DIVISION OF ARCHITECTURE

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

Faculty
Carey C. Carscallen, Director
Philip H. Bess
William W. Davidson, Professor Emeritus
Kathleen M. Densky, Library Director
Richard G. Hogan
Thomas B. Lowing
Mark A. Moreno
Arpad D. Ronaszegi
Rhonda G. Root
Llewellyn D. Seibold

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<th>Academic Programs</th>
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<tr>
<td>BArch: Bachelor of Architecture</td>
<td>164-167</td>
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<tr>
<td>BS: Architectural Studies</td>
<td>37</td>
</tr>
<tr>
<td>Minor in Architectural Studies</td>
<td>22</td>
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</tbody>
</table>

Andrews University anticipates a possible change in degree nomenclature for the Bachelor of Architecture degree not currently a part of this bulletin.

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.

(The National Architectural Accrediting Board 1998 Conditions and Procedures for Professional Degree Programs in Architecture)

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.

RESOURCES

The Architecture Resource Center (ARC) provides an extensive range of materials including over 22,500 books, 90 journals, and a growing video collection. An added dimension to resource materials are two special collections. The ARC maintains a relationship with the Environmental Design Research Association, and houses an internationally recognized collection of books and materials in the area of environmental psychology and design. In addition, the ARC holds the Senseman Rare Book Collection of over 800 rare and out of print books and photos.

Other Facilities. The architecture facilities include a well-equipped and staffed woodworking shop (2,500 sq. ft); a computer laboratory for word processing, spreadsheets, imaging manipulation, and CAD. The lab is equipped with a seven-station local area network with Ethernet connections, small and large format printing capabilities, and multiple scanners. The architecture building operates a wireless (Radio Frequency) network, introduced primarily for laptop use within the Division. Other buildings on campus share the same network for added computing flexibility. The Division also houses a print shop with direct access to large-sheet xerox and ammonia-based duplicating and an expanding slide collection of approximately 29,000 slides.

Summer Abroad. Each student is expected to attend the Summer Abroad Program offered every summer. This program is usually four weeks in duration. Students completing Professional Year One should make plans accordingly. For further information, consult the Division of Architecture.


Bachelor of Architecture Degree Program

(BArch)

ADMISSION PROCEDURE

Acceptance to Andrews University does not mean acceptance into
The Division of Architecture or the Bachelor of Architecture degree program. Students must meet the minimum GPA requirements to proceed from Pre-Arch Year One to Pre-Arch Year Two. Upon the completion of the pre-architecture years in The Division of Architecture, students must apply for acceptance into the Bachelor of Architecture program. Application packets specifying standards for acceptance are available from the division office.

Transfer Students. Transfer applicants who have had no previous course work in architectural design must complete the foundation (or “pre-architecture”) years and then make formal application to the professional program.

Advanced Standing. Transfer students from another architecture program may apply for advanced standing (third or fourth year) in the professional program. The Division of Architecture does not accept applications to the fifth year of study. Students desiring to apply for advanced standing should make formal application to the professional program. Tentative placement into the design sequence is made after the Admissions Committee has evaluated the student’s submissions. After one semester, the student is given final placement in the design sequence and, on the basis of transfer-course evaluations, receives credit for previous academic work toward the Andrews University degree. Transfer students may petition up to nine credits toward the architecture elective line.

General Education Requirements—40-43
Religion—12
RELT100, plus three of the following: RELB210, RELP400, RELT250, 340
Arts & Humanities—5
HIST117, 118
Physical/Natural Science—3
PHYS115
Social Science—3
ARCH370
Language & Communication—8
Written Expression: ENGL115, 215
Communication: COMM104
Mathematics & Computer Science—4-7
MATH166 & 167, Computer Competency Exam
Service—2
BHSC100 plus fieldwork;
AIAS Volunteer in Community Projects;
ADRA or Maranatha Projects
Wellness—3
HLED130, two activity courses

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 ARCH125, 126, 241, 242, 321, 322, 441, 442, 521, and 522). Students must maintain the minimum overall 2.50 cumulative required GPA for graduation.

COMPUTER POLICY
The Division of Architecture regards the computer as a tool helpful in achieving the purposes of the Program Mission, and to students in their professional development. Use of the computer in the curriculum varies by course.

Transfer students must possess a laptop by the beginning of Pre-Arch Year One. Transfer students entering Pre-Arch Year Two must possess a laptop by the beginning of the academic year.

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—21-24
HIST117, 118; ENGL115; COMM104; MATH166, 167;
BHSC100; HLED130; RELT100, Computer Competency Exam
Architecture Core—8
ARCH125, 126
Architecture Elective—2
Recommended ARCH150

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

THIRD THROUGH FIFTH YEARS
General Education—9.5
Religion electives, ENGL215, PE Elective
Architecture Core—65
ARCH305, 321, 322, 330, 335, 336, 370, 405, 434, 441, 442,
449, 459, 521, 522, 535
Architecture Electives—26
Total credits for BArch degree—164-167

