thesis or Non-Thesis Option described below.

Thesis Option

All candidates for the Master of Science degree in Urban and Regional Planning with a Thesis Option must complete 6 semester credit hours of Master’s Thesis (includes thesis defense/seminar presentation).

URP 6983	Master’s Thesis (taken twice)
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Non-Thesis Option

All candidates for the Master of Science degree in Urban and Regional Planning with a Non-Thesis Option must complete 6 semester credit hours from the following: URP 6933 Planning Professional Report, and either URP 6943 Professional Internship, or an additional 3 hours of URP 5483 Planning Workshop.

URP 6933	Planning Professional Report
URP 6943	Professional Internship
URP 5483	Planning Workshop

D. Comprehensive Exam

Degree candidates in the Thesis Option and Non-Thesis Option are required to pass a written comprehensive examination and enroll in URP 6961 Comprehensive Examination if no other courses are being taken that term.

URP 6961	Comprehensive Examination
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Total Credit Hours

48

Dual Master of Architecture and M.S. in Architecture Degree Program

This dual degree program is designed to offer the opportunity for qualified graduate students to study both Master of Architecture (M.Arch.) and Master of Science in Architecture (M.S.Arch.) in the UTSA Klesse College of Engineering and Integrated Design’s School of Architecture and Planning. This research-oriented professional track combining the M.Arch. and M.S.Arch. degrees aims to produce graduates who possess the skill set needed to conduct architectural research and,

more importantly, understand how to integrate research outcomes into the design decision-making processes. This dual degree program will serve a recent growing trend in architectural professional practice that pairs the conventional approach to practicing architecture with a focus on applied research and evidence-based decision-making. This STEM designated and NAAB accredited professional program informed by a research agenda will provide students with the skills needed to conduct valid and reliable research projects within professional settings.

Applicants will be admitted to the M.Arch. and M.S.Arch. degree programs independently, according to the admission schedule and policies of each degree program. Applicants must submit all admission materials to each program independently and on time. Admission to the dual degree program may occur after a student has already matriculated in the M.Arch., M.S.Arch., or both degree programs, as long as the student is still within the first half of each program.

Required Courses

Students choosing the dual degree program must complete the 52 semester credit hours of Master of Architecture 2 (M.Arch. 2) coursework and the 33 semester credit hours of Master of Science in Architecture (M.S.Arch.) coursework. For students without a preprofessional bachelor’s degree in architecture, an additional 37 preparatory graduate semester credit hours listed in the M.Arch. 3 program must be completed prior to the required dual degree coursework. However, under this dual-degree program, up to 15 semester credit hours of either M.Arch. 2 or M.S.Arch. coursework can be applied to the other degree requirements. These shared-credit courses substantially reduce the total time required for students to complete both programs, when compared with taking each of the two degree programs separately.

Students should refer to the School of Architecture and Planning catalog for M.Arch and M.S.Arch program admission and degree requirements

Dual Master of Architecture and M.S. in Urban and Regional Planning Degree Program

This dual degree program is designed to offer the opportunity for qualified graduate students to study both Master of Architecture (M.Arch.) and Master of Science in Urban and Regional Planning (M.S.URP). Both the Master of Architecture (M.Arch.) and Master of Science in Urban and Regional Planning (M.S.URP) degree programs are within the School of Architecture and Planning, based at the UTSA Downtown Campus. This integrated professional track combining the M.Arch. and M.S.URP degrees provides architecture students an opportunity to complete their degree program in architecture while acquiring urban and regional planning expertise. Through this dual degree program, urban and regional planning students can develop physical design skills and the possibility to acquire professional licensure in architecture. Through completion of an accredited professional degree that integrates physical building design with considerations of land use, public policy, economics, environment, and culture, graduates of the dual degree program will enter the work force well-equipped to comprehensively lead multidisciplinary projects.

Applicants will be admitted to the M.Arch. and M.S.URP degree programs independently, according to the admission schedule and policies of each degree program. Applicants must submit all admission materials to each program independently and on time. Admission to the dual degree program may occur after a student has already matriculated in the

M.Arch., M.S.URP, or both degree programs, as long as the student is still within the first half of each program.

Required Courses

Students choosing the dual degree program must complete the 52 semester credit hours of Master of Architecture 2 (M.Arch. 2) coursework and the 48 semester credit hours of Master of Science in Urban and Regional Planning (M.S.URP) coursework. For students without a preprofessional bachelor's degree in architecture, an additional 37 preparatory graduate semester credit hours listed in the M.Arch. 3 program must be completed prior to the required dual degree coursework. However, under this dual-degree program, up to 15 semester credit hours of either M.Arch. 2 or M.S.URP coursework can be applied to the other degree requirements. These shared-credit courses substantially reduce the total time required for students to complete both programs, when compared with taking each of the two degree programs separately. URP 5343 History and Theory of Urban and Regional Planning is a required course in this program, which substitutes for ARC 5813 History and Theory of Urban Form. Either the Thesis Option or Non-Thesis Option is available for each program. No more than 6 credit hours of electives may be taken outside of the School of Architecture and Planning.

Students should refer to the School of Architecture and Planning catalog (p. 1) for M.Arch and M.S.URP program admission and degree requirements, which are listed above.

- Graduate Certificate in High-Performance Design and Sustainability (p. 6)
- Graduate Certificate in Historic Preservation (p. 7)
- Graduate Certificate in Urban and Regional Planning (p. 7)

Graduate Certificate in High-Performance Design and Sustainability

The negative impacts of human activities on the environment are a major challenge threatening the survival of humans and other species, and the built environment is a key contributor to environmental impacts. The Graduate Certificate in High-Performance Design and Sustainability provides students with the theoretical knowledge and applied skills to understand how buildings impact the environment and how building performance, in terms of operational energy, daylighting, occupant comfort/health, embodied energy, water conservation and reuse, and other relevant and emerging issues (such as biophilia) can be predicted, analyzed, and used to improve buildings.

