School of Architecture

Roy F. Knight, Dean
William J. Lauer, Associate Dean

The School of Architecture offers a program of professional studies which prepares its graduates for the practice of architecture. While emphasizing knowledge and skills required by architects in guiding the processes of building, the school is especially concerned that its students learn that kind of good judgment which particularly distinguishes the architect from all other professionals who serve the building industry. Therefore, the student is regularly called upon to pay attention to cultural, philosophical and ethical issues that appropriately concern the architect in performance of the art of building. The student is also required to discover and understand the principles by which our physical universe appears to operate in order to know the science of building as fully as possible. It is important for the student to learn the characteristics of the natural environment while learning the physical behavior of materials in structures. Furthermore, the program of the school is concerned with preparing the student to be adaptable to change. An understanding of society is important as we see it developing in sometimes surprising ways. This places special demands upon the professionals. Consequently the program of the School emphasizes the process of learning with the intent of enabling its graduates to adapt to the changing circumstances of our world. How to learn about architecture is as important a matter for the student as learning itself.

Facilities

In the spring of 1981, a new building housing the School of Architecture and shared by the Art Department was completed. The Art and Architecture Building contains all the primary activities of the school. Expressly designed for the school in an open architectural competition, the building has already received widespread recognition and has become one of the models sought out by other schools. The building was designed by the Knoxville architectural firm of McCarty, Bullock, Hol saple, Inc. It contains as its major feature a large interior mall or street. Opening off this large gathering space, which serves as a campus focal point, are amply designed classrooms, a reference library which contains extensive slide collections and other reference materials, computer rooms, faculty offices, lecture rooms, administrative offices, an elaborate darkroom, workshop, and a gallery in which architecture as well as art exhibits are mounted.

The principal library holdings of the school are located in the James D. Hoskins Library, with additional volumes in the Undergraduate Library.

Financial Assistance for Students

A number of $500 sponsorships are made available each year by architectural firms, manufacturers of building materials, and other construction-related industries. These grants are used to cover tuition, books and equipment. Sponsorships are also available through the national headquarters of the American Institute of Architects. Honor students in all the upper four years are eligible for this aid, but it is primarily awarded to student's of third- and fourth-year standing.

Lecture Program

Throughout the academic year, the school organizes an extensive series of special lectures by experts in architecture and related subjects. Students are expected to attend regularly and benefit from this opportunity to hear the leading people of the field. The lectures are open to the University community and the public as well.

Included in the series is the ROBERT B. CHURCH MEMORIAL LECTURESHIP. Named for the school's second dean, it has become widely respected in the field as an honor to be appointed to this lectureship. The most prominent architects from around the world are brought to the school with income from the endowment.

Other important lectures are sponsored by the General Shale Corporation and the architectural branch of the Tennessee Valley Authority. Annually in the spring quarter a special program called TAASS is arranged. Within a period of one week the entire school participates in special lectures, seminars, exhibits, and informal gatherings. Featured are discussions by a series of visiting experts. TAASS is a student-organized event.

Publications

Students in the school each year publish a journal of architecture, Portfolio. Continuing several years of excellent publications covering work of the school and current thinking in the field, this journal has become a widely recognized part of the school's participation in the profession.

Foreign Studies Program

Each year the school offers at least two opportunities for foreign study to its students. In cooperation with the Danish International Student Committee a program is regularly offered in Copenhagen taught by outstanding Danish architects and educators. Within the school faculty, a person is assigned responsibility to lead a program in Europe each year at varied locations. These are designed to include visits to prominent new architectural sites and major historic locations.

Studies abroad, which are arranged to include a full quarter's credit for advanced students, include design, history, and theory of architecture.

General Information

Students are advised to consult the University's general requirements as stated in the front section of this catalog as well as the requirements described in the School of Architecture's Student Handbook.

Self-advising will not be permitted in the School of Architecture. Students must plan their schedule by consulting with an assigned adviser. Electives will be chosen with the concurrence of the adviser and with full consideration of the necessary prerequisites.

