

**Northwest Arkansas Community College**  
(Workforce Division)

**Discipline Code**

CST

**Course Number**

2223

**Course Title**

Construction Methods II

**Catalog Description**

This course offers the student insights into Commercial construction process. Topics include Site Evaluation/Layout and Development, Excavations and Foundations, Formwork, Concrete, Structural Timber, Structural Steel, Floor and Roof Systems, Insulating and Finishing. Lab work includes but is not limited to forming and pouring concrete.

**Prerequisites**

CST 2213

**Credit Hours**

3 credit hours

**Contact hours**

45 lecture contact hours

**Load hours**

3 load hours

**Semesters Offered**

Fall, Spring & Summer

**ACTS Equivalent**

N/A

**Grade Mode**

A-F

**Learning Outcomes**

Upon completing this course, the student should be able to:

- Interpret and utilize a geotechnical report to evaluate a construction site.

- Plan the temporary facilities for a commercial construction project.
- Apply basic SWPPP principles to a construction site.
- Analyze site plan information to verify grading and sewer design data.
- Analyze the formwork required for a reinforced concrete wall system.
- Analyze the reinforcing requirements for a concrete building.
- Describe the principles of structural steel framing systems.
- Describe the principles of timber framing systems.
- Describe the principles of masonry construction.
- Identify various applications of commercial finishing products both interior and exterior.

### **General Education Outcomes Supported**

- Students develop higher order thinking skills.
- Students can write clear, coherent, well-organized documents, substantially free of errors.
- Students develop effective oral communication skills.
- Students can achieve mathematical literacy.
- Students demonstrate information literacy.

### **Standard Practices**

#### **Topics list**

- Site Evaluation and Layout
- Excavations
- Foundations
- Concrete Formwork
- Reinforcing Concrete
- Steel Construction
- Structural Timber Framing
- Finishing

#### **Learning activities**

- Courses must, at a minimum, cover the core learning outcomes for each topic. Faculty may add to these outcomes, but may not omit any of them.
- Lab safety and equipment orientation and enforcement of safety protocols is the responsibility of each faculty member.
- Hands-on laboratory exercises solidify six key learning principles used in all commercial construction.

- Commercial construction site tours provide a living laboratory to demonstrate a variety of construction materials and methods outlined in the text and in the lectures.
- Students must maintain a photo journal highlighting construction techniques they've observed in their daily lives.
- Since all general education outcomes are supported by specific course and program outcomes, all instructors should include learning activities that develop these outcomes in their courses and identify them in course syllabi. Instructors should describe how these activities will be evaluated in their course syllabi and/or reflected in their gradebooks.

### **Assessments**

Exams covering multiple aspects of concrete, steel, and wood applications within the commercial construction industry, lab exercises to reinforce coursework, a photo journal, and an oral presentation covering the contents of a term paper.

### **Grading guidelines**

- 90% score of all graded assignments = A
- 80% - 89% score on all graded assignments = B
- 70% - 79% score on all graded assignments = C
- 60% - 69% score on all graded assignments = D
- <60% score on all graded assignments = F

**Revision Date** May 11, 2022