The Graduate Certificate in High-Performance Design and Sustainability enables students the opportunity to gain understanding and skills in various aspects of sustainability and high environmental performance in the built environment. The certificate provides students with an understanding of the theoretical underpinnings of high-performance design and sustainability and prepares them for further graduate studies in this area. It also provides skills and knowledge complementary to the pursuit of a professional career in the design and analysis of high-performance buildings and sustainability. The program is located within the School of Architecture and Planning and may be most effective for students with skills commensurate with a degree or experience in architecture for the most effective educational experience. However, other skills may be considered as relevant to the certificate (to be determined in consultation with the certificate coordinator/GAR), and it remains open to students from a variety of backgrounds. Students from different backgrounds may be required to take preparatory courses to provide them with the level of knowledge and expertise needed for

the certificate. The certificate will not be subject to licensure and/or accreditation standards but will remain current to expected standards of knowledge and skill expected in the profession.

Admission Requirements

New and existing graduate students in "good standing" shall declare the intent to seek the certificate by requesting permission to enter and complete the program. Students not currently enrolled in a graduate program may apply according to UTSA admission requirements for certificate programs as a special (non-degree-seeking) graduate student. Special graduate student applicants are required to submit a personal statement. The Certificate Program Coordinator may determine that a student requires prerequisite background courses to adequately prepare for the courses of the Graduate Certificate Program.

Certificate Program Requirements

The Graduate Certificate in High-Performance Design and Sustainability requires 16 semester credit hours of coursework. Two courses are required with an additional 9 semester credit hours of coursework to be selected from the list of approved courses or other courses approved in consultation with the Certificate Program Coordinator. All requirements must be completed within a six-year period. Courses taken for the Graduate Certificate in High-Performance Design and Sustainability can be applied toward other graduate degree programs such as the Master of Architecture and the Master of Science in Architecture degrees. Students will be advised by the High-Performance Design and Sustainability Certificate Program Coordinator.

Code	Title	Credit Hours
A. 7 semester credit hours of required courses:		7
ARC 5713	Environmental Architecture and Sustainability	
ARC 5724	Advanced Building Technology and Sustainability	
B. 6 to 9 semester credit hours of elective courses selected from the following list (any additional elective, and ARC 5163, ARC 6126, ARC 6136, ARC 6146, and ARC 6973 are subject to review and approval by the Certificate Program Coordinator. Only three (3) credits for ARC 6126, 6136, or ARC 6146 may be counted toward the certificate:		6-9
ARC 5723	Applications in Sustainable Design	
ARC 5743	Building Performance Modeling and Simulation	
ARC 5753	Advanced Daylighting Design and Analysis	
ARC 5763	Post-Occupancy Evaluation of Buildings	
ARC 5773	Environmental Life Cycle Assessment of Buildings	
ARC 5783	Architectural Lighting Design	
ARC 5163	Current Issues and Topics in Contemporary Architecture	
ARC 6136	Advanced Topics Studio	
ARC 6973	Special Topics	
C. 0 to 3 semester credit hours of approved elective courses selected from the following list (or any additional elective approved in consultation with the Certificate Program Coordinator):		0-3
ARC 6413	Sustainable Preservation Technology	
CE 5643	Sustainable Energy Systems	
CSM 5243	Sustainable Construction and Delivery	

ES 5153	Urban Environmental Planning and Sustainability	
ES 6053	Sustainability and Renewable Energy	
GRG 5563	Applied Sustainability	
URP 5453	Urban and Regional Sustainability	
Total Credit Hours		16

Graduate Certificate in Historic Preservation

Historic Preservation is a process of design for continuity and the management of change within an existing historic context. The Graduate Certificate in Historic Preservation offers specialized education in historic preservation design, technology, planning, and management through graduate-level courses.

The Graduate Certificate in Historic Preservation enables graduate students from multiple program areas to receive tangible confirmation of skills and comprehension in historic preservation. It offers students from any discipline the opportunity to take historic preservation classes with rationale and purpose. Certificate holders can gain employment advantages in fields related to archaeology, architecture, business, engineering, geography, historic preservation, history, interior design, landscape architecture, law, museum studies, political science, public policy, social science, and urban and regional planning. Many government jobs within federal, state, and local agencies specifically require or desire graduate-level training in historic preservation. All states, many counties, and most large cities have nonprofit organizations and societies devoted to historic preservation. Within the construction industry there is currently a huge trend upwards in adaptive use of existing buildings, especially within previously abandoned downtown areas. There is widespread demand for professionals with specialized training in historic preservation. Interested individuals should contact the Historic Preservation Certificate Program Coordinator within the School of Architecture and Planning.

Admission Requirements

New and existing graduate students in "good standing" should declare the intent to seek the Certificate by requesting permission to enter and complete the program. Students not currently enrolled in a graduate program may apply according to UTSA admission requirements for certificate programs as a special (non-degree-seeking) graduate student. Special graduate student applicants are required to submit a personal statement and 2 letters of recommendation. The Certificate Program Coordinator may determine that a student requires prerequisite background courses to adequately prepare for the courses of the Graduate Certificate Program.

Certificate Program Requirements

The Certificate requires 15 semester credit hours of coursework. Two courses are required, with an additional 9 semester credit hours of coursework to be selected from the list of approved courses or other courses approved in consultation with the Certificate Program Coordinator. All requirements must be completed within a six-year period. Courses taken for the Graduate Certificate in Historic Preservation can be applied toward other graduate degree programs such as the Master of Architecture and the Master of Science in Architecture degrees. Students will be advised by the Historic Preservation Certificate Program Coordinator/Advisor.