Freshman Association

Requirements

The School of Architecture, being a professional program and having limited resources, has a restricted enrollment based on the following criteria:
(1) Accept applicants with an ACT composite score of 27 or above.
(2) Accept applicants with a total of 65 or above using the formula of the high school grade point average times 10 plus the ACT composite score. A minimum ACT composite score of 20 is required.
(3) Refer applicants with an ACT score of 16 or below.
(4) Refer applicants not falling into items 1, 2, or 3 to the Committee on Admissions. The committee meets during the second week of March.

**Deadlines for Applications**

Applications for the School of Architecture must be received no later than March 1 for association in the summer or fall quarter. November 1 is the deadline for applications for the spring quarter; enrollment is closed for the winter quarter.

**Requirements for Admission to Second-Year Architecture**

1. Satisfactory completion of first-year architectural program with grade point average at least 2.3; exceptions may be made by petition only.
2. Application to the School of Architecture no later than May 1 preceding the start of the second year. Students must maintain an overall 2.3 grade point average by the end of 51 hours (attempted) in order to maintain "full status" in the program. Delinquent students must be put on "temporary status" for one quarter. These students will have one quarter to raise the overall GPA to 2.3 or have minimum 2.3 on each quarter's work until overall average is raised to 2.5. If the GPA is not brought up to a 2.3, the student will be dropped from the program.

**Third-Year Prerequisites**

Students are required to have all first- and second-year courses satisfactorily completed before entering the third-year design courses, Architecture 3001-02-03. Students who register for a third-year design course holding first- or second-year deficiencies may be required to drop the course at any point during the quarter.

**Minor**

An undergraduate minor in architecture is offered. Applicants who are admitted to the program and admitted to the School of Architecture by the Architecture Academic Standards Committee and Dean of the School of Architecture, who will approve specific programs of study proposed by students.

**Course Load**

The average course load in any quarter is 16 credit hours. The minimum which may be taken by full-time students is 12 hours; the maximum which may be taken without approval of the dean is 19 hours.

**Satisfactory/No Credit Courses**

These courses, if successfully completed, will count as hours for graduation, although neither S nor NC grades will be calculated in the student's grade point average. Satisfactory is defined as C or better work on the traditional grading scale, and no credit is defined as less than C. The following regulations apply: (1) S/NC courses may not count for required courses in the architecture electives; (2) a student who desires to take a course S/NC should indicate this intention at the start of registration. A change from S/NC grading to regular grading or from regular grading to S/NC will not be permitted beyond the add deadline for each quarter. Exception: Students who register for a course S/NC in a restricted area will be required to change to regular grading when the error is discovered.

**Program Description**

The curriculum for the Bachelor of Architecture Degree includes a combination of required and elective courses which offer the student a broad professional program of study and a sound general education. While the majority of the courses are designated as required, students may use the available architecture electives to expand their knowledge and general interest. Academic non-architecture electives allow students to broaden their education in areas of general interest: the humanities, natural sciences, social sciences or arts. All electives are to be taken only with the approval of the student's advisor.

**Curricula for Architecture**

All students studying for a Bachelor of Architecture degree will include the following requirements in their course of study. Students are not allowed to enroll simultaneously in two design lab courses. For any additional specialized requirements, the student should refer to the Student Handbook of the School of Architecture and the student's advisor.

**SERVICE PRACTICUM REQUIREMENT**

A three-month, non-credit internship in an architect's office, engineer's, or contractor's office or related work may be approved by the school. This must be evidenced by a letter from the employer indicating type and quality of student's work and time of employment prior to the fifth year. (See course description for Architecture 4000.)

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
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<tr>
<td>Architecture 1001, 1200, 1300</td>
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<td>Architecture 1101, 1201, 1301</td>
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<td>English 1010 or 1011, 1020, 1031, 1032, or 1033</td>
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<td>Math 1400-50-60 or Math 1550-60; Phil. 2510</td>
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<td>History 1510-20</td>
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**Second Year**

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<td>Architecture 2101, 2201, 2301</td>
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<td>Architecture 2114, 2214, 2314</td>
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<td>Architecture 2207, 2307</td>
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<td>Physics 2240-50-60</td>
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<td>Architecture 3107</td>
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<td>Architecture 3114, 3214</td>
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<td>Architecture 3116, 3216, 3316</td>
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<td>Architecture 3217, 3317</td>
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<td>Architecture 4101</td>
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<tr>
<td>Architecture 4213, 4313</td>
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<td>Architecture 4116</td>
<td>4</td>
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<tr>
<td>Architecture electives</td>
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2100 Fundamentals of Site Design (4) Projects involving site orientation, climate, energy conservation, access, topography, grading and drainage. Prereq: 1300 and 1301; coreq: 2101.

