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# SCHOOL OF ARCHITECTURE, ART & DESIGN

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Paula L. Dronen, *Assistant Dean*

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The School of Architecture, Art & Design is comprised of the professional degree programs Master of Architecture (5½ year and 3½ year tracks), Bachelor of Interior Design and Bachelor of Science in Construction Management, and the Department of Visual Art & Design.

## Architecture Faculty

Carey C. Carscallen, *Dean*  
Paula L. Dronen, *Assistant Dean*  
William W. Davidson, *Professor Emeritus*  
Kathleen M. Demsky, *Library Director*  
Troy M. Homenchuk  
Robin A. Johnson  
Thomas B. Lowing  
Mark A. Moreno  
Rhonda G. Root  
Llewellyn D. Seibold  
Martin D. Smith  
Ariel Solis  
Andrew C. von Maur  
Kristin S. von Maur

Academic Programs	Credits
MArch: (3½ Year Track)	102
MArch: (5½ Year Track)	
BSA: Architecture	138
MArch (Professional Degree)	30
BS: Architectural Studies (Non-Professional)	128
BID: Bachelor of Interior Design	133
BSCM: Construction Management	137
Minor in Architectural Studies	23

## Mission

The architecture faculty aspires to teach sound thinking, practical skills, and rigorous scholarship in the discipline of architecture; and promotes students who:

- Craft buildings that are dignified, durable and purposeful;
- Design communities that foster civility;
- Serve mankind in accord with their professional and Christian vocation;
- Seek the virtues of joy, beauty, wholeness and moderation in their lifelong pursuit of learning.

All this for God's honor and His glory until the risen Christ comes again.

## Academic Calendar 2012–2013

May 25, 2013     Deadline for application to BSA professional degree track, BID and BSCM programs.  
(Currently enrolled students and transfer students seeking studio placement.)

## Master of Architecture (3½-Year Track) Application Deadlines

Sept 15, 2012     For January 2013 admission  
Feb 14, 2013     For summer or fall admission

## Resources

The Architecture Resource Center (ARC) provides an extensive range of materials including over 25,000 books, 90 journals, and a growing media 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; a computer laboratory for word processing, spreadsheets, imaging manipulation, and CAD. The lab is equipped with a 12-station local area network with Ethernet connections, small and large format printing capabilities, and multiple scanners.

**Student Handbook.** A handbook for School of Architecture, Art & Design students outlining policies, operational guidelines, and general information is available from the School office. Students are responsible for all policies outlined in the *School of Architecture, Art & Design Student Handbook*.

## Computer Policy

The programs in architecture, interior design and construction management regard 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 that meet the requirements of the curriculum as they advance through the program. It is up to the students that their laptop is capable of effectively running the software used in the different courses. A list of software used in the curriculum is available at the School office and must be consulted when purchasing a laptop.

## Programs

### Master of Architecture

The School of Architecture, Art & Design offers two tracks that lead to the professionally accredited Master of Architecture—the 5½-Year Professional Degree Track and the 3½-Year Professional Degree Track. These two tracks are outlined below.

### 5½-Year Professional Degree Track

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

### 3½-Year Professional Degree Track

The 3½-year professional degree program is designed for students who have previously earned an undergraduate degree that may be in an unrelated area of study. Under this option, the student spends the first 2½ years completing undergraduate prerequisite architectural core courses. The final year is similar to the final year of the Master of Architecture 5½-year degree which results in the accredited professional degree. Please see the Academic Calendar for application deadlines.

### Program Accreditation

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 U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

Andrews University School of Architecture, Art & Design offers the following NAAB-accredited programs:

- MArch (pre-professional degree—138 undergraduate credits + 30 graduate credits)
- MArch (non-pre-professional degree + 72 undergraduate prerequisite credits + 30 graduate credits)

Next accreditation visit for all programs: 2012

*(The National Architectural Accrediting Board, Inc., 2009 Conditions for Accreditation)*

### Bachelor of Science in Architectural Studies (Non-Professional)

The Bachelor of Science in Architectural Studies is a non-professional degree. Students who elect this 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.

