Division of Architecture
DIVISION OF ARCHITECTURE

Architecture Building, Room 103
(616) 471-6003; FAX: (616) 471-6261
architecture@andrews.edu
http://www.arch.andrews.edu

Faculty
Llewellyn D. Seibold, Division Administrator
Paula L. Dronen, Program Administrator
Philip H. Bess, Faculty Administrator
Carey C. Carscadden
William W. Davidson, Professor Emeritus
Kathleen M. Densky, Library Director
Thomas B. Lowing
Mark A. Moreno
Michael Newman
Arpad D. Ronaszegi
Rhonda G. Root

ACADEMIC CALENDAR
In addition to the campus-wide calendar in the front of this bulletin, the following date is specific to the Division of Architecture.

2001
May
25 Tues Deadline for applications to professional program

MISSION
The Division of Architecture seeks to identify, understand, and teach the nature and practice of architecture. Architecture commonly is understood to be the art of building. This art manifests specific architectural concerns (e.g., durability, convenience, beauty, and decorum) in ways that satisfy both the practical needs and the intellectual, aesthetic, and spiritual sensibilities of human beings. The division desires that its faculty and students pursue excellence in the lifelong vocation of architecture. The foremost purpose of this pursuit is the creation of a physical environment for the glory of God and the good of human beings. Toward this end, we structure both the substance and the manner of our curriculum.

Programs
The following statements are required by the National Architectural Accrediting Board to define program types. Andrews University offers the Professional Bachelor of Architecture degree.

In the United States, most state 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 US professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards. Masters degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

Professional Bachelor of Architecture Degree
The professional program in architecture leads to the Bachelor of Architecture degree. It is a five-year course of study (10 semesters) plus one summer. Following graduation, a three-year internship is generally required (depending on state requirements) prior to completing state licensing requirements.

Bachelor of Science Degree
Students taking the Bachelor of Science degree with a major in architectural studies may seek advanced degrees or employment in the construction industry, the arts, business and other fields.

ACADEMIC STANDARDS
A grade of C- or higher is required in order to continue in the design studio sequence. A grade of less than C- requires a student to repeat that studio before advancing in the studio sequence. (This includes ARCH126, ARCH241, 242, ARCH321, 322, ARCH441, 442, and ARCH521, 522) A grade of C- or lower is not acceptable within the major requirements. Students must maintain the minimum over-all 2.50 cumulative required GPA for graduation.

COMPUTER POLICY
The Division of Architecture regards the computer as a tool helpful in achieving the purposes...
DIVISION OF ARCHITECTURE

of the Program Mission, and to students in their professional development. Use of the computer in the curriculum varies by course.

Students are required to have a laptop computer and software meeting guidelines available in the Division office. Because computer technology changes rapidly and frequently, a revised policy is drafted in the Fall semester outlining the specific requirements for each year. Consequently, the Division recommends awaiting each year’s minimum specifications prior to making purchases. Laptop purchases should be made prior to the end of Fall semester, Pre-Arch year two.

Fees are assessed each year regarding computer lab and laptop network cards.

OTHER POLICIES
Students are responsible for all policies outlined in the Division of Architecture Student Handbook.

Professional Degree
Bachelor of Architecture

PRE-ARCH YEAR ONE
General Education—21.5-24.5
HIST117, 118; ENGL115; COMM104; MATH168; BHSC100; HLED130; RELT100, PE elective, Computer Competency Exam
Architecture Core—8
ARCH125, 126
Architecture Elective—2
Recommended ARCH150

PRE-ARCH YEAR TWO
General Education—6.5
ENGL215; PHYS115, PE elective
Architecture Core—26
ARCH201, 202, 205, 241, 242, 315, 316

THIRD THROUGH FIFTH YEARS
General Education—9
Religion electives
Architecture Core—68
ARCH305, 321, 322, 330, 335, 336, 370, 434, 441, 442, 449, 459, 521, 522, 535
Architecture Electives—30
Total credits for BArch degree—171-174

Non-professional Degree
BS: Architectural Studies
BS Core—37
General Education—54.57
See general education requirements for Bachelor of Science degree.
Major Requirements—16
ARCH125, 126, 150, 315, 316
Major Electives—21
A minimum of 9 upper division credits from courses with ARCH acronyms.
Cognate Requirements—6
ART104, 207.
Minor Requirements—22
General Electives—5
Total credits for the BS degree—124-127

Minor in Architectural Studies—22
ARCH125, 126, 150; plus 12 additional credits with a minimum of 6 upper division credits from courses with ARCH acronyms.

Courses

See inside back cover for symbol code.

ARCH108
Introduction to Structural Mechanics
Laws of static equilibrium, centroids and moment of inertia. Concepts of stress, strain, flexure, shear, and torsion. Basic design of simple structural member of steel, wood, and reinforced concrete. Open to all students except engineering, mathematics, or physics majors. Prerequisite: high-school algebra. May not be offered each year.

