

DIVISION OF ARCHITECTURE

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Faculty

Carey C. Carscallen, *Director*
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Thomas B. Lowing
Mark A. Moreno
Rhonda G. Root
Llewellyn D. Seibold
Andrew C. von Maur
Kristin S. von Maur

Academic Programs	Credits
MArch: (3 ^{1/2} Year Track)	100
MArch: (5 ^{1/2} Year Track)	
Master of Architecture	31
BSA in Architecture	134
BS: Architectural Studies (Non-Prof.)	127
Minor in Architectural Studies	22

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.

Academic Calendar 2004–05

May 25, 2004 Deadline for applications to professional degree track

Programs

The following statements are required by the National Architectural Accrediting Board to define program types. Andrews University offers the Professional Master 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 six-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)

Master of Architecture Professional Degree Track

The professional degree program consists of a pre-professional Bachelor of Science in Architecture degree and then a Master of Architecture degree. When earned sequentially, the degree track results in an accredited professional education.

Master of Architecture 3^{1/2} Year Degree Track

The Master of Architecture 3^{1/2} year degree track is designed for students who have previously earned an undergraduate degree in an unrelated area of study. Currently, this degree track is not accredited by the National Architectural Accrediting Board (NAAB). It is anticipated that this program will be brought into candidacy with NAAB in the near future.

Bachelor of Science in Architectural Studies

The Bachelor of Science in Architectural Studies is a non-professional degree. Students who elect for the Bachelor of Science degree do not proceed into the professional program track. In this program, Architectural Studies is declared as a major and upon successful completion, receives an undergraduate degree. Students who elect for this degree 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 25,000 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 ammonia-based duplicating and an expanding slide collection of approximately 39,000 slides.

Student Handbook. A handbook for Division of Architecture students outlining policies, operational guidelines, and general information is available on the World Wide Web.

Master of Architecture 5^{1/2} Year Professional Degree Track

ADMISSION PROCEDURE

Students seeking to pursue architecture at Andrews University must first submit an Andrews University undergraduate application for acceptance to the pre-architecture years. Upon completion of the pre-architecture years, students must apply for acceptance into the professional degree track. This application packet is submitted directly to the Division of Architecture, and may be obtained from the division office. Please note that acceptance to the university for the pre-architecture years does not guarantee acceptance to the professional degree track. Upon acceptance to the professional degree track, academic standards must be maintained in order to move from the Bachelor of Science in Architecture degree to the final year of study, resulting in the Master of Architecture degree. Please refer to the current bulletin to review the academic standards requirement.

TRANSFER STUDENTS

Transfer applicants who have no previous work in architectural design must complete the foundation (pre-architecture) years and then make formal application to the professional degree track.

Advanced Standing. Transfer students from another architecture program may apply for advanced standing (third or fourth year) in the professional degree track. The Division of Architecture does not accept applications to the Master of Architecture Year only. Some transfer students applying for admission to the professional degree track, however, may be required to submit both the university application and the Division of Architecture application. Please contact the Division for specific information.

Tentative placement into the design sequence is made after the Admissions Committee has evaluated the student's submissions. After one term, the student is given final placement in the design sequence and, on the basis of transfer-course evaluations, receives credit for previous academic work towards the Andrews University degree.

Summer Studio. In some cases, completion of the Summer Studio program is best for transfer students. Prior to application, students must have a transcript analysis done by the Division of Architecture to determine eligibility for the program.

Application to the Summer Studio is made by filling out an Andrews University Undergraduate Application. Students applying to this program, in addition to applying to Andrews University, must also contact the Division of Architecture directly to confirm their reservation for the class. The deadline for reserving seats is April 15.

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 ART104, ARCH126, 215, 247, 318, 320, 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.

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

Laptop network cards are purchased by the student.

