Architectural History 1: Ancient through Renaissance. 3 Credit Hours.
Traces the history of Western architecture from the ancient world to the high renaissance and mannerism of the late 16th century. The evolution of architectural thought, various formal languages (styles) and theoretical concepts are studied through the examination of selected buildings within their specific political, social, economic, and cultural milieu. Emphasis on the analysis of the ancient temple and the Christian church. Development of individual portfolio of design work, a requirement for graduate students in architecture.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

Architectural History 2: Renaissance through 20th Century. 3 Credit Hours.
Traces the history of Western architecture from the 17th century through the 20th century. The evolution of architectural thought, various languages (styles) and theoretical concepts studied through the examination of selected buildings within their specific political, social, economic, and cultural milieu. Analysis of the significant buildings of the baroque and rococo, the neo-classic and the romantic, modernist, and post-modernism periods. Development of individual portfolio of design work, a requirement for graduate students in architecture.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.
ARCH 5152. Materials and Methods of Construction. 3 Credit Hours.
Introduction to construction materials, fundamentals of building construction, methods of assembling building systems in an integrated manner, and costing. Introduces specific regulatory issues dealing with zoning regulations, building codes, and barrier-free access requirements within the context of contemporary building techniques. Methods of construction in wood, masonry, concrete, and steel are described in detail and issues of enclosure, roofing, insulation, and finishes are presented. The course carries technical drawing requirements. Development of individual portfolio of design work, a requirement for graduate students in architecture.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 5231. Graduate Design Studio 1. 6 Credit Hours.
The house as essential site of architecture. Consideration of relationships between program, culture, society and form making at a domestic scale; consideration of structure, space, shelter and place making; methods of construction, tectonics and detailing as design concerns; introduction to precedent study as research technique. Development of individual portfolio of design work, a requirement for graduate students in architecture.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
ARCH 5122|Minimum Grade of B-|May not be taken concurrently.

ARCH 5232. Graduate Design Studio 2. 6 Credit Hours.
Studio with environmental sustainability focus - energy and resource use, hydrology, sustainable materials, infrastructure and building methods, recycling, environmental performance and quality; emphasis on systems and details (very large and very small); development of techniques for environmental analysis (observation, data analysis etc.); development of ecological and environmentally responsive design proposals; program development; introduction to design collaboration. Development of individual portfolio of design work, a requirement for graduate students in architecture.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
(ARCH 5122|Minimum Grade of B-|May not be taken concurrently AND ARCH 5231|Minimum Grade of B-|May not be taken concurrently)

ARCH 5251. Structural Analysis for Architects. 3 Credit Hours.
This course covers loadings determination and evaluation, resolution and equilibrium of force systems, truss analysis, centroids, moments of inertia, shear and bending moment diagrams, basic beam, column, and system design. Development of individual portfolio of design work, a requirement for graduate students in architecture.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 5252. Str Des for Architects 1. 3 Credit Hours.
Application of principles of engineering mechanics to layout, analysis, design, and detailing of structural elements in steel and wood of simple buildings. Flexural theory including elastic and plastic design is taught. Students will be familiarized with current building design codes as they relate to the structural design of building elements.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.
ARCH 5253. Str Des for Architects 2. 3 Credit Hours.
Application of principles of engineering mechanics to layout, analysis, design, and detailing of structural elements in concrete and masonry of simple buildings. Students will be familiarized with current building design codes as they relate to the structural design of building elements.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 5296. Movements in Modern Architecture. 3 Credit Hours.
History and theories of the architecture and urbanism of the modern period, from the beginning of the 19th century until the 1960's. Key ideas, texts and iconic buildings from the USA, Europe and other sites of the modernist diaspora are discussed. Development of individual portfolio of design work, a requirement for graduate students in architecture.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 5351. Env Control Systems 1. 3 Credit Hours.
This course discusses the thermal and environmental processes that affect buildings and develops techniques for designers to respond to and manipulate thermal environments in ways that are integral with other building systems. Mechanical, electrical, and plumbing systems, heating, ventilation, and air-conditioning (HVAC) equipment, vertical transportation, communication, security, and fire protection systems and introduced. These are discussed against a backdrop of the principles of sustainability and environmental responsibility.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 5596. Seminar in Architectural Theory. 3 Credit Hours.
Theories of architecture and urbanism during the modern and contemporary periods; participation in critical theoretical discussions and the development of a research paper in response to critical feedback. The course serves to lay the ground for the theoretical development of thesis ideas. Development of individual portfolio of design work, a requirement for graduate students in architecture.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 8000. Spec Top Sem in Practice. 3 Credit Hours.
Graduate level seminar to familiarize and engage students in issues of Integrated Practice. The course centers on a discussion of major impacts of practice, and the ethical issues and responsibilities that we are faced with in the current era where BIM has the potential to change the roles in built environment disciplines, and impacts of globalization and sustainability drive our needs. The course addresses changes brought on in technology and practice management. Discussion and research can span a range of issues that affect practice.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may be repeated for additional credit.