### Bachelor of Interior Design

The interior design program is a four-year plus one summer course of study and results in the Bachelor of Interior Design. This degree qualifies students to participate in the Interior Design Experience Program (IDEP) which is required in order to be eligible to sit for the National Council for Interior Design Qualification (NCIDQ) certification examination ([www.ncidq.org](http://www.ncidq.org)).

### Bachelor of Science in Construction Management

The construction management program is four years plus two summers in duration. This program also requires 600 hours of construction work experience (see curriculum details). According to standards set by the Construction Management Certification Institute

(CMCI), an independent administrative body of the Construction Management Association of America (CMAA); a four-year degree in Construction Management plus 48 months of CM experience within 5 classifications of 30 possible experience areas meet eligibility requirements to apply to sit for the Certified Construction Manager (CCM) certification examination ([cmaanet.org](http://cmaanet.org)).

### Admission Procedures

#### BSA Professional Degree Track, BID or BSCM

Students seeking to pursue the \*BSA Professional Degree Track, BID or BSCM must first submit an Andrews University undergraduate application for acceptance to the University. Students admitted to the University on regular standing are eligible to begin Pre-Professional Year One, which is a common first-year experience between these programs.

Upon completion of Pre-Professional Year One students must:

1. Declare their degree program choice (BSA Professional Degree Track, BID or BSCM) and
2. Have a minimum cumulative GPA of 2.5

Upon completion of Pre-Professional Year Two students must apply for acceptance to their respective programs. The application packet may be obtained from the School and must be submitted directly to the School by the application deadline. Minimum requirements to be considered for admission to these programs are outlined under each program curricula.

\* Students taking the BSA Professional Degree Track who plan to pursue the Master of Architecture must meet the standards outlined under Graduate-Year Enrollment.

#### Transfer Students

Transfer applicants who have no previous work in architectural/interior design must complete the foundation years (pre-professional years one and two) and then make formal application to their program choice.

**Advanced Standing.** Transfer students from another architecture program may apply for advanced standing (third or fourth year) in their program choice. Transfer students applying for advanced standing are required to submit both the university application and the School of Architecture, Art & Design application. Please contact the School 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.

The School does not accept applications to the Master of Architecture year only.

**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 School to determine eligibility for the program. It is expected that students pursuing the summer studio option will have completed the majority of general education courses normally required in Pre-Professional Year One.

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 School of Architecture, Art & Design directly to confirm their reservation for the class.

**Master of Architecture (3½-Year Professional Degree)**

Application must be made online to the School of Graduate Studies & Research. In addition to meeting the application requirements of the School of Graduate Studies & Research, applicants should:

1. Hold an undergraduate degree;
2. Have a minimum cumulative undergraduate GPA of 3.0;
3. Submit an online application.
4. Submit a portfolio of work (this work need not be architectural in nature, it may include writing samples, drawings, photography, etc.) Original work will not be accepted.
5. The following prerequisite courses may be required at the discretion of the Admissions Committee:
  - a. ARCH126 Drawing & Graphics Studio
  - b. ART104 Introduction to Drawing
  - c. MATH168 Precalculus
  - d. PHYS141 General Physics I

Upon acceptance, graduate standards of scholarship apply to all coursework.

**Academic Standards**

Academic standards apply to the BS, BSA, BID and BSCM. 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. Faculty approval is required for any studio course to be repeated. (This includes ART104, ARCH126, 215, 247, 318, 320, 441, 442; INT341, 342, 441, 442.)

Students accepted to the BSA Professional Degree Track are expected to maintain a minimum cumulative GPA requirement of 2.75 for acceptance into the Master of Architecture year (see Graduate-Year Enrollment requirements). Students whose cumulative GPA falls below this minimum requirement are not allowed to continue to the Master of Architecture Year (graduate-year) but may be eligible to receive the Bachelor of Science in Architecture (BSA), the pre-professional component of the professional Master of Architecture. The BSA alone is not an NAAB-accredited degree. A minimum cumulative GPA of 2.25 is required to receive the BSA.