Code	Title	Credit Hours
A. 6 semester credit hours of required courses:		6
ARC 5203	History and Theory of Preservation	
ARC 6413	Sustainable Preservation Technology	
or ARC 6443	World Heritage Management	
B. 3 to 6 semester credit hours of approved elective courses selected from the following list (or any additional elective approved in consultation with the Certificate Program Coordinator):		3-6
ARC 5403	Historic Preservation Seminar	
ARC 5423	Preservation Laws and Environmental Policy	
ARC 5463	Heritage Resilience, Adaptation and Mitigation	
ARC 5813	History and Theory of Urban Form	
ARC 6003	Morphology of the Architecture of the Southwest	
ARC 6413	Sustainable Preservation Technology (if not taken to meet requirement in section A)	
ARC 6013	Theories and Philosophies of Regionalism	
ARC 6423	Architectural Conservation Theory	
ARC 6433	Research Methods	
ARC 6443	World Heritage Management (if not taken to meet requirement in section A)	
ARC 6453	Cultural Landscapes and Urban Conservation	
ARC 6463	Heritage Tourism Planning and Design	
C. 3 to 6 semester credit hours (consisting of either the studio or the nonstudio option) of approved elective courses selected from the following list (or any additional elective approved in consultation with the Certificate Program Coordinator). "Skills courses":		3-6
ARC 5233	Architectural Surveys and Measured Drawings	
ARC 5483	GIS for Heritage Planning	
ARC 6136	Advanced Topics Studio (studio option)	
Total Credit Hours		15

Graduate Certificate in Urban and Regional Planning

The purpose of the Graduate Certificate in Urban and Regional Planning is to provide students with an introductory understanding of the historical, social, international, and physical context of comprehensive land use planning and sustainable urbanism.

The Graduate Certificate in Urban and Regional Planning is a 15-semester-credit-hour program. Degree-seeking or special graduate students from any discipline at UTSA are allowed to complete the Certificate in Urban and Regional Planning (URP) program. Students will be advised by the URP Certificate Program Coordinator/Advisor. Interested individuals should contact the Urban and Regional Planning Certificate Program Coordinator within the School of Architecture and Planning.

Admission Requirements

New and existing graduate students in "good standing" may declare the intent to seek the Certificate by requesting permission to enter and complete the program. Students not currently enrolled in a graduate

program may apply according to UTSA admission requirements for certificate programs (see Certificate Program Regulations in this catalog). The Certificate Program Coordinator may determine that a student requires prerequisite background courses to adequately prepare for the courses of the Graduate Certificate Program.

Certificate Program Requirements

The Graduate Certificate in Urban and Regional Planning curriculum consists of 6 semester credit hours of required planning courses and 9 elective hours. A minimum of one-half of all credits counted toward the certificate must be taken in Urban and Regional Planning. Courses taken for the Graduate Certificate in Urban and Regional Planning can be applied toward the Master of Science in Urban and Regional Planning, Master of Architecture, and Master of Science in Architecture degrees. Students will be advised by the Urban and Regional Planning Certificate Program Coordinator/Advisor.

Code	Title	Credit Hours
A. 6 semester credit hours of the following required courses:		6
URP 5333	Introduction to Urban and Regional Planning	
URP 5343	History and Theory of Urban and Regional Planning	
or PAD 5103	Planning and Land Use Law	
B. 9 semester credit hours of graduate elective courses approved by the Urban and Regional Planning Graduate Advisor		9
Total Credit Hours		15

Architecture (ARC) Courses

ARC 5011. Introduction to Architecture and Design. (1-0) 1 Credit Hour.

Prerequisite: Enrollment in the Master of Architecture Degree 3 program. A lecture course introducing ideas and concepts associated with architecture and design. This course has Differential Tuition. Course Fee: DL01 \$25.

ARC 5133. Professional Architectural Practice and Ethics. (3-0) 3 Credit Hours.

Prerequisite: Enrollment in the MArch program. A study of ethical and legal business practices and conventions relating to architectural practice and the building industry. Course material considers ethics, codes and regulations, project delivery options, budgeting and scheduling, construction methodologies and corresponding administration systems, liability, and contract documents, as they inform the professional practice of architecture. (Formerly titled "Professional Practice and Construction in a Global Setting.") This course has Differential Tuition.

ARC 5156. Introductory Design Studio I. (0-18) 6 Credit Hours.

Prerequisite: Enrollment in the Master of Architecture 3 program. Architectural design as a theoretically informed and creative process. Provides students the opportunity to acquire fundamental design skills for the creative and practical design of architectural environments. Projects consider spatial experience, contextual response, building form and structure, and the development of representational skills. (Formerly ARC 5196. Credit cannot be earned for both ARC 5156 and ARC 5196.) This course has Differential Tuition.

ARC 5163. Current Issues and Topics in Contemporary Architecture. (3-0) 3 Credit Hours.

A critical survey of the leading issues, theories, writings, projects, and built works of architecture over the past 20 years. May be repeated for credit once when topics vary. This course has Differential Tuition.

ARC 5166. Introductory Design Studio II. (0-18) 6 Credit Hours.

Prerequisite: ARC 5156, ARC 5913, ARC 5923, ARC 5943, and enrollment in the Master of Architecture Degree 3 program. Provides students the opportunity to acquire design skills in the application of building technology and material use through the consideration of building structure and envelope. Projects consider spatial experience, programming, organizational concepts, building-to-site relations, and tectonics. This course has Differential Tuition.

ARC 5173. Architectural Theory and Criticism. (3-0) 3 Credit Hours.

A survey of contemporary architectural theory and criticism from 1950 to the present with a concern for diverse cultural and social contexts. May be repeated for credit once when topics vary. (Formerly COA 5173. Credit cannot be earned for both ARC 5173 and COA 5173.) This course has Differential Tuition.

ARC 5176. Introductory Design Studio III. (0-18) 6 Credit Hours.

Prerequisite: ARC 5166, ARC 5623, and enrollment in the Master of Architecture 3 program. Architectural design as a theoretically informed and creative process. Provides students the opportunity to acquire design skills in the application of building technology and material use through the consideration of building structure and envelope. Projects of increasing complexity considering architectural order, precedent, urban and non-urban contexts, building performance, structure and detailing. Continues investigation of traditional and digital media. This course has Differential Tuition.

ARC 5193. Principles of Global Architecture: Place, Context and Culture. (3-0) 3 Credit Hours.

This course is a study of global, historical, and cross-cultural architectural principles with a concern for environment and sustainability. Consideration is given to the political, social, ecological, economic, and/or technological context that informs the work, as well as the diverse social and spatial patterns, values, and needs of those who occupy and use buildings. This course has Differential Tuition.

ARC 5203. History and Theory of Preservation. (3-0) 3 Credit Hours.