2101 Design in the Environment (2) Introduction to design and design methodology. Focus on the environmental context. Review of exemplary approaches in current practice. Prereq: 1300 and 1301; coreq: 2100.

2114 Computer Applications in Architecture (4) Demonstration of computer use in architecture, including exercises in programming.

2200 Elements of Architecture (4) Design of small buildings with special consideration for site, interior, circulation patterns, space allocation, and structural order. Presentation sketches, constructed drawings, and sketch models. Prereq: 2100 and 2101; coreq: 2201.

2201 Building Use (2) Introduction to techniques of building programming. Space allocation and balance. Inter-relationship of spaces in terms of use. Examination of user requirements. Typical approaches to entry, access, circulation, and public and private zoning. Diagrammatic presentations and sketches from field observations. Prereq: 2100 and 2101; coreq: 2200.

2207 Architectural History I (3) Development of architecture from antiquity through the Byzantine period, with consideration for cultural conditions and forms of settlement. Prereq: 1300 and 1301; coreq: 2201.


2300 Order and Form in Building (4) Design of small buildings answering site and functional requirements. Emphasis on exploration of formal possibilities and structural implications in relation to program use. Presentation sketches, constructed drawings, and finished model. Prereq: 2200 and 2201; coreq: 2301.

2301 Models of Building Form (2) Exemplary building models illustrating imaginative manipulation of form in response to spatial and structural requirements. Prereq: 2200 and 2201; coreq: 2300.

2307 Architectural History II (3) Development of western architecture from the medieval period through the Baroque. Prereq: 2207.


3107 Architectural History III (3) Study of the modern movement from its roots in Romanticism, Neoclassicism, and the Industrial Revolution through the work of modern movement masters, with applications to current design issues. Prereq: 2307.

3114 Structures in Wood and Steel (4) Introduction to analysis and design of simple steel and wood structures. Background requirements. Use of construction and building codes, handbooks, and design tables - selection of structural members.

3116 Environmental Control (4) Human physiological response to heat, light, and sound in buildings. Study of the physiological effects which affect buildings - introduction to heating, ventilating, and air conditioning.

3200 Architectural Design II: Concepts (6) Building concepts, forms, and functions studied through design projects which affect buildings of moderate complexity. Preliminary structure, materials, choice, energy considerations, and environmental setting. Solution is to be presented in complete sketches, drawings, and models at site and building scales required. Prereq: 3100.

3214 Structures in Masonry and Concrete (4) Introduction to structural principles and design of simple concrete and masonry structures based upon specific loading conditions. Use of construction and building codes, handbooks, and design tables. Prereq: 3114.

3216 Mechanical Systems in Architecture (4) Introduction and analysis of heating, ventilating, and air conditioning systems, including both passive and active solar energy systems. Plumbing and fire protection systems. Prereq: 3116.


3300 Architectural Design III: Details (6) Design concepts developed in detail, with consideration of alternative structural and environmental systems. Full scale detail studies. Drawings and models showing structure, detail, and their relation to overall building design. Prereq: 3200; coreq: 3317.


3317 Structural and Mechanical Applications (4) Analysis and selection of structural and mechanical systems for a specific case study to integrate technical information into the design solution. Prereq: 3214 and 3216; coreq: 3300.

3810 Research Methods for Designers (3) General introduction to variety of research methods and techniques available to designer and appropriate for uncovering basic user requirements during design process. Prereq: 2000.

3930 Behavioral Approaches to Environmental Design (3) Of major concern in the lecture content of this course is the effect of the built environment on human behavior. Particular emphasis will be placed upon the role of environmental factors in human development, learning, adaptation, stress and satisfaction, recreation behavior, and life-cycle functions. Studio problems will explore the design of environments for children and environmental supports for various types of physical disabilities for people of all ages. Prereq: Consent of instructor.