**General Education Requirements**

The General Education Requirements outlined below apply to the Bachelor of Science in Architecture (BSA), the Bachelor of Interior Design (BID) and the Bachelor of Science in Construction Management (BSCM).

**General Education Requirements—43**

See professional program requirements, p. 51, and note the following **specific** requirements:

- Religion:** professional degree requirements
- Language/Communication:** professional degree requirements
- History:** HIST117, 118
- Fine Arts/Humanities:** ART104
- Life/Physical Sciences:** PHYS141
- Mathematics:** MATH168
- Computer Literacy:** covered in core curriculum
- Service:** covered in core curriculum
- Social Sciences:** ARCH370  
(BSCM: follow professional degree requirements)
- Fitness Education:** professional degree requirements

**BSA: Bachelor of Science in Architecture Professional Degree Track**

**Pre-Professional Year One**

**General Education—26**

ART104, COMM104, ENGL115, HIST117, 118, MATH168, PE Elective, RELT100, Social Science Choice (see list, p. 51)

**Architecture Core—6**

ARCH126, 150

**Continued Undergraduate Enrollment Requirements—**

2.5 Cumulative GPA

**Pre-Professional Year Two**

**General Education—8**

PHYS141, PE Elective, Religion Elective

**General Elective—2**

**Architecture Core—22**

ARCH201, 202, 215, 247, 315, 316

**Continued Undergraduate Enrollment Requirements**

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. Official transcripts (transfer students only)
7. Acceptance into Professional Degree Track

**Professional Track Years One & Two**

**General Education—9**

ENGL215, Religion electives

**Architecture Core—52**

ARCH205, 305, 318, 320, 335, 336, 370, 434, 435, 441, 442, 449, 459

**Summer Abroad—6**

ARCH330

**Architecture Electives—7**

**Total Credits for BSA—138**

**Summer Abroad.** Each student is required to attend the Summer Abroad Program offered every summer. This program is usually five weeks in duration. Students completing Professional Track Year One should make plans accordingly. For further information, consult the School of Architecture, Art & Design.

**Architecture Electives.** Of the 7 undergraduate and 14 graduate credits, a minimum of 2 credits are required in Community Project.

**Graduate-Year Enrollment**

**Graduate Admission Requirements.** In addition to meeting the General Minimum Admission Requirements for graduate degree programs on p. 52, the following School requirements apply to the graduate phase of this program. (These are subject to change by action of the School's Academic Policies and Curricula Committee.)

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

## MArch: Master of Architecture

### Architecture Core—16

ARCH521, 522 or \*594, 535

### Architecture Electives—14

A minimum of 14 credits of architecture electives at the graduate level. Selection of electives outside of School offerings requires the approval of the School faculty.

### Total Credits for MArch—30

\*Students must apply and be accepted to the practicum program prior to registering for ARCH594. ARCH594 will satisfy 6 core credits (replacing ARCH522 Visiting Critic/Topic Studio) and may satisfy architecture elective credits if registered for more than 6 credits.

### 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: Master of Architecture (3½-Year Track)

### Architecture Core—88

ARCH150, 201, 202, 205, 247, 305, 315, 316, 318, 320, 335, 336, 370, 434, 435, 441, 442, 449, 459, 521, 522 or \*594, 535

### Architecture Electives—14

**Recommended Prerequisite**—See Admissions Procedures.

### Total Credits for 3½-Year MArch—102

\*Students must apply and be accepted to the practicum program prior to registering for ARCH594. ARCH594 will satisfy 6 core credits (replacing ARCH522 Visiting Critic/Topic Studio) and may satisfy architecture elective credits if registered for more than 6 credits.

### 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.

## BS: Architectural Studies (Non-Professional)

### General Education—57

See general education requirements for BS degree, p. 42.