ARCH 8011. Adv Arch Des Studio 1. 6 Credit Hours.
Design studio to familiarize students with current urban design strategies and their historical precedents. Students will engage in generative analysis of urban systems, economies, structures, infrastructures, spaces and/or cultures, involving observation and data collection, visualization, program development and its spatio/temporal resolution and visualization. The studio may involve collaboration with aligned fields or disciplines e.g. landscape architecture, media studies, geography and urban studies, community and regional planning and/or outside agencies or groups. Peer critique and evaluation are utilized as learning techniques.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.
ARCH 8012. Elect Arch Des Studio. 6 Credit Hours.
Advanced architectural design studio. The topic of the studio varies in accordance with faculty expertise and research focus. This might include, but not be limited to an area of architectural, spatial, social, cultural or political practice, an interdisciplinary intersection such as architecture + biology / geology / war / the media / gender or business; research into materials, energy, structure, scripting, fabrication or other computational technologies. The course develops observational techniques and data collection, management and visualization appropriate to the topic of the studio. It requires spatio / temporal / material development, resolution and representation of an architectural design strategy at appropriate scales. Collaboration with aligned fields or disciplines may be undertaken if it is appropriate to the topic of the studio. Peer critique and evaluation are utilized as learning techniques and the capacity for independent work is developed. The course must be taken once, but may be taken up to three times for required credits as long as the topic covered is substantially different each time.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may be repeated for additional credit.

ARCH 8013. Comp Arch Design Studio. 6 Credit Hours.
Comprehensive design studio: the integration of structural and environmental systems, programming, tectonics and detailing into architectural design and expression in holistic and environmentally sustainable ways; comprehensive representation of design; development of time management skills, peer critique and self evaluation; interaction with consultants.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 8096. Professional Practice. 3 Credit Hours.
The course is required for internship in the architectural profession. It exposes students to the history, development and current status of the architectural profession and professional education and develops understandings of the trends and dynamics of contemporary architectural practice. It discusses what is required to properly serve clients and the common good; how to pursue, win, negotiate and prepare agreements and contracts; how to organize, manage, design, control costs, produce and administer contracts for the construction of architectural projects and how to organize, build and maintain architectural firms.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 8100. Spec Top Case St in Arch. 3 Credit Hours.
Graduate level seminar that centers on comprehensive case studies in architecture as a form of primary research. The seminar discussion and research will focus on architectural works with the aim of learning about important aspects and overlaps that make architecture. In each case, the topics that drive the research and analysis will vary. Topics and issues will be guided by class discussion and the nature, scale and context of the architectural works. The course will address methods of analysis and techniques for visualization and presentation. It requires active participation in class discussions.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may be repeated for additional credit.

ARCH 8131. Arch Research Seminar 1. 3 Credit Hours.
Graduate level research seminar to familiarize and engage students in an area of contemporary urban research, its history, networks, strategies and techniques. It will develop methods and skills for the research and analysis of urban systems, economies, structures, infrastructures, spaces and / or cultures and techniques to visualize data and present research findings. The topic of the seminar varies in accordance with faculty expertise and research focus and might include, but not be limited to, approaches to sustainable urban development, ludic urban design strategies, advocacy based urbanism, user generated cities, computational urbanism, etc. The course takes a seminar format and requires active participation in class discussions. The course is required to be taken once in conjunction with ARCH 8011, but may be taken again for elective credit provided that the topic covered is different each time.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may be repeated for additional credit.
ARCH 8132. Arch Research Seminar 2. 3 Credit Hours.
Graduate level seminar to familiarize and engage students in an area of contemporary architectural research, its history, networks, strategies, techniques. The topic of the seminar varies in accordance with faculty expertise and research focus. This might include, though not be limited to, questions about research as architectural practice, about architectural design as research, about architectural history, about architecture as spatial or political practice, or engage in any one of the interdisciplinary intersections currently re-energizing architecture - architecture + biology / war / media studies / post-colonial studies / gender studies / business etc. The course will develop methods and skills for architectural research and analysis and techniques for data visualization and research presentation. The course takes a seminar format and requires active participation in class discussions. The course is required to be taken once, but may be taken again for elective credit provided that the topic covered is different each time.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may be repeated for additional credit.

ARCH 8133. Arch Research Seminar 3. 3 Credit Hours.
Graduate level seminar to familiarize and engage students in contemporary research in an area of architectural technology, its history, networks, strategies and techniques. The topic of the seminar varies in accordance with faculty expertise and research focus. This might include, though not limited to materials research, energy research, structural research, fabrication, computational technologies, etc. The course will examine the history of the field, develop methods and skills for research and analysis and techniques for data visualization and research presentation. The course takes a seminar format and requires active participation in class discussions. The course is required to be taken once, but may be taken again for elective credit provided that the topic covered is different each time.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may be repeated for additional credit.

