



Architectural Design Studio (ADST) 556

Comprehensive Design of Complex Buildings (Revision 1)

Status:

Replaced with new revision, see the [course listing](#)  for the current revision 

Delivery mode:

[Paced study](#) . Delivered via Brightspace.

Credits:

6

Area of study:

Architecture

Prerequisites:

Undergraduate degree in architecture

Precluded:

None

Faculty:

[Faculty of Science and Technology](#) 

Notes:

This course is offered in January, May, and September. You may contact the FST Student Support at 1-855-362-2870 to inquire about other offerings.

This course is offered over 13 weeks. Students are required to attend one 3-hour evening video teleconference session per week.

This course is intended for students enrolled in the Graduate Diploma in Architecture (GD Arch) at the RAIC Centre for Architecture at Athabasca University.

Overview

Architectural Design Studio 556: Comprehensive Design of Complex Buildings is the first studio in the sequence of studios that comprise an important part of the GD Arch. You will develop a design for a building type that is a place of assembly, according to a coherent architectural idea and in response to a complex architectural program. This studio requires that the spaces be designed in a way that is appropriate to each activity and organized in accordance with the relationships required by the functional program and the site. Special attention will be given to the human dimension of both public and private spaces and to the integration and resolution of all building systems.

Outline

This studio course has three projects and two formal presentations. The first project is a precedent analysis of successful institutional projects. The second project, in which you design a complex building for a place of assembly, forms the majority of the course.

Each week, you will be asked to share your work in progress with your instructor and the other students in the studio. This weekly session is the equivalent of a desk critique (a session during which the architecture student sits down with their instructor to review their designs) given in a face-to-face studio.

These interactive meetings will be held in an online environment that includes video conferencing, audio conferencing, and social media, and will allow the instructor to provide feedback in the form of sketches beside or as a layer over your work. This is intended to be a productive working session much like you would experience in an architect's office. You will receive a full set of instructions for connecting to the virtual studio.

Learning outcomes

Adapted from Canadian Architectural Certification Board, **Canadian Education Standard** [↗](#).

After successfully completing this course, you should have developed

- *Understanding of* the fundamentals of visual perception and the principles and systems of order that inform two- and three-dimensional design, architectural composition, and urban design.
- *Ability to* use appropriate representational media, including freehand drawing and computer technology, to convey essential information at each stage of the pre-design and design process.
- *Ability to* make technically precise drawings and develop an outline specification for a proposed building.
- *Ability to* apply fundamental architectural principles in the design of buildings, interior spaces, and sites, and to respond to natural and built site characteristics in the development of a program and the design of a project.
- *Ability to* prepare a comprehensive program for an architectural project that accounts for client and user needs, appropriate precedents, space and equipment requirements, the relevant laws and standards, and site selection and design assessment criteria.
- *Ability to* produce and document a comprehensive architectural project based on a building program and a site, including the development of forms and spaces demonstrating an understanding of structural and environmental systems, building envelope systems, building assemblies, and lifesafety provisions, and of the principles of sustainability and environmental stewardship.
- *Understanding of* principles of structural behaviour in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems.
- *Understanding of* the basic principles and appropriate application and performance of environmental systems, including acoustical, lighting, climate modification systems, and energy use.
- *Understanding of* the basic principles and appropriate application and performance of plumbing, electrical, vertical transportation,

communication, security, and fire protection systems.

- *Understanding of the basic building science principles and the appropriate application of building envelope materials and assemblies in the Canadian environment.*
- *Understanding of the basic principles and appropriate application and performance of various construction materials, products, components, and assemblies common to the Canadian construction industry, including their environmental impact and reuse.*
- *Ability to integrate appropriate technical systems into a complex building and to use appropriate representational media, including freehand drawing and computer technology, to convey essential technical elements at each stage of the design development process.*

Evaluation

To **receive credit**  for ADST 556, you must achieve a cumulative grade of at least 67 percent. Your work in this course will be evaluated based on two projects, in which you will scan and submit your work to your instructor at each stage.

The weighting of the projects is as follows:

Activity	Weight	Complete by
Project 1: Comparative Analysis of Precedents	10%	Week 2
Review Project 2 and select your project site and option.		Week 2
Project 2A: Design Brief	15%	Week 4
Project 2B: Schematic Design	20%	Week 7
Midterm Presentation		Week 7
Project 2C: Final Project	45%	Week 13

Activity	Weight	Complete by
Final Presentation		Week 13
Project 3A: Reflecting on What You Have Learned	10%	Week 14
Project 3B: Submit Two Images to the Gallery		Week 14
Total	100%	

Materials

Although there is no textbook for this studio, your instructor may assign readings as they deem appropriate during the course.

Student-provided tools and equipment

You must provide a digital camera for your own use, as well as a few other tools. The items you will need to provide are listed below:

Photography tools:

- Smartphone with camera, or digital camera (SLR preferable)

Drawing materials:

- 35.56 cm × 43.18 cm (14" × 17") Strathmore 300 series acid-free drawing paper
- 22.86 cm × 30.48 cm (9" × 12") Strathmore 300 series sketchbook
- white or beige 2-ply card stock
- trace paper

Drawing tools:

- 0.30 mm precision felt pen (or similar)
- 2H to 2B pencils or mechanical pencils

- › coloured markers and/or pencil crayons
- › compass
- › protractor
- › ruler
- › drawing board (recommended)

Modeling materials:

- white or beige 2-ply card stock
- clear plastic sheet

Modeling tools:

- › self-healing cutting mat: 18" × 24" (45.75 cm × 60.96 cm) or larger preferable
- › metal-edge cork-back ruler (various sizes)
- › stainless steel knife
- › masking tape/painter's tape
- › white glue
- › modeling set square

Use of computers

You may use computers to design and complete your projects for this studio (except where noted), but remember that hand drawing and modeling skills remain essential to the development of an architect. You are encouraged you to use those skills wherever possible.

Important links

- [RAIC Centre for Architecture](#) 
- [Graduate Diploma in Architecture](#) 
- [Courses](#) 
- [Fees and Funding](#) 

Athabasca University reserves the right to amend course outlines occasionally and without notice. Courses offered by other delivery modes may vary from their individualized study counterparts.

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