### Major Requirements—17

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 BS—128

## BID: Bachelor of Interior Design

### Pre-Professional Year One

#### General Education—26

ART104, COMM104, ENGL115, HIST117, 118, MATH168, PE Elective, RELT100, Social Science Choice (see list, p. 51)

#### Core—6

ARCH126, 150

#### Continued Undergraduate Enrollment Requirements—

2.5 Cumulative GPA

### Pre-Professional Year Two

#### General Education—8

PHYS141, PE Elective, Religion Elective

#### Core—24

ARCH201, 202, 215, 247, 485, INT200, 315

#### Continued Undergraduate Enrollment Requirements

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. Official transcripts (transfer students only)
7. Acceptance into Professional Degree

### Professional Years One & Two

#### General Education—9

ENGL215, Religion electives

#### Core—50

ARCH335, 336, 370, 435, 445; BSCM325, 445; INT300, 341, 342, 420, 435, 441, 442

#### Summer Abroad—6

ARCH330

#### Electives within ARCH, BSCM, or INT—4

### Total Credits for BID—133

**Summer Abroad.** Each student is required to attend the Summer Abroad Program offered every summer. This program is usually five weeks in duration. Students completing Professional Year One should make plans accordingly. For further information, consult the School of Architecture, Art & Design.

## BSCM: Bachelor of Science in Construction Management

### Pre-Professional Year One

#### General Education—26

ART104, COMM104, ENGL115, HIST117, 118, MATH168, PE Elective, RELT100, Social Science Choice (see list, p. 51)

#### Core—6

ARCH126, 150

#### Continued Undergraduate Enrollment Requirements—

2.5 Cumulative GPA

**Pre-Professional Year Two****Summer—4**

PHYS141

**General Education—4**

PE Elective, Religion Elective

**Core—22**

ARCH201, 202, 215, 247, 485, BSCM101, 207

**Minor Requirements—6**

ACCT121, 122

**Continued Undergraduate Enrollment Requirements**

1. Application and \$40 fee
2. Cumulative GPA of 2.75
3. Portfolio (Optional)
4. Three letters of recommendation (two must be from academic sources)
5. Letter of Intent
6. Official transcripts (transfer students only)
7. Work Experience: 100 hours of documented work experience in construction
8. Acceptance into Professional Degree

**Professional Years One & Two****General Education—9**

ENGL215, Religion electives

**Core—39**

ARCH435; BSCM215, 301, 302, 325, 349, 365, 401, 402, 410, 420, 430, 445, 455, 465

**Summer—6**

ARCH395

**Minor Requirements—15**

BSAD341; ECON225, 226; Upper Division electives

**Work Experience—500 hours**

500 hours of documented work experience in construction

**Total Credits for BSCM—137**

**Summer Abroad.** Each student is required to take ARCH395 Community Project in Architecture during a summer following Pre-Professional Year Two. A minimum of 6 credits must be earned.

**Work Experience.** As indicated above, students pursuing the BSCM must document 600 hours of work experience in the construction industry. 100 hours must be obtained prior to applying to the professional degree program and an additional 500 hours must be obtained prior to graduation. Please see School for Work Experience Requirement Form.

**Minor in Architectural Studies (23)**

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.

**Architecture****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 three-dimensional representation. *Spring, Summer*

**ARCH150 (3)****Introduction to Architecture**

Emphasis on design concepts, professional vocabulary, historical appreciation, contemporary issues, and values that are important to the mission of the School of Architecture, Art & Design. 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 systems. *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 (4)****Structures I**

Structural theory: statics by analytical and graphical solutions. Determinations of loads, resolution of force systems, and equilibrium analysis. Structural properties of shape (centroids, moment of inertia) and materials (stress, stiffness, modulus of elasticity). Shear and bending moments, deflection, column theory, introductory awareness of structural system behavior. Analysis and design of wood structures (joists, girders, columns). Introduction to the structural design process. Prerequisites: MATH168 & PHYS141. *Fall*