An introduction to the history, philosophy, methodologies, and practices of historic preservation and restoration. This course has Differential Tuition.

ARC 5233. Architectural Surveys and Measured Drawings. (3-0) 3 Credit Hours.

A survey of documentation and interpretation of sites and buildings and graphic recording techniques. This course has Differential Tuition.

ARC 5403. Historic Preservation Seminar. (3-0) 3 Credit Hours.

An advanced study of selected topics in architecture, design, preservation, and planning. May be repeated once for credit when topics vary. This course has Differential Tuition.

ARC 5423. Preservation Laws and Environmental Policy. (3-0) 3 Credit Hours.

A survey of the laws and regulations that affect preservation of the built environment nationally, regionally, and locally. Includes considerations of fundamentals of legal protection for and regulation of historic cultural resources in light of contemporary attitudes toward the historic environment, and the economic bases of the use of historic buildings and sites examined in terms of contemporary social and cultural attitudes that determine effective strategies of preservation action. (Formerly titled Legal and Economic Aspects of Preservation.) This course has Differential Tuition.

ARC 5463. Heritage Resilience, Adaptation and Mitigation. (3-0) 3 Credit Hours.

Advanced study and critical analysis of risk management planning tools for heritage sites including best practices for mitigation, adaptation, and preparedness in the face of climate change and disaster risks. The course also addresses the role of heritage in sustainable development. This course has Differential Tuition.

ARC 5483. GIS for Heritage Planning. (3-0) 3 Credit Hours.

Course provides the opportunity to acquire an understanding of the principles of spatial analysis using geographic information systems (GIS). Emphasis is placed on analyzing cultural resources and urban and cultural landscapes with GIS tools. Topics may include mapping density and changes over time, cultural mapping, etc. This course has Differential Tuition.

ARC 5533. Contemporary Materials in Architecture and Design. (1-6) 3 Credit Hours.

A survey and examination of contemporary materials from multiple perspectives. Includes consideration of the characteristics and applications of existing, new, and emerging materials. Includes design project. This course has Differential Tuition.

ARC 5543. Advanced Digital Design and Fabrication Technologies in Architecture. (3-0) 3 Credit Hours.

An in-depth examination of contemporary digital design and fabrication technologies in architecture and other design disciplines. This course has Differential Tuition.

ARC 5603. Advanced Seminar in Architectural History. (3-0) 3 Credit Hours.

An in-depth study or survey investigating selected topics in architectural history. May be repeated once for credit, when topics vary. This course has Differential Tuition.

ARC 5613. American Architecture. (3-0) 3 Credit Hours.

A survey of the development of the architecture of the United States from the earliest human settlements to the present. This course has Differential Tuition.

ARC 5623. History of Modern Architecture. (3-0) 3 Credit Hours.

Prerequisite: Enrollment in the Master of Architecture 3 program. Study of the social, aesthetic, theoretical, technical, cultural, Western and non-Western, and professional forces that form, shape, and constitute architecture of the modern era. This course has Differential Tuition.

ARC 5643. Modern Architecture of Mexico. (3-0) 3 Credit Hours.

A survey of the architecture and urbanism of Mexico from Independence in 1821 to the present. This course has Differential Tuition.

ARC 5713. Environmental Architecture and Sustainability. (3-0) 3 Credit Hours.

A study of history and theory of environmentally sustainable design. Includes the review of the general discourse of sustainability and consideration of the tools and techniques employed to produce sustainable architectural environments. (Formerly ARC 5153. Credit cannot be earned for both ARC 5713 and ARC 5153.) This course has Differential Tuition. Course Fee: DL01 \$75.

ARC 5723. Applications in Sustainable Design. (3-0) 3 Credit Hours.

An introduction to the integration of environmental performance criteria in architectural design. Includes the application of simulation methods, design decision support tools, rating systems (e.g., LEED), and consideration of building energy consumption patterns, conservation strategies, solar shading, solar access, integration of electric and daylight, and the life cycle analysis of materials and systems. This course has Differential Tuition.

ARC 5724. Advanced Building Technology and Sustainability. (3-3) 4 Credit Hours.

An advanced study of building technology, sustainability, and building performance. Includes consideration of sustainable techniques, technologies, building enclosures, and environmental systems for new and existing buildings. Addresses issues of systems integration and performance optimization. (Formerly ARC 5513 and ARC 5733. Credit can only be earned for one of the following: ARC 5513, ARC 5733, or ARC 5724.) This course has Differential Tuition.

ARC 5743. Building Performance Modeling and Simulation. (3-0) 3 Credit Hours.

An introduction to the integration of building performance modeling and simulation into the design process to improve building performance in new and existing buildings. Includes consideration of building energy consumption patterns, conservation strategies, solar shading, solar access, and integration of electric lighting and daylighting. This course has Differential Tuition.

ARC 5753. Advanced Daylighting Design and Analysis. (3-0) 3 Credit Hours.

A study of the design, analysis methods, and technologies of architectural daylighting. Includes issues of the visual environment, daylight availability, lighting and energy use, lighting and thermal comfort, and the integration of electric lighting and daylighting. This course has Differential Tuition.

ARC 5763. Post-Occupancy Evaluation of Buildings. (3-0) 3 Credit Hours.

The course provides knowledge of the process of assessing the performance and user satisfaction of built environments after they have been occupied. This course has Differential Tuition.

ARC 5773. Environmental Life Cycle Assessment of Buildings. (3-0) 3 Credit Hours.

An introduction to the principles and assessment methods of the Life Cycle Assessment for new and existing buildings. This course has Differential Tuition. Course Fee: STSE \$30; SAP1 \$25.

ARC 5783. Architectural Lighting Design. (3-0) 3 Credit Hours.

Provides students with the opportunity to obtain in-depth knowledge of architectural lighting systems, fundamental scientific principles governing light in the built environment, the technologies, materials, and strategies for control of light in buildings, and basic methods of analysis. This course has Differential Tuition.

ARC 5793. High Performance Building Enclosure. (3-0) 3 Credit Hours.

This advanced course explores enclosures in high-performance building design, emphasizing sustainable practices and innovative technologies. This course has Differential Tuition.