ARCH125
(was ARCH171)
Drawing & Graphics Studio
Introduction to freehand drawing and architectural graphic conventions. Exercises include freehand and drafted drawings of building plans, sections, and elevations, and an introduction to three-dimensional representation. Fall, Summer

ARCH126
(was ARCH172)
Introduction to Design Studio
Introduction to formal composition, abstract architectural elements, and traditional architectural proportioning systems and presentation techniques. Spring, Summer

ARCH150
Introduction to Architecture
Emphasis on design concepts, professional vocabulary, historical appreciation, contemporary issues, and values that are important to the mission of the Division of Architecture. Open to all students. Fall

ARCH201
Construction I
An overview of structural systems and a qualitative analysis of the flow of forces in buildings. Construction materials and assemblies, detailing, and material selection. Includes soil, concrete, masonry, metals, and wood. Fall

ARCH202
Construction II
Weatherproofing, finish materials, and detailing in construction. System and component selection and introduction to cost estimating. Prerequisite: ARCH201. Spring

ARCH205, 305
(was ARCH110/210 & 310/410)
Structures I, II
Topics in statics, strength, of materials, structural analysis, and design in reinforced concrete, steel, and wood. Wind and seismic loading. Prerequisites: MATH168 & PHYS115, ARCH205 is a prerequisite to ARCH305. Spring

ARCH230
Surveying
Introduction to measurement and error theory. Plane and topographic surveys, horizontal and vertical control, earthwork computations. Basic principles of photo-grammar. Prerequisite: secondary-school trigonometry. May not be offered each year.

ARCH241
(was ARCH271&272)
Placemaking & Craft Studio
Introduction to building design and the logic of craft in construction. In simple program projects, emphasis will be placed upon qualities of space, materiality, and form as they relate to landscape and to human nature. Prerequisite: ARCH126. Fall

ARCH242
(was ARCH203)
Construction Drawings Studio
Introduction to contract document conventions and production of construction drawings. Computer-based applications are used as the primary drawing tool. Prerequisite: ARCH241 & meet general education requirement for computer competence. Spring

ARCH245
Visual Studies in European Architecture
Students in sketch and/or photographic format study the visual qualities of various buildings of architectural significance in Europe. The visual study is accompanied by historical and analytical examination of the buildings and architects. Prerequisites: ARCH242 and acceptance to the European Office Practicum.

ARCH249
Computer-aided Design
Through tutorials, exercises, and projects the student expands working knowledge of the drafting and design capabilities of computer-aided design. Introduction to a three-dimensional program. Prerequisites: ARCH242 or permission of the instructor. May not be offered each year.

ARCH284
Architectural Rendering
Demonstrations and exercises to deepen students’ understanding of the communication process, increase familiarity with different expressive forms of graphic art, and further advance skills in the use of different media. Prerequisites: ARCH125 and minimum junior standing or permission of the instructor. May not be offered each year.

ARCH299
Independent Study
Study of special topics not currently offered by the Division of Architecture. In consultation with a professor, the student researches a selected area, filing a copy of the completed project report in the Division of Architecture office. A mini- mum of 30 hours of work required for each credit. May be repeated for a total of 6 credits.

ARCH315
(was ARCH361 combined with half of ARCH362)
History of Architecture I
Chronological overview of the history of architecture from pre-history through the 14th century (Gothic). Emphasis is on the vocabulary and design of buildings, their symbolic relationships, and their meaning in a cultural and human context. Prerequisites: HIST117, 118 & ENGL115. Fall

ARCH316
(was ARCH363 combined with half of ARCH362)
History of Architecture II
Chronological overview of the history of architecture from the 15th century (Renaissance) to today. Emphasis is on the vocabulary and design of buildings, their symbolic relationships, and their meaning in a cultural and human context.
context. Prerequisites: HIST117, 118 & ENGL115. Spring

ARCH321 (was ARCH371)
Sustainable Design Studio
Study design projects based on the concept of sustainability, using building materials and construction methods to achieve resource-efficient buildings. Prerequisites: ARCH242 and acceptance to Professional Program. Fall

ARCH322 (was ARCH372 combined with ARCH373)
Background Building/Foreground Building Studio
Design of a commercial and/or residential building, followed by design of a civic or religious building; both in the physical and cultural setting of a traditional small town or urban neighborhood. Prerequisite: ARCH321 Spring

ARCH330
Analytical Summer Abroad
Eight week course focusing upon study, analysis, and documentation of buildings, spaces, and/or gardens in another country. Studies will occur in a "base" city, with day trips to other sites. Base venue may change from year to year. Prerequisite: ARCH242. Summer

ARCH335 (was ARCH231 combined with half of ARCH232)
Environmental Technology I
Introduction to environmentally, energy-conscious design concepts with the primary focus on climate and site analysis. An overview of standard evaluation methods for thermal performance in both design development and qualitative building evaluations covers heat loss/gain, thermal and solar envelope, HVAC system selection and layout. Principles of water conservation, collection and supply, and the treatment and disposal of liquid and solid wastes. Fall