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>ARCH125</td>
<td>(5)</td>
<td><em>Introduction to Design Studio</em> Introduction to formal composition, abstract architectural elements, and traditional architectural proportioning systems and presentation techniques. <em>Spring, Summer</em></td>
</tr>
<tr>
<td>ARCH126</td>
<td>(3)</td>
<td><em>Drawing and Graphics Studio</em> Introduction to freehand drawing and architectural drawing graphic conventions. Exercises include freehand and drafted drawings of building plans, sections, and elevations, and an introduction to 3-dimensional representation. <em>Fall, Summer</em></td>
</tr>
<tr>
<td>ARCH150</td>
<td>(2)</td>
<td><em>Introduction to Architecture</em> 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. <em>Fall</em></td>
</tr>
<tr>
<td>ARCH201</td>
<td>(3)</td>
<td><em>Construction I</em> An overview of site work, foundation, and structural systems as well as an investigation into the structural and material properties, assembly methods and detailing primarily for wood and masonry construction system. <em>Fall</em></td>
</tr>
<tr>
<td>ARCH202</td>
<td>(3)</td>
<td><em>Construction II</em> An investigation into the structural and material properties, assembly methods and detailing primarily for steel and concrete construction systems as well as an introduction to cost estimating. Prerequisite: ARCH201. <em>Spring</em></td>
</tr>
<tr>
<td>ARCH205, 305, 405</td>
<td>(4, 2, 2)</td>
<td><em>Structures I, II, III</em> Topics in statics, strength, of materials, structural analysis, and design in reinforced concrete, steel, and wood. Wind and seismic loading. Prerequisites: MATH166, 167 &amp; PHYS115; ARCH205 is a prerequisite to ARCH305; ARCH305 is a prerequisite to ARCH405. <em>Spring</em></td>
</tr>
<tr>
<td>ARCH230</td>
<td>(3)</td>
<td><em>Surveying</em> Introduction to measurement and error theory. Plane and topographic surveys, horizontal and vertical control, earthwork computations. Basic principles of photo-grammetry. Prerequisite: secondary-school trigonometry. May not be offered each year.</td>
</tr>
<tr>
<td>ARCH241</td>
<td>(5)</td>
<td><em>Placemaking Studio</em> Introduction to building design as it relates to landscape and to human nature, in simple program projects. Prerequisites: ARCH125 &amp; 126. <em>Fall</em></td>
</tr>
<tr>
<td>ARCH242</td>
<td>(5)</td>
<td><em>Architecture as Craft Studio</em> Design projects focusing on the materiality of architecture and the logic of construction. Prerequisites: ARCH241 &amp; meet general education requirement for computer competence. <em>Spring</em></td>
</tr>
<tr>
<td>ARCH245</td>
<td>(4)</td>
<td><em>Visual Studies in European Architecture</em> 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.</td>
</tr>
<tr>
<td>ARCH284</td>
<td>(3)</td>
<td><em>Architectural Rendering</em> 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: ARCH126 and minimum junior standing or permission of the instructor. May not be offered each year.</td>
</tr>
<tr>
<td>ARCH299</td>
<td>(1-4)</td>
<td><em>Independent Study</em> 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.</td>
</tr>
<tr>
<td>ARCH315</td>
<td>(3)</td>
<td><em>History of Architecture I</em> 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 &amp; ENGL115. <em>Fall</em></td>
</tr>
<tr>
<td>ARCH316</td>
<td>(3)</td>
<td><em>History of Architecture II</em> 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. Prerequisites: HIST117, 118 &amp; ENGL115. <em>Spring</em></td>
</tr>
<tr>
<td>ARCH321</td>
<td>(5)</td>
<td><em>Sustainable Design Studio</em> Studio design projects based on the concept of sustainability, using building materials and construction methods to achieve resource-efficient buildings. Prerequisites: ARCH242 and acceptance to the Professional Degree Program. <em>Fall</em></td>
</tr>
<tr>
<td>ARCH322</td>
<td>(5)</td>
<td><em>Background Building Studio</em> Design of a commercial and/or residential building(s) of increased programmatic complexity, in the physical and cultural setting of a traditional small town or urban neighborhood. Prerequisite: ARCH321. <em>Spring</em></td>
</tr>
<tr>
<td>ARCH330</td>
<td>(3-6)</td>
<td><em>Analytical Summer Abroad</em> A 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. <em>Summer</em></td>
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ARCH335
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
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 over-view of lighting and acoustics and their integration into the design of buildings with introductory quantitative methods. Prerequisite: PHYS115. Spring

ARCH350
Architectural Design
Studio with topics and projects appropriate to the major or minor in architectural studies. May be repeated up to total of 8 credits. Prerequisite: ARCH242. May not be offered each year.

ARCH360/560
Islamic Architecture
A focused view on the period of architectural history known as Islamic Architecture. Covers the beginnings of Islamic period from 600 CE down to the present time, looking at Islamic buildings from all parts of the world. Prerequisite: ARCH315 & 316.

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. Prerequisites: 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. Prerequisite: ARCH241.

ARCH390/590
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 for up to 6 credits.

ARCH396
Cooperative Work Experience
Supervised work with an architecture 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.

ARCH415/515
Design Studio Practicum
Students assist studio teachers in design courses as critics. The course is open to students interested in teaching and architectural criticism and who are chosen by the Division faculty for demonstrable potential in this area.

ARCH420
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.

ARCH434
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
ARCH510 (3)
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 (6)
Urban Design Studio
Urban design proposal for a small town (or parts thereof), urban neighborhood, or college campus. Prerequisites: ARCH330 and 442. Fall

ARCH522 (6)
Visiting Critic/Topic Studio
Design project(s) to be determined by Visiting Critic and regular faculty. Topic of studio varies. Prerequisite: ARCH521. Spring

ARCH535 (4)
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. Prerequisite: ARCH442 or permission of instructor.