ARC 5813. History and Theory of Urban Form. (3-0) 3 Credit Hours.

Considers the origins and characteristics of cities, their current condition, and emerging theories of urban design. This course has Differential Tuition.

ARC 5913. Introduction to Construction Materials and Concepts. (3-0) 3 Credit Hours.

Prerequisite: Enrollment in the Master of Architecture 3 program. Introduction to concepts and skills fundamental to structures, construction, building enclosure, sustainability, and interior environments, along with the analysis and selection of materials, components, and assemblies. Provides an introduction to the historical role of materials in architectural and interior design. This course has Differential Tuition.

ARC 5923. Principles of Structures. (3-0) 3 Credit Hours.

Prerequisite: Enrollment in the Master of Architecture 3 program. Introduction to architectural structures including the principles and systems of structural materials that consider the spatial, structural, sustainable, and aesthetic qualities possible in the articulation of structure through architectural design. (Formerly titled "Introduction to Structures I.") This course has Differential Tuition. Course Fee: DL01 \$75.

ARC 5933. Structures. (2-3) 3 Credit Hours.

Prerequisite: ARC 5923 and enrollment in the Master of Architecture 3 program. Continued introduction to architectural structures that considers the physical principles that govern classical statics and strength of materials, the graphical and mathematical design of structural systems, and the role of structural articulation in the design of buildings. (Formerly titled "Introduction to Structures II.") This course has Differential Tuition.

ARC 5953. Environmental Systems. (2-3) 3 Credit Hours.

Prerequisite: ARC 5943 and enrollment in the Master of Architecture 3 program. Light and sound as design considerations in building design including the natural and artificial systems that support them. Course deals with illumination, electrical design, and acoustics. (Formerly titled "Introduction to Environmental Systems II.") This course has Differential Tuition.

ARC 6003. Morphology of the Architecture of the Southwest. (3-0) 3 Credit Hours.

An examination of environmental conditions, cultural traditions, social patterns, building conventions, and aesthetic intentions that have influenced the architecture and planning of communities of South Texas, the Southwest, and the North Mexican borderlands. (Formerly ARC 6123. Credit cannot be earned for both ARC 6003 and ARC 6123.) This course has Differential Tuition.

ARC 6013. Theories and Philosophies of Regionalism. (3-0) 3 Credit Hours.

A survey of the discourse of architectural regionalism. Includes consideration of regionalist theory and practice in the twentieth century, regional planning, critical regionalism, bioregionalism, sustainability, and issues such as modernity, globalization, cultural identity, authenticity, place, and tradition. (Formerly ARC 5213. Credit cannot be earned for both ARC 6013 and ARC 5213.) This course has Differential Tuition.

ARC 6126. Advanced Design Studio. (0-18) 6 Credit Hours.

Prerequisite: Completion of, or concurrent enrollment in, ARC 5173. An introduction to advanced architectural design, including the role of research, program preparation, and technological integration in architectural design. This course has Differential Tuition.

ARC 6136. Advanced Topics Studio. (0-18) 6 Credit Hours.

Prerequisite: ARC 6126. An advanced architectural design studio, which allows faculty and students to explore a range of architecture-related topics in a studio setting. Content varies. (Formerly titled "Advanced Design Studio II.") This course has Differential Tuition.

ARC 6146. Advanced Technical Studio. (0-18) 6 Credit Hours.

Prerequisite: ARC 5724 and ARC 6136, graduate standing, and consent of instructor. An advanced architectural design studio, which includes the integration of building materials, services, and systems, technical documentation and comprehensive design. (Formerly titled "Advanced Design Studio III.") This course has Differential Tuition.

ARC 6243. Advanced Design Visualization. (0-9) 3 Credit Hours.

Advanced exploration of graphic processes and techniques utilized in the design of the built environment. This course has Differential Tuition.

ARC 6253. Architectural Graphics and Visual Communication. (0-9) 3 Credit Hours.

A rules and methods-based course dedicated to teaching visual communication for architecture. This course builds on fundamentals and covers grid systems, layout + composition, color theory, type, text, and image manipulation, as well as fundamental techniques employed by architects and designers such as orthographic drawing (section + plan), axonometric drawings, and analytical diagramming. This course has Differential Tuition. Course Fee: STSE \$30; SAP1 \$25.

ARC 6323. Master's Research Preparation. (3-0) 3 Credit Hours.

Prerequisite: Consent of instructor. An advanced study aimed at supporting the development of a Master's Thesis or Professional Report for the Master of Science in Architecture degree. This course builds on scholarly documentation, research analysis and contemporary research practice issues. This course has Differential Tuition.

ARC 6413. Sustainable Preservation Technology. (1-6) 3 Credit Hours.

A survey of techniques of preservation: methods of analysis, history of materials, and technology used in old buildings. Includes emphasis on buildings as integrated sets of subsystems and how these are affected by the processes of material deterioration, conservation, and techniques of intervention. This course has Differential Tuition.

ARC 6423. Architectural Conservation Theory. (3-0) 3 Credit Hours.

An advanced study and critical analysis of current design theory and techniques for conservation of historic sites. This course has Differential Tuition.

ARC 6433. Research Methods. (3-0) 3 Credit Hours.

An examination of theories and methods in architectural research. Includes a critical review of theoretical perspectives and considers a range of research methods and techniques used in architectural research. (Formerly COA 6433. Credit cannot be earned for both ARC 6433 and COA 6433.) This course has Differential Tuition. Course Fee: STSE \$30; SAP1 \$25.

ARC 6443. World Heritage Management. (3-0) 3 Credit Hours.

Principles and practices for managing cultural properties with a focus on World Heritage properties. Includes surveys of international documents applicable to the management of cultural heritage sites globally and study of documentation, planning, community engagement, public interpretation, design/conservation treatments, and universal values, as well as UNESCO World Heritage process and purpose. This course has Differential Tuition. Course Fee: STSE \$30; SAP1 \$25.

ARC 6453. Cultural Landscapes and Urban Conservation. (3-0) 3 Credit Hours.