ARCH336 (was ARCH233 combined with half of ARCH232)
Environmental Technology II
Principles of design for fire safety and code compliance. Principles of electricity and a brief survey of electrical systems and wiring design. The design and location requirements of elevators and moving stairways and walks. A qualitative overview of lighting and acoustics and their integration into the design of buildings with introductory quantitative methods. Prerequisite: PHYS115. Spring

ARCH345
Safety and Accessibility
Lectures, seminars, and exercises on safety systems and barrier-free requirements. Includes principles for the accommodation of human disabilities and present code requirements within the practice of architecture. Prerequisites: ARCH201. May not be offered each year.

ARCH350
Architectural Design
Studio with topics and projects appropriate to the major or minor in architectural studies. May be repeated up to a total of 8 credits. Prerequisites: ARCH126. May not be offered each year.

ARCH365
Issues in Contemporary Architecture
Lectures, readings, visits with architects and to architectural sites. Topics include current architectural developments in the western world. May be offered as part of European Architecture tour or off-campus summer session. Prerequisite: ARCH315 & 316. May not be offered each year.

ARCH370
Person-Environment Theory
Studies in the relationship between people and the environment, including a consideration of towns, cities, gardens, buildings, and artifacts, as well as the cultural and natural landscape. Prerequisites: ARCH241. Spring

ARCH390
Special Topics in
Based on selected topics of current interest in architecture offered by the Division of Architecture. May be repeated in different topic areas. May not be offered each year.

ARCH395
Community Project in Architecture
"Hands-on" involvement in humanitarian and/or service oriented projects. Work initiated by students requires prior approval of faculty. Graded on S/U basis. May be repeated up to 6 credits.

ARCH396
Cooperative Work Experience
Supervised work with an architect or construction firm. 120 hours of work is required for each credit. May be repeated up to 6 credits. Prerequisites: 3rd year standing and application one semester in advance of the planned work. Graded on S/U basis.

ARCH402
European Office Practicum
Offered during summers in Berlin, Germany, or other European locations. Students spend at least four weeks in architectural offices where they participate on actual projects. Prerequisites: ARCH242 and acceptance to European Office Practicum. Graded on S/U basis.

ARCH420
Urban Studies
A broad survey, both typological and historical, of the physical characteristics of cities and their development, with an emphasis upon urban form as a cooperative human artifact embodying particular cultural values and ideas. Prerequisites: ENGL115; HIST117, 118. Fall

ARCH441 (was ARCH471 combined with ARCH472)
Integrative Design Studio
Comprehensive building design project: site design, building design, and development of architectural detail (including integration of materials and structural and environmental systems). Prerequisite: ARCH322 Corequisite: ARCH449. Fall

ARCH442 (was ARCH572 & 573)
Visiting Critic/Topic Studio
Design project(s) to be determined by Visiting Critic and regular faculty. Topic of studio varies. Prerequisite: ARCH441. Spring

ARCH449
Integrative Design
Preliminary design of the structure and environmental control systems for a concurrent studio project. Building codes, accessibility standards, and zoning ordinances are reviewed for design implications. Corequisite: ARCH441. Fall

ARCH459
Design Theory
A survey and analysis of architectural thought, including readings from both historical and contemporary sources. Prerequisite: ARCH315. Fall

ARCH489
Independent Computer-Aided Design Applications
Individual studies in computer applications relating to a design project or research topic of special interest. May not be offered each year.

ARCH495
Inspection Field Trip
An organized trip to areas of significant architectural interest and individual reports thereon. May be repeated for up to 6 credits. May not be offered each year.

ARCH499
Independent Research
Study of special topics not currently offered by the Division of Architecture. In consultation with a professor, the student researches a selected area, filing a copy of the completed project report in the Division of Architecture office. A minimum of 30 hours of work required for each credit. May be repeated for a total of 6 credits. May not be offered each year.

ARCH510
Advanced Structures Seminar
A consideration of topics in structural analysis and design as they relate to the Architecture Review Examination. Graded on S/U basis. Prerequisite: ARCH305 or equivalent. May not be offered each year.

ARCH521 (was ARCH571)
Urban Design Studio
Urban design proposal for a small town (or parts thereof), urban neighborhood, or college campus. Prerequisites: ARCH442. Fall

ARCH522
Final Design Studio
Design of a programmatically and symbolically complex building and/or public space, often on a site(s) determined by the immediately preceding urban design project (ARCH521). Prerequisite: ARCH521. Spring

ARCH535 (was ARCH545 combined with ARCH546)
Professional Practice
Lectures and seminars focusing on Judeo-Christian values and social responsibilities in the profession. Studies introduce conventional practice methods and career planning for present and future. Topical areas include the role of the architect, organization and management of the firm, and project administration. Fall