**ARCH215 (5)****Introduction to Design Studio**

Introduction to formal composition, architectural typology and principles of building context in the design of buildings and artifacts with simple program elements. Minimum cumulative GPA of 2.5. Prerequisite: ARCH126. *Fall*

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

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

**ARCH299 (1-4)****Independent Study**

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

**ARCH305 (4)****Structures II**

Structural problems in steel analysis and principles of concrete and masonry, lateral loads due to wind and seismic forces. Prerequisite: ARCH205. *Spring*

**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***

The design of buildings as it relates to landscape and to human experience with increased complexity of program and form. Prerequisites: ARCH247, admission to the Professional Degree Track. *Fall*

**ARCH330 \$ (6)**  
***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 (4)**  
***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 (4)**  
***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: PHYS141. *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.

**ARCH390/485 \$ ♦ (1-4)**  
***Special Topics in \_\_\_\_\_***

Based on selected topics of current interest in architecture offered by the School of Architecture, Art & Design. May be repeated in different topic areas. Topics include, but are not limited to:

Architecture of the Ancient Americas, Islamic Architecture, Furniture Design, Surveying.

**ARCH395/595 S (1-6)**  
***Community Project in Architecture***

"Hands-on" involvement in humanitarian and/ or service oriented projects in an on-site work environment. Work initiated by students requires prior approval of faculty. Graded on S/U basis. May be repeated for up to 6 credits.

**ARCH424 ♦ (2, 3)**  
***Islamic Architecture***

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

**ARCH425 ♦ (2, 3)**  
***Architecture of Ancient Americas***

A focused view of the architectural history that covers ancient North, Central and South Americas. Covers the vernacular architecture and art of the Native American cultures. Prerequisites: ARCH315 & 316.

**ARCH426 ♦ (2, 3)**  
***Far Eastern Architecture***

A focused view of the architectural history that covers ancient Far East. Covers the vernacular architecture and art from India to China, Japan and the Southeast Asian cultures. Prerequisites: ARCH315 & 316.

**ARCH434 \$ (3)**  
***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. *Spring*

**ARCH435 (3)**  
***Introduction to Building Information Modeling***

An introduction to Building Information Modeling (BIM) using Autodesk REVIT software. Corequisites: ARCH441, 449. *Fall*

**ARCH441 \$ (5)**  
***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. Prerequisites: ARCH205, 318, 330; Corequisites: ARCH435, 449. *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*

**ARCH445 ♦ (2)**  
***Furniture Design***

An exploratory course that prepares individuals to apply technical knowledge and skills to prepare and execute furniture design projects from assemblage to finish. Incorporates the safe use of a variety of hand and power tools and machinery. Projects

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vary according to the individual skill level of the student. May be repeated for up to 4 credits.

### 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; Corequisites: ARCH435, 441. *Fall*

### ARCH450 ◆ (4) **Applied Structures**

Application of the principles of statics and strength of materials to the design of reinforced concrete and masonry structures. Lateral forces, wind and seismic loads, and the structural divisions of the Architect's Registration Examination will be reviewed. Prerequisite: ARCH205. *Spring*

### ARCH459 (3) **Design Theory**

A survey and analysis of architectural thought, including readings from both historical and contemporary sources. Prerequisite: ARCH315. *Spring*

### ARCH480 ◆ (1-3) **Architectural Community Service**

Design of community service or architectural mission projects. May also include pre-construction management work associated with mission projects. Work initiated by students requires prior approval of faculty. May be repeated for up to 6 credits. Prerequisite: ARCH247.

### ARCH496 ◆ (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.

### ARCH499 (1-4) **Independent Research**

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

## Graduate

### ARCH521 (6) **Urban Design Studio**

Urban design proposal for a small town (or parts thereof), urban neighborhood, or college campus. Prerequisite: Completion of BSA. *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*

### ARCH530 \$ (6) **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*

### 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. *Fall*

### ARCH594 (6-16) **Practicum**

Experience under the supervision of a practicing, professional architect that meets the requirements of the Andrews University School of Architecture, Art & Design. May be for a for-profit or not-for-profit organization. Prerequisite: Acceptance to Master of Architecture degree year and Acceptance to Practicum Program. Graded on S/U basis.