ARCH 8146. Graduate Field Work Report. 1 Credit Hour.
This course requires that students prepare an independent report of their study abroad, field work, or internship experience in a format that is agreed upon with the course coordinator.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

ARCH 8233. Arch Des St Tokyo (G). 6 Credit Hours.
A complex design investigation incorporating analysis of urban systems, observational research, data collection and analysis and the study of architectural precedents. The course immerses students in a foreign urban and architectural culture and asks them to engage in a complex design investigation, whose topic and scale is variable. Course may be used as equivalent of ARCH 8012 but may only be taken once.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 8234. Arch Des Studio Rome (G). 6 Credit Hours.
A complex design investigation incorporating analysis of urban systems, observational research, data collection and analysis and the study of architectural precedents. The course immerses students in a heritage urban and architectural locale and asks them to engage in a complex design investigation, whose topic and scale is variable. Course may be used as equivalent of ARCH 8012 but may only be taken once.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 8241. Seminar: Analysis Urb Str (G). 3 Credit Hours.
Research on urban systems and forms that have marked the development of Italian and Roman architecture from the 15th to the 18th century and that are now a reference point in every Western city: the piazza, the Roman palazzo, the theatre, the garden. The course is intended as a theoretical and analytical complement to the graduate architecture design studio in Rome. It fulfills the requirements of ARCH 8132.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.
ARCH 8242. Urban Seminar Tokyo (G). 3 Credit Hours.
This course provides students an overview of architecture and urbanization in historic and contemporary Japan. Economic, socio-political and technological forces that have shaped the built environment and architecture are discussed and the work of contemporary Japanese architects are studied and analyzed. The course is a theoretical and analytical complement to the Architecture Design Studio. It fulfills the requirements of ARCH 8132.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 8352. Env Control Systems 2. 3 Credit Hours.
This course covers visual and audio environmental stimuli and architectural design responses to them. In addition, it discusses and introduces techniques for measuring the design of building systems for improved environmental performance, in terms of the efficiency of systems, environmental impact and capital and operational costs.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may not be repeated for additional credits.

ARCH 9182. Independent Study in Architecture. 1 to 3 Credit Hour.
Graduate level independent study carried out by students interested in research that focuses on the various subdisciplines in architecture. Students must submit a proposal to a faculty member for review and approval that follows departmental guidelines for independent study. Topics and issues that guide the independent study can vary.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

ARCH 9280. Special Topics in Communication. 1 to 3 Credit Hour.
Graduate level course that addresses current topics in graphic and visual communication in architecture.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

ARCH 9285. Architecture Internship. 1 to 3 Credit Hour.
This course expands students' knowledge and professional experience through internships in architectural and other built environment firms. Students will be exposed to methods of practice and design thinking. The course requires that the student prepare a report in a format agreed upon with the course coordinator.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

ARCH 9380. Special Topics in History or Culture. 1 to 3 Credit Hour.
Graduate level course that addresses current topics related to architectural history and/or cultural studies.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

ARCH 9480. Special Topics in Technology. 1 to 3 Credit Hour.
Graduate level course that addresses current topics in digital or building technology in architecture.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

ARCH 9580. Special Topics in Site and Context. 1 to 3 Credit Hour.
Graduate level course that addresses current topics in site and context in architecture.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.
ARCH 9682. Independent Research. 1 to 3 Credit Hour.
Graduate level independent research in architecture. Students work with a faculty member according to an agreed upon syllabus and schedule. Topics and issues that guide the course work will vary.

Department Restrictions: Must be enrolled in one of the following Departments: Tyler:Architecture.
Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.

Repeatability: This course may be repeated for additional credit.

ARCH 9991. Directed Research. 3 Credit Hours.
The development of a self motivated architectural design inquiry under the guidance of a faculty co-coordinator. This includes design research, the development of a design program, site investigation, analytical and speculative design investigations and / or experimentation with advanced visualization techniques. The course is seminar based and engages students in critical dialogue with their own and other students' work. It prepares students for undertaking an architectural design thesis the following semester.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may be repeated for additional credit.

ARCH 9996. Arch Design Thesis. 6 Credit Hours.
Self directed architectural design thesis that follows on the research and design inquiries conducted in the fall semester. The course requires that students demonstrate the ability to undertake design research, develop a design program, conduct analytical and speculative design investigations and utilize advanced visualization techniques in the representation of their work. It culminates in a formal juried presentation and a textual document of a publishable standard of a graduate level design thesis.

Level Registration Restrictions: Must be enrolled in one of the following Levels: Graduate.
Degree Restrictions: Must be enrolled in one of the following Degrees: Master of Architecture.

Repeatability: This course may be repeated for additional credit.