Advanced study and critical analysis of contemporary design theory, methods and approaches for conservation of cultural landscapes, of historic cities and historic urban landscapes. This course has Differential Tuition. Course Fee: STSE \$30; SAP1 \$25.

ARC 6463. Heritage Tourism Planning and Design. (3-0) 3 Credit Hours.

Course introduces the theory, practice and current issues of cultural heritage tourism planning and design as a socio-cultural phenomenon. Topics include motives and behaviors of heritage tourists, resources and attractions, plus public interpretation and management policy. Explores connection of cultural heritage tourism to sustainable community development. This course has Differential Tuition.

ARC 6483. Condition Assessment and Conservation. (3-0) 3 Credit Hours.

Prerequisite: Consent of Instructor. Advanced study of condition assessment methods specific to historic structures, including visual inspection techniques, condition assessment mapping, destructive and non-destructive diagnostic methods of investigation for material and structural deterioration, and introduction to mathematical modeling techniques. Best practices for material and structural treatments. This course has Differential Tuition.

ARC 6533. Adaptive Reuse and Rehabilitation. (3-0) 3 Credit Hours.

This is a seminar course that considers Adaptive Reuse design strategies and contemporary design approaches within historical contexts. It also covers sustainable design principles and urban rehabilitation processes. This course has Differential Tuition.

ARC 6823. Study Abroad: Advanced Architectural History/Theory. (3-0) 3 Credit Hours.

Prerequisite: Consent of instructor. An advanced study in architectural history/theory associated with a study abroad program; involves field trips. This course has Differential Tuition. Course Fee: STSE \$30; SAP1 \$25.

ARC 6921. Professional Report. (0-0) 1 Credit Hour.

Prerequisite: ARC 6943 and the approval of Graduate Advisor of Record. The directed architectural research course is offered only for the Master of Science in Architecture students who have completed 9 semester credit hours of ARC 6943 Professional Internship. Credit will be awarded upon completion of the report. Enrollment is required each term in which the report is in progress. May be repeated for credit. This course has Differential Tuition.

ARC 6923. Professional Report. (0-0) 3 Credit Hours.

Prerequisite: ARC 6943 and the approval of Graduate Advisor of Record. The directed architectural research course is offered only for the Master of Science in Architecture students who have completed 9 semester credit hours of ARC 6943 Professional Internship. Credit will be awarded upon completion of the report. Enrollment is required each term in which the report is in progress. This course has Differential Tuition.

ARC 6933. Inquiries and Methods. (3-0) 3 Credit Hours.

Prerequisite: ARC 5173, ARC 6126, and ARC 6136. The course involves the research and preparation of a proposal for an independent design project. The grade report for the course is either "CR" (satisfactory performance) or "NC" (unsatisfactory performance). (Formerly ARC 6931. Credit cannot be earned for both ARC 6931 and ARC 6933. Formerly titled "Master's Project Preparation.") This course has Differential Tuition. Course fees: SAP1 \$25; STSE \$30.

ARC 6943. Professional Internship. (0-0) 3 Credit Hours.

Prerequisite: Consent of instructor. Supervised professional practice experience with public agencies or private firms. Individual conferences and written reports required. May be repeated for credit, but not more than 3 credit hours will apply to the Master of Architecture degree. With the approval of Graduate Advisor of Record, up to 9 credit hours may be applied to the Master of Science in Architecture degree. This course has Differential Tuition.

ARC 6951. Independent Study. (0-0) 1 Credit Hour.

Prerequisite: Permission in writing (form available) from the instructor and the Graduate Advisor of Record. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master of Architecture degree or the Master of Science in Architecture degree. This course has Differential Tuition.

ARC 6953. Independent Study. (0-0) 3 Credit Hours.

Prerequisite: Permission in writing (form available) from the instructor and the Graduate Advisor of Record. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master of Architecture degree or the Master of Science in Architecture degree. This course has Differential Tuition.

ARC 6961. Comprehensive Examination. (0-0) 1 Credit Hour.

Prerequisite: Permission of the architecture Graduate Advisor of Record. Independent study course for the purpose of taking the Comprehensive Examination. The grade report for the course is either "CR" (satisfactory performance on the Comprehensive Examination) or "NC" (unsatisfactory performance on the Comprehensive Examination). Credit earned in ARC 6961 may not be counted toward the Master of Science in Architecture degree. May be repeated once. This course has Differential Tuition.

ARC 6973. Special Topics. (3-0) 3 Credit Hours.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Topics courses may be repeated for credit when topics vary, but not more than 6 semester credit hours of ARC 6973 or 12 hours of ARC 6976 will apply to the Master of Architecture degree or the Master of Science in Architecture degree. This course has Differential Tuition.

ARC 6976. Special Topics. (0-18) 6 Credit Hours.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Topics courses may be repeated for credit when topics vary, but not more than 6 semester credit hours of ARC 6973 or 12 hours of ARC 6976 will apply to the Master of Architecture degree or the Master of Science in Architecture degree. This course has Differential Tuition.

ARC 6981. Master's Thesis. (0-0) 1 Credit Hour.

Prerequisite: ARC 6983 and consent of instructor. May be repeated for credit, but not more than 6 hours will apply to the Master of Science in Architecture degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress. (Formerly COA 6981.) This course has Differential Tuition.

ARC 6982. Master's Thesis. (0-0) 2 Credit Hours.

Prerequisite: ARC 6323 and consent of instructor. May be repeated for credit, but not more than 6 hours will apply to the Master of Science in Architecture degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress. This course has Differential Tuition. Course Fee: STSE \$20; SAP1 \$25.

ARC 6983. Master's Thesis. (0-0) 3 Credit Hours.

Prerequisite: ARC 6323 and consent of instructor. May be repeated for credit, but not more than 6 hours will apply to the Master of Science in Architecture degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress. (Formerly COA 6983.) This course has Differential Tuition.

ARC 6991. Master's Project. (0-3) 1 Credit Hour.

Prerequisite: ARC 6996 and consent of instructor. A comprehensive study focusing on an independent design proposal and the complete representation of the project. May be repeated, but not more than 6 hours will apply to the Master of Architecture degree. Credit will be awarded upon completion of the project. Enrollment is required each term in which the project is in progress. This course has Differential Tuition.