### ARCH599 (1-4) **Independent Research**

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

## Construction Management

### BSCM101 (2) **History and Introduction to Construction Management**

A historical background into the development of the construction industry, the roles of the different participants and an overview of the construction process. Career choices, industry firms, and key players in the construction management process will be explored. Prerequisites: HIST117, 118, ENGL115.

### BSCM207 (2) **Regulatory Issues**

Examination of the regulations in planning, building, advocacy and civil rights rules. Includes investigative techniques, jurisdictional responsibilities and inspection procedures.

### BSCM215 (2) **Construction Equipment and Methods**

Construction equipment and selected construction methods including equipment application strategies, own/lease benefits and establishing operational costs for project estimating.

### BSCM301 (2) **Cost Estimating I**

Introduction to the estimating function and review and applications of material quantity survey techniques used in estimating costs of construction projects. Includes types of approximate and precise methods of estimating and their uses, and computer applications.

### BSCM302 (3) **Cost Estimating II**

Pricing and bidding of construction work including cost factors, labor and equipment, productivity factors, prices databases, job



direct and indirect costs, methods of estimating time, materials, equipment, subcontractors' work, general expenses, and profit, bid preparations and submission, and computer applications. Prerequisite: BSCM301

**BSCM325 (2)**  
**Structural Systems Design**

The study of typical construction materials as used in the design process. Concrete, wood, steel and composite structures and underlying mechanical and physical properties will be covered. Prerequisites: MATH168, PHYS141

**BSCM349 (3)**  
**Construction Documents**

This course examines construction documents for competitive bidding and execution of projects. Light and heavy construction types will be examined.

**BSCM365 (2)**  
**Site Construction and Surveying**

The study of critical aspects of site construction and surveying relating to on-site logistics.

**BSCM401 (3)**  
**Construction Management I**

Construction management concepts and practices, the management system, construction planning and programming, project control, environmental management, total quality management, and ethics in construction management.

**BSCM402 (3)**  
**Construction Management II**

A management course in contract documents, safety, planning, scheduling, production control, and law and labor. Topics include contracts, planning, cost and production peripheral documents, and cost and work analysis, scheduling, material handling, layout, payment scheduling, and inspections.

**BSCM410 (2)**  
**Project Planning & Scheduling**

Construction planning, scheduling, and communications required for project control, the practical and legal implications of each, as well as introduction to the use of scheduling software, and its benefits.

**BSCM420 (2)**  
**Construction Law**

Study of the United States legal system and contractual issues that are significant to construction managers, and addresses ethics in the construction industry. Legal issues arising from design and construction services, focusing on risk management and liability awareness.

**BSCM430 (3)**  
**Professional Practice**

Analyzes construction contracts, specifications, and practices with regard to business law and liability. Examines contractor, architect, and engineer responsibilities through case studies and class discussions.

**BSCM445 (3)**  
**Building Information Modeling—Cost Analysis**

Application of a Building Information Model that incorporates cost data, used for quantity takeoff and cost estimating. Prerequisite: ARCH435

**BSCM455 (3)**

**Building Information Modeling—Construction Management**

Application of a Building Information Model used to visualize a construction schedule and sequence. Prerequisite: BSCM445

**BSCM465 (3)**  
**Collaborative Project Delivery**

Application of project delivery in conjunction with a concurrent project within the School of Architecture, Art & Design. Building Information Modeling will be used as a method of applying cost analysis and project planning and scheduling. Prerequisite: BSCM455

**Interior Design**

**INT200 (3)**  
**Color Theory**

This course introduces students to the aesthetic, historical, perceptual, scientific, and psychological aspects of color and light and the implication of color principles and theories to interior design. Students will explore color through experimentation, observation and evaluation. Relevant design projects will be analyzed for their use of color theory.