3940 Behavioral Approaches to the Design of Prosthetic Environments (3) Many standard features of the built environment have the potential for interfering with the functioning of individuals with various types of physical disability, study of architectural barriers in relation to this barrier. Prereq: Consent of instructor of course lecture content. Studio problems explore design of barrier-free environmental features and design of disability-specific environments and behavioral supports. Prereq: 3930 for non-architecture students.

4000 Service Practicum (0) A non-credit internship for minimum of 3 months duration to be completed prior to fifth year.

4100 Advanced Architectural Design I (6) Large-scale buildings, form, and structure are studied in exploration of appropriate image which resolves complex use and context requirements. Prereq: 3300.

4101 Community Form (3) Patterns of community development. Study of selected historical and contemporary examples of community form. Prereq: 3116.


4200 Advanced Architectural Design II (6) Design at community scale, emphasizing attention to patterns of community design in response to use requirements and with the physical environment. Consideration for sense of place, energy conservation, land use, access and

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4731-32 Earthquake Resistant Structure I, II (4, 4)\footnote{Analysis and design of structures to resist earthquake effects. Earthquake phenomena. Vibration of single degree structural systems. Response and damage prediction. Introduction to dynamic analysis of structures, instrumentation and structural response. Frame and shear wall behavior. Groundstructure interaction. Prereq: Consent of instructor. (Same as Civil Eng. 4731-32.)}


4802 American Architecture II (3) Stylistic periods from the Gothic Revival through the twentieth century.


4804 The International Style (3) Architecture of the International Style 1922-1952 with antecedents and influences.

4805 Indigenous Architecture (3) Study of worldwide "anonymous" architecture reliant upon climatic conditions, availability of materials, and economic level of people. Examples from prehistoric structures through twentieth century vernacular.

4806 History of Architectural Technology (3) Building materials and construction techniques from antiquity to the present.

4807 Tennessee Architecture (3) History of settlement patterns and building in the state.

4808 Literature of Architecture (3) Survey of architectural writing. Relationship between literature and design.

4810 Aesthetics in Architecture (3) Philosophies of art underlying the practice of architecture.

4811 Special Topics in History, Theory and Criticism (1-4) Special topics in history-related subjects. May be repeated. Maximum credit 12 hours.

4812 East European Architecture (3) Twentieth century architecture in Russia, Czechoslovakia, Poland, Hungary, East Germany, Rumania, Bulgaria, Yugoslavia.

4813 Medieval Architecture (3) History of architecture from the decline of Rome to the beginning of the Renaissance.

4814 Forms of Utopia (3) Ideas and architectural expressions of Utopian movements.

4815 Criticism Seminar (3) Theories, function, and techniques of architectural criticism.

4816 Architects in Social Criticism (3) Writings which illustrate technological, political, and anthropological assumptions of some nineteenth and twentieth century architects.

4817 Architecture since 1945 (3) Recent architecture.

4820 Special Topics in Architecture (1-4) Individual projects under faculty direction. Credit adjusted to project complexity and level of effort. May be repeated. Maximum credit 6 hours.

4821 Design Methods (3) Application of general systems theory and other methods to architectural design. Research project. Prereq: Consent of instructor. (Same as Civil Engineering 4850 and Engineering Science and Mechanics 4850.)

4822 Fire Protection in Structures (3) Characteristics of fires in buildings. Fire codes, building evacuation, sprinklers and other fire protection systems, emergency power and lighting, and fire resistant materials and construction.

4823-44 Advanced Structural Design I, II (3, 3) In-depth analysis and innovative concepts in design of building structures and systems. Prereq: Consent of instructor. (Same as Civil Engineering 4850.)

4830 Introduction to Preservation (3) Theory and practice of architectural preservation and restoration.

4831 Preservation Technology (3) Techniques of preservation: dating, methods of analysis, history of materials and technology used in old buildings.