ARC 6996. Master's Project. (0-18) 6 Credit Hours.

Prerequisite: ARC 6933 or equivalent. A comprehensive study focusing on an independent design proposal and the complete representation of the project. Credit will be awarded upon completion of the project. Enrollment is required each term in which the project is in progress. This course has Differential Tuition. Course Fee: DL01 \$150.

ARC 7011. Doctoral Seminar in Architecture. (1-0) 1 Credit Hour.

Organized lectures and seminar presentations to facilitate the development of doctoral students' research skills and knowledge of current and emerging research. Will include presentations of current research by faculty and invited guests who are experts in various aspects of research in building performance, and advanced graduate students who are about to complete their dissertation research. May be repeated for credit. This course has Differential Tuition.

ARC 7211. Doctoral Research. (0-0) 1 Credit Hour.

Prerequisite: Doctoral student standing and consent of the student's Dissertation Committee. Research work carried out by the student under the supervision of their Dissertation Committee. May be repeated for credit, but not more than 15 hours may be applied to the Doctoral degree. This course has Differential Tuition.

ARC 7212. Doctoral Research. (0-0) 2 Credit Hours.

Prerequisite: Doctoral student standing and consent of the student's Dissertation Committee. Research work carried out by the student under the supervision of their Dissertation Committee. May be repeated for credit, but not more than 15 hours may be applied to the Doctoral degree. This course has Differential Tuition.

ARC 7213. Doctoral Research. (0-0) 3 Credit Hours.

Prerequisite: Doctoral student standing and consent of the student's Dissertation Committee. Research work carried out by the student under the supervision of their Dissertation Committee. May be repeated for credit, but not more than 15 hours may be applied to the Doctoral degree. This course has Differential Tuition.

ARC 7311. Doctoral Dissertation. (0-0) 1 Credit Hour.

Prerequisite: Successful defense of comprehensive exam and consent of the student's Dissertation Committee. Dissertation work carried out by the student under the supervision of their Dissertation Committee. May be repeated for credit, but not more than 15 hours may be applied to the Doctoral degree. This course has Differential Tuition.

ARC 7312. Doctoral Dissertation. (0-0) 2 Credit Hours.

Prerequisite: Successful defense of comprehensive exam and consent of the student's Dissertation Committee. Dissertation work carried out by the student under the supervision of their Dissertation Committee. May be repeated for credit, but not more than 15 hours may be applied to the Doctoral degree. This course has Differential Tuition.

ARC 7313. Doctoral Dissertation. (0-0) 3 Credit Hours.

Prerequisite: Successful defense of comprehensive exam and consent of the student's Dissertation Committee. Dissertation work carried out by the student under the supervision of their Dissertation Committee. May be repeated for credit, but not more than 15 hours may be applied to the Doctoral degree. This course has Differential Tuition.

Urban and Regional Planning (URP) Courses

URP 5213. Social Justice in the City. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. Examines spatial inequality particularly in distressed communities. Emphasis is placed on residential segregation, the deconcentration of poverty, and policies and programs that perpetuate spatial inequalities and promote the geographies of opportunity. This course has Differential Tuition.

URP 5223. Community Development Finance. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. Provides a general understanding of economic development and real estate finance. Students learn about a developer's pro forma income and expense statement, calculating debt service and the return on investment, discounted cash flow analysis, underwriting practices, deal structuring, and financing project gaps. Programs such as CDBG, new market tax credits, the low-income housing tax credit program, and historic rehabilitation tax credits are introduced. Real world case studies are explored throughout the course to understand how federal, state, and local government funding sources can be used with private sector resources to finance community-based projects. This course has Differential Tuition.

URP 5233. GIS for Urban Studies. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. Provides a basic understanding of spatial analysis using geographic information systems. Emphasis is placed on analyzing urban issues with GIS tools. Topics include mapping density and change, measuring geographic distributions, and analyzing patterns and clusters. This course has Differential Tuition.

URP 5313. Urban Housing Policy and Analysis. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. An examination of the evolution of housing and neighborhood design and planning with emphasis on sustainable planning and design methods, and solutions. This course has Differential Tuition.

URP 5333. Introduction to Urban and Regional Planning. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This course explores the theory and practice of land use planning in local, regional, and state-level planning in the United States. This course deals with the institutional environment in which planning occurs, and the methods planners must know to create and implement a comprehensive plan. It will cover the topics of zoning and subdivision regulations, long-range comprehensive plan, and basic principles of functional plans, area plans, site plans, and form-based codes. This course has Differential Tuition.

URP 5343. History and Theory of Urban and Regional Planning. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This course reviews the origins and evolution of thought and action in planning, including post-colonial perspectives. Students have the opportunity to explore theory in planning contexts for practical application and research. This course has Differential Tuition.

URP 5353. Structure and Function of Cities and Regions. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. A study of the social, political, economic, and changing physical design, form, and infrastructure of cities and regions. This course has Differential Tuition. Course fees: STSE \$30; SAP1 \$25.

URP 5363. Urban Planning Methods I. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. Introduction to research design in urban planning and basic exploratory analytic tools. Topics include: data gathering and management, demographic and employment analysis and forecasting, literature gathering and synthesis, visualization, database graphics, and GIS for applications in urban and regional planning with an emphasis on how these inform question formation. (Formerly titled "Intermediate Urban Planning Methods.") This course has Differential Tuition. Course Fee: DL01 \$75.

URP 5373. Site Planning and Design. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This course will introduce students to site planning as both a design activity and also as a nexus of principles and issues that are central to the profession of urban planning. Through this course, students will have an opportunity to learn how to use various planning software to conduct land suitability and site analysis, and build-out analysis. For the final project, students will develop a site plan visualizing the arrangements of buildings, structure, infrastructure, and landscape based on local zoning, subdivision, and land development ordinances. This course has Differential Tuition. Course fee: LRE1 \$25; STSE \$30.

URP 5383. Planning and Housing for Rural Communities. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. A survey of the comprehensive planning of small towns and housing in rural areas. Includes consideration of growth management techniques. This course has Differential Tuition. Course fees: SAP1 \$25; STSE \$30.