OTHER POLICIES

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

Professional Degree Track

PRE-ARCH YEAR ONE

General Education—23

BHSC100; COMM104, ENGL115, HIST117, 188, HLED120, MATH168, RELT100, INFS110

Architecture Core—8

ARCH126, 150, ART104

Continued Undergraduate Enrollment Requirements—2.5 Cumulative GPA

PRE-ARCH YEAR TWO

General Education—7

PE elective, PHYS115; Religion elective

Architecture Core—26

ARCH201, 202, 205, 215, 247, 315, 316

Continued Undergraduate Enrollment Requirements

Application to continue undergraduate program

1. Application and \$40 fee
2. Cumulative GPA of 2.75
3. Portfolio
4. Three letters of recommendation (two must be from academic sources)
5. Letter of Intent
6. Acceptance into Professional Degree Track

ARCHITECTURE YEARS THREE & FOUR BSA

General Education—11

ENGL215, PE electives, Religion electives

Architecture Core—44

ARCH305, 318, 320, 335, 336, 370, 405, 434, 441, 442, 449, 459

Summer Abroad—6

ARCH330 and 3 elective credits

Architecture Electives—9

Total credits for BSA degree—134

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.

GRADUATE-YEAR ENROLLMENT

Graduate Admission Requirements. In addition to meeting the General Minimum Admission Requirements for graduate degree programs on p. 44, the following Division requirements apply to the graduate phase of this program. (These are subject to change by action of the Division's Academic Policies and Curricula Committee.)

1. Completion of a baccalaureate degree—BSA: Architecture.
2. Successful completion of all undergraduate coursework with a minimum GPA of 2.75.

MArch Professional Degree**Architecture Core—16**

ARCH521, 522, 535

Architecture Electives—15

A minimum of 15 credits of architecture electives at the graduate level. Selection of electives outside of Division offerings requires the approval of the Division faculty.

Continued Graduate Enrollment Requirements

1. No grade lower than C (2.00) in any course in the graduate portion of the program.
2. A student whose cumulative graduate GPA falls below 3.0 in any given term is placed on academic probation. A student is normally disqualified if they do not increase their graduate GPA to 3.0 during the academic term of probation.
3. A minimum cumulative GPA of 3.0 is required to receive the Master of Architecture degree.

MArch 3^{1/2} Year Track**Architecture Core—84**

ARCH500, 505, 506, 509, 517, 518, 521, 507 or 522, 534, 535, 549, 559, 601, 602, 605, 606, 607, 615, 616, 635, 636, 670.

Architecture Electives—16Total credits for 3^{1/2} Year MArch degree—98**Non-professional Degree****BS: Architectural Studies****BS Core—37****General Education—57**

See general education requirements for Bachelor of Science degree.

Major Requirements—16

ARCH126, 150, 215, 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—127

Minor in Architectural Studies—22

ARCH126, 150, 215; plus 12 additional credits with a minimum of 6 upper division credits from courses with ARCH acronyms.

Courses

(Credits)

See inside front cover for symbol code.

ARCH126 (3)**Drawing and Graphics Studio**

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. *Spring, Summer*

ARCH150 (2)**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 (3)**Construction I**

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. *Fall*

ARCH202 (3)**Construction II**

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. *Spring*

ARCH205, 305, 405 (4, 2, 2)**Structures I, II, III**

Topics in statics, strength of materials, structural analysis, and design in reinforced concrete, steel, and wood. Wind and seismic loading. Prerequisites: MATH166, 167 & PHYS115; ARCH205 is a prerequisite to ARCH305 & 405. *Fall, Spring*

ARCH215 (3)**Introduction to Design Studio**

Introduction to formal composition, abstract architectural elements, and traditional architectural proportioning systems and presentation techniques. Prerequisite: ARCH126, INFS110. *Fall*

ARCH247 (5)**Architecture as Craft Studio**

Design projects focusing on the materiality of architecture and the logic of construction. Prerequisites: ARCH215. *Spring*

ARCH299 (1-4)**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 minimum of 30 hours of work required for each credit. May be repeated for a total of 6 credits.