4832 Descriptive Analysis of Historic Buildings (3) Identification and analysis of characteristic elements of buildings from various architectural periods, with emphasis on American architecture. Survey techniques.

4833 Preservation Law (3) Legal aspects of contemporary preservation activity.

4840 Project Management (3) Principles, methods, and application of project management to the total building process. Project manager, his function, responsibilities, and activities investigated through case studies, job history reviews, and project simulation.

4841 Construction Management (3) Principles, methods, and application of construction management to the total building process. Construction manager function, responsibilities, and activities investigated through case studies, job history reviews, and project simulation.

4842 Professional Services (3) Marketing of architectural practice by study of cases, theories, public relations procedures, and understanding sales of architectural services, both basic and comprehensive.

4843 Contract Documents (3) Analysis and theory of contract documents by application of production techniques and procedures.

4844 Advanced Contracts (3) Study of contractual problems relating to architect, owner, contractor, and subcontractor.

4845 Codes and Zoning (3) Theory, review, and research of county, state, local, and national codes and zoning. History and development of fire safety and building codes; history and development of zoning emphasizing architect's responsibility as related to specific project application.

4846 Cost Analysis (3) Methods and theories of estimating project cost and building cost with reference to present techniques. Research in new techniques of cost analysis.

4847 Specifications (3) Theory, analysis, and methods of specifications. Emphasis placed on development and research of specifications.

4849 Supervision (3) Theories, methods, and site study of job inspection during construction phase and construction administration.

4850 Elementary Structural Matrix Methods (4) Introduction to the generalized matrix methods of analysis of structures. Review of matrix algebra and vectors; development of member stiffness and flexibility matrices; assembly of structure stiffness and flexibility matrices. Prereq: Consent of instructor. (Same as Civil Engineering 4850 and Engineering Science and Mechanics 4850.)


4862 Fire Protection in Structures (3) Characteristics of fires in buildings. Fire codes, building evacuation, sprinklers and other fire protection systems, emergency power and lighting, and fire resistant materials and construction.

4863-64-65 Advanced Mechanical and Electrical Systems (3, 3, 3) In-depth analysis and innovative concepts in design of heating, ventilating, air conditioning, lighting and electrical distribution systems in buildings. Prereq: 3316.

4870 Architectural Photography (3) Photography as a design, research, and presentation medium. Emphasis on architectural photography using black and white media.

4871 Advanced Architectural Photography (3) Application of special photographic techniques with emphasis on color printing and processing. Prereq: Consent of instructor.


4873-82 Advanced Structural Design I, II, III (4, 4, 4) Analysis, and design of basic building structures. Structural and constructional aspects of building, including struc-
4883-84 Advanced Architectural Structures I, II (3, 3) Philosophy of structural design in relation to materials and form. Advanced mathematical and experimental analysis of structures, including use of computer programs. Prereq: 4891 or equivalent.

4887 Structural Design for Protection Against Extreme Hazards (3) Probability, risk, human values, insurance. Survey of possible hazards: floods, fire, hurricanes and tornadoes, earthquakes, nuclear effects, internal and external explosions. Building code and engineered design of steel, masonry and wood structures to resist extreme effects. Protective construction for human needs. Fire protection engineering, fire phenomena, life safety analysis, high-rise building fires.


4891 Computer-aided Design (3) Survey of computer applications in architecture, with special emphasis on structural calculations. Prereq: 2114.

4892 Architectural Computer Graphics (3) Survey of architectural applications of computer graphics; program planning and implementation. Prereq: 2114.


4894 Advanced Design of Concrete Buildings (3) Precast and on-site concrete construction and maintenance, foundations, floor and wall systems. Domes and shell roofs. Prereq: 4891 or equivalent.

4900 Aspects of Urban Environment (4) Interdisciplinary course in urban problems. Prereq: Consent of one of the instructors. (Same as Urban Studies 4900).

4940 Proxemics (4) Seminar for graduate students and upper-division students. Introduction to proxemic research. Definition of proxemic variables. Proxemic notation exercises. Analysis of etic data and the identification of emic categories. Observer bias and methods and bias reduction. Members of seminar required to design, conduct, and present original proxemic research. Prereq: 2000 or consent of instructor.