**INT300 (2)**  
**Materials & Methods**

In this course students will examine non-textile based materials, available resources, and methods of production, construction and installation. Through a study of current product applications, they will learn how to select, specify and apply appropriate materials and finishes on the basis of aesthetics, material cost, environmental impact and performance.

**INT315 (3)**  
**History and Theory of Interiors**

This course is a survey of interior design throughout history. Emphasis is given to the historical, theoretical and cultural influences that have affected the design of the interior environment from antiquity through present-day. Prerequisites: HIST117, HIST118, ENGL115.

**INT341 (5)**  
**Interior Design Studio I**

Intermediate design studio building on previous design principles. Prerequisite: ARCH247 & acceptance into Professional Degree Program.

**INT342 (5)**  
**Interior Design Studio II**

Intermediate design studio building on previous design principles. Prerequisite: INT341.

**INT420 (3)**  
**Textiles**

This course introduces students to the technical and aesthetic aspects of textiles and their use in interior design. Emphasis is placed on product knowledge, specifications, technology, safety, testing, and terminology. New textiles and fibers and their application and performance will be studied.

**INT441 (5)**  
**Interior Design Studio I**

Advanced design studio building on previous design principles. Prerequisite: INT342.

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**INT442** (5)  
**Interior Design Studio II**  
 Advanced design studio building on previous design principles.  
 Prerequisite: INT441.

**BSCM445** (3)  
**Building Information Modeling—Cost Analysis**  
 Application of a Building Information Model that incorporates cost data, used for quantity takeoff and cost estimating.  
 Prerequisite: ARCH435

**INT435** (3)  
**Professional Practice**  
 This course explores standard business procedures commonly associated with the practice of interior design. Students will study various types of design practices, financial management and compensation, ethical practices, professional development, legal liability, and issues related to licensing and certification. The management of a typical interior design project will be studied, including writing proposals and contracts, specifications, bidding procedures, budgets, construction schedules, contractor negotiations and collaboration, and project [administration](#).  
[VISUAL ART & DESIGN](#)

**VISUAL ART & DESIGN**

Art and Design Center, Room 111  
 269-471-3450  
[www.andrews.edu/art/](http://www.andrews.edu/art/)  
[www.andrewsbfa.org](http://www.andrewsbfa.org)  
[www.610g.blogspot.com](http://www.610g.blogspot.com)

**Visual Art & Design Faculty**

Rhonda G. Root, *Chair*  
 Stefanie P. Elkins  
 Steven L. Hansen  
 Thomas J. Michaud  
 Diane J. Myers  
 Sharon J. Prest  
 David B. Sherwin  
 Douglas A. Taylor  
 Marc G. Ullom

**Emeritus**

Gregory J. Constantine ([gregcons@andrews.edu](mailto:gregcons@andrews.edu))

Academic Programs	Credits
BFA in Visual Art	
Emphasis Areas	
Fine Art	75-78
Illustration	75-78
Pre-Art Therapy	75-78
BFA in Visual Communication	
Emphasis Areas	
Art Direction/Advertising	75-78
Graphic Design	75-78
Web Design	75-78
BFA in Photography	
Emphasis Areas	
Commercial Photography	75-78
Documentary Film	75-78
Fine Art Photography	75-78
BA: Art	
Emphasis Areas	
Art History	42
Pre-Art Therapy	43
Visual Art	40
BS: Visual Arts Education	53
Minor in Art History	21
Minor in Graphic Design	22
Minor in Visual Art	22
Minor in Digital Media	21
Minor in Photography	20
Minor in Web Design	22-25

**Mission**

We, the Andrews University Department of Visual Art & Design, mentor students to be Christ-centered, socially responsible creative individuals by developing their artistic gifts in a nurturing spiritual environment.

**Department Goal**

It is the goal of the Department of Visual Art & Design to help each student achieve the traditional and digital skills necessary