ARCH315 (3)**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** (3)
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. Prerequisites: HIST117, 118 & ENGL115. *Spring*
- ARCH318** (5)
Background Building Studio
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: ARCH320. *Spring*
- ARCH320** (5)
Placemaking Studio
Introduction to building design as it relates to landscape and to human nature, in simple program projects. Prerequisites: ARCH247. *Fall*
- ARCH330** (3)
Analytical Summer Abroad
A course focusing upon study, analysis, and documentation of buildings, spaces, and/or gardens in another country. Venues may change from year to year. Prerequisite: ARCH318. *Summer*
- ARCH335** (3)
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** (3)
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*
- ARCH370** (3)
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: ARCH320.
- ARCH390** (1-4)
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. Topics include, but are not limited to, Architecture of the Ancient Americas, Islamic Architecture, Furniture Design, Surveying.
- ARCH395** (2-6)
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** (1-6)
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.
- ARCH434** (4)
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** (6)
Foreground Building Studio
Design of a public and/or civic building in the physical and cultural setting of a traditional small town or urban neighborhood. Prerequisite: ARCH205, 318; Corequisite: ARCH449. *Fall*
- ARCH442** (6)
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: ARCH441. *Spring*
- ARCH449** (3)
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. Prerequisite: ARCH205; Corequisite: ARCH441. *Fall*
- ARCH459** (3)
Design Theory
A survey and analysis of architectural thought, including readings from both historical and contemporary sources. Prerequisite: ARCH315.
- ARCH499** (1-4)
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.
- ## GRADUATE
- ARCH500** (3)
Introduction to Design Studio
Introduction to formal composition, abstract architectural elements, and traditional architectural proportioning systems and presentation techniques. *Spring, Summer*
- ARCH505** (3)
Drawing and Graphics Studio
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. *Fall, Summer*

- ARCH506** (5) **Placemaking Studio**
Introduction to building design as it relates to landscape and to human nature, in simple program projects. Prerequisites: ARCH500 & 505. *Fall*
- ARCH507** (5) **Architecture as Craft Studio**
Design projects focusing on the materiality of architecture and the logic of construction. Prerequisites: ARCH506 & meet general education requirement for computer competence. *Spring*
- ARCH509** (5) **Background Building Studio**
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: ARCH506. *Spring*
- ARCH517** (6) **Foreground Building Studio**
Design of a public and/or civic building in the physical and cultural setting of a traditional small town or urban neighborhood. Prerequisite: ARCH605, 509; Corequisite: ARCH549. *Fall*
- ARCH518** (6) **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: ARCH517. *Spring*
- ARCH521** (6) **Urban Design Studio**
Urban design proposal for a small town (or parts thereof), urban neighborhood, or college campus. Prerequisite: ARCH518. *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*
- ARCH534** (4) **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. *Fall*
- 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.
- ARCH549** (3) **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. Prerequisite: ARCH605; Corequisite: ARCH517. *Fall*
- ARCH559** (3) **Design Theory**
A survey and analysis of architectural thought, including readings from both historical and contemporary sources. Prerequisite: ARCH615.
- ARCH590** (1-4) **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. Topics include, but are not limited to, Architecture of the Ancient Americas, Islamic Architecture, Furniture Design, Surveying.
- ARCH599** (1-4) **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.
- ARCH601** (3) **Construction I**
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. *Fall*
- ARCH602** (3) **Construction II**
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: ARCH601. *Spring*
- ARCH606, 607, 608** (4, 2, 2) **Structures I, II, III**
Topics in statics, strength of materials, structural analysis, and design in reinforced concrete, steel, and wood. Wind and seismic loading. ARCH606 is a prerequisite to ARCH607 & 608. *Fall, Spring*
- ARCH615** (3) **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.
- ARCH616** (3) **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.
- ARCH635** (3) **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*

ARCH636 (3)

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. *Spring*

ARCH670 (3)

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: ARCH506.