



South Central College

ARCH 1301 Studio 3

Common Course Outline

Course Information

Description An advanced studio course developing a coordinated set of working drawings for a heavy commercial construction project. This course will advance students' knowledge of commercial construction principles, the applications of architectural and engineering systems, and the scheduling/management of construction document preparation. The research/incorporation of applicable codes shall be major factors in developing this set of construction documents. A progression to advanced Building Information Modeling (BIM) strategies will be incorporated. Emphasis on critical thinking, problem solving, and software application.

Total Credits 4

Total Hours 96

Types of Instruction

Instruction Type	Credits/Hours
Lecture	2/32
Lab	2/64

Pre/Corequisites

ARCH 1201 Studio 2

ARCH 1302 Revit 2 BIM Management

Institutional Core Competencies

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Outcomes

1. Demonstrate building design knowledge

Learning Objectives

- Demonstrate an awareness of architectural requirements
- Demonstrate an awareness of structural requirements
- Demonstrate an awareness of civil requirements
- Demonstrate an awareness of building code requirements

2. Demonstrate an understanding of heavy commercial construction

Learning Objectives

Identify heavy commercial construction materials & methods
Explore building styles used in commercial construction
Identify various terminology used in light commercial construction

3. Demonstrate plan coordination for commercial construction documents

Learning Objectives

Define the method of commercial construction used in the project
Research applicable building codes as they pertain to the project
Identify information necessary for the coordination of commercial working drawings
Categorize and organize construction document content

4. Produce heavy commercial construction drawings

Learning Objectives

Draft a title sheet
Draft a foundation plan
Draft a reflected ceiling plan
Draft a floorplan
Draft a roof plan
Draft exterior elevations
Draft interior elevations and details
Draft building sections and wall sections
Draft wall-door-frame-window types and schedules
Draft construction details
Draw notes, annotation, symbols, and dimensions required for complete project information
Draft an architectural site plan

5. Demonstrate knowledge of industry design resources and regulations

Learning Objectives

Research and apply graphic standards
Research and implement the ADA regulations
Research and implement architectural product requirements

6. Implement Building Information Modeling (BIM) software

Learning Objectives

Apply advanced draw and modify commands
Apply advanced model and view tools
Source and apply library families
Produce accurate output for construction drawings
Utilize project management skills

7. Develop knowledge of fire and sounds resistive design concepts

Learning Objectives

Demonstrate an understanding of building fire separation
Demonstrate an understanding of fire rating
Demonstrate an understanding of STM rating
Discuss fire rated wall assemblies and egress

8. Develop knowledge of energy related design concepts

Learning Objectives

Demonstrate an understanding the building envelope
Demonstrate an understanding of R-value
Discuss energy related wall assemblies
Discuss LEED project specific compliant finish materials

9. Develop and apply critical thinking and problem-solving skills

Learning Objectives

Recognize the questions requiring solution

Apply appropriate strategies to achieve a result
Incorporate information judiciously and purposefully

10. Demonstrate ability to research

Learning Objectives

Institute requirements set forth by the Minnesota Building Code
Examine zoning ordinances and apply requirements
Research and implement the Minnesota Energy Code

11. Practice time management skills

Learning Objectives

Cultivate self-starting and resourcefulness
Demonstrate organizational skills
Learn to prioritize tasks to manage workload
Develop alternative study practices to maintain focus

12. Practice professional workplace practices

Learning Objectives

Ability to integrate various technologies
Proficient in computer software and peripherals
Demonstrate exceptional participation and attendance

SCC Accessibility Statement

Disability Services provides accommodations and other supports to students with permanent and temporary disabilities that affect their SCC experience. Disabilities may include mental health (anxiety, depression, PTSD), ADHD, learning disabilities, chronic health conditions (migraine, fibromyalgia), sensory disabilities, and temporary disabilities (broken arm, surgery). Common accommodations are extended test time, private room for testing, audiobooks, and sign language interpreter.

Contact us: Faribault A116 (507) 332-5847. North Mankato E112 (507) 389-7222. ds@southcentral.edu
www.southcentral.edu/disability

Grading Scale

Each project, quiz, activity, and assignment will have an assigned possible number of points. Points will be awarded based on correctness of work. The total of all points earned will be divided by the maximum possible to determine a percentage. Late assignments will be accepted anytime until the semesters end **Any work handed in late (regardless of duration) will incur a 10% deduct from the grade for that instance.**

Grades will be based on the following percentage of points earned

A	92-100
A-	90-91.9
B+	87-89.9
B	83-86.9
B-	80-82.9
C+	77-79.9
C	73-76.9
C-	70-72.9

Note: Grades below 70% will not count towards degree completion, course must be repeated

D+	67-69.9
D	63-66.9
D-	60-62.9
F	Below 60

Attendance Expectation

Class attendance / participation contributes significantly to academic success. Students who attend classes regularly tend to earn higher grades and have higher passing rates in courses. Excessive absences may jeopardize your grades or even your ability to continue in this course. **Class participation will be part of your grade! The following will apply in all ARCH program courses:**

- An absence is excused **ONLY** if the student contacts the instructor **BEFORE** class.
- If you are absent from class for any reason, you are responsible for all missed work and for contacting the instructor promptly.
- Unexcused absences for 3 consecutive class sessions will reduce your final grade by 10% after the first occurrence and automatic course failure after the second occurrence. Overall attendance falling below 50% will result in automatic course failure.
- Online attendance is available at the instructor's discretion. It is reserved for extenuating circumstances and is **NOT** a replacement for attendance.