URP 5393. Urban Planning Methods II. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. Design and implementation of quantitative models in urban planning to answer relevant research questions. Emphasis on connecting method to question. Topics include descriptive statistics, difference of means testing, correlation, basic spatial statistics, regression analysis, and effectively communicating analytic results. (Formerly titled "Advanced Urban Planning Methods.") This course has Differential Tuition.

URP 5413. Planning Practice and Ethics. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This course explores how planners work, including legal foundations, ethical challenges, and practical issues. Students also have the opportunity to practice project management and organizational communication. This course has Differential Tuition.

URP 5423. Graphic Communication for Planners. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This course is designed for graduate students in urban planning who are interested in graphic communications. The course goal is to obtain skills in graphic production that enable planners to communicate their ideas and plans to the public. This course has Differential Tuition. Course Fee: SAP1 \$25; STSE \$30.

URP 5433. Transportation Planning. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This survey of transportation planning includes foundations, practical techniques, and disruptions, emphasizing emerging and sustainable transportation modes. This course has Differential Tuition. Course Fee: STSE \$30; SAP1 \$25.

URP 5443. Community Development. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. Introduction to contemporary trends in urban development and redevelopment, focusing on planning and development techniques used to develop or revitalize urban and regional areas. This course has Differential Tuition.

URP 5453. Urban and Regional Sustainability. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. Through this course, students will have the opportunity to acquire background knowledge necessary for developing plans and policies to promote sustainable urban and regional growth and preserve natural areas. This course will cover a wide range of state, regional, and local-level growth management techniques and land preservation policies. This course has Differential Tuition.

URP 5463. Environmental Planning and Assessment. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This course will examine the legal basis of environmental planning and policy in the US. Students will have the opportunity to learn about the impacts of air, water, and land pollution, and evaluate planning and policy responses. The course will also survey and evaluate planning tools and strategies to protect the environment, conserve natural resources, and mitigate climate change for sustainable and livable future communities. This course has Differential Tuition.

URP 5473. Introduction to Health Planning. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This course provides a comprehensive introduction to fundamental concepts, principles, and methods of health planning aimed at the provision of health services, health-supportive facilities, and the design of healthy communities. This course has Differential Tuition. Course Fee: SAP1 \$25; STSE \$30.

URP 5483. Planning Workshop. (2-3) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. A seminar/workshop involving an application of theory and practice relating to an urban or regional scale project. May be repeated for credit. This course has Differential Tuition.

URP 5493. Planning and Economic Development. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. An introduction to economic development as a critical element of neighborhood, community, regional, and national planning. The course addresses current economic development practices and theory. This course has Differential Tuition.

URP 5513. Public Participation and Qualitative Analysis. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. This course involves methods of facilitating public input and analyzing textual data. Topics include: online and in-person involvement, integrating input to plans, co-production, and evaluation with case study, observational, and content analysis techniques. This course has Differential Tuition.

URP 6933. Planning Professional Report. (3-0) 3 Credit Hours.

Prerequisite: URP 6943 and approval of the Urban and Regional Planning Graduate Advisor of Record. The directed planning research course is offered only for Non-Thesis Option students who have completed URP 6943 Professional Internship. May be repeated for credit, but not more than 6 hours may be applied to the master's degree. This course has Differential Tuition.

URP 6943. Professional Internship. (0-0) 3 Credit Hours.

Prerequisite: Graduate standing, 18 semester credit hours of graduate work, and consent of instructor. Supervised professional practice experience with public agencies or private firms. Individual conferences and written reports required. May be repeated for credit, but not more than 6 hours will apply to the Master of Science degree in Urban and Regional Planning. This course has Differential Tuition.

URP 6951. Independent Study. (0-0) 1 Credit Hour.

Prerequisite: Graduate standing and permission in writing (form available) from the instructor and the Graduate Advisor of Record. Independent reading, research, discussion, and/or writing under the direction of a faculty member, for students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master of Science degree in Urban and Regional Planning. This course has Differential Tuition.

URP 6953. Independent Study. (0-0) 3 Credit Hours.

Prerequisite: Graduate standing and permission in writing (form available) from the instructor and the Graduate Advisor of Record. Independent reading, research, discussion, and/or writing under the direction of a faculty member, for students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master of Science degree in Urban and Regional Planning. This course has Differential Tuition.

URP 6961. Comprehensive Examination. (0-0) 1 Credit Hour.

Prerequisite: Graduate standing and permission from the Urban and Regional Planning Graduate Advisor of Record to take the comprehensive examination. Independent study course for the purpose of taking the Comprehensive Examination. The grade report for the course is either "CR" (satisfactory performance on the Comprehensive Examination) or "NC" (unsatisfactory performance on the Comprehensive Examination). Credit earned in URP 6961 may not be counted toward the Master of Science degree. May be repeated once. This course has Differential Tuition.

URP 6973. Special Topics. (3-0) 3 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Topics courses may be repeated for credit when topics vary, but not more than 6 semester credit hours of URP 6973 or 12 hours of URP 6976 will apply to the Master of Science degree in Urban and Regional Planning. This course has Differential Tuition.

URP 6976. Special Topics. (6-0) 6 Credit Hours.

Prerequisite: Graduate standing or consent of instructor. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Topics courses may be repeated for credit when topics vary, but not more than 6 semester credit hours of URP 6973 or 12 hours of URP 6976 will apply to the Master of Science degree in Urban and Regional Planning. This course has Differential Tuition.

URP 6981. Master's Thesis. (0-0) 1 Credit Hour.

Prerequisite: Graduate standing and permission from the Urban and Regional Planning Graduate Advisor of Record. May be repeated for credit, but not more than 6 hours will apply to the Master of Science degree in Urban and Regional Planning. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress. This course has Differential Tuition.

URP 6983. Master's Thesis. (0-0) 3 Credit Hours.

Prerequisite: Graduate standing and permission from the Urban and Regional Planning Graduate Advisor of Record. May be repeated for credit, but not more than 6 hours will apply to the Master of Science degree in Urban and Regional Planning. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress. This course has Differential Tuition.