South Central College

BDET 1130 Materials and Methods

Course Outcome Summary

Course Information

Description The basic construction methods and materials used in building technologies are examined. Common building materials such as wood, masonry, concrete, and metals will be analyzed as it relates to commercial applications. The classification of materials and project delivery systems; application of principles of building science to construction sites; relationship between technology and sustainability will be addressed. (Prerequisites: None)

Total Credits 3

Total Hours 48

Types of Instruction

Instruction Type	Credits/Hours
Lecture	
Lab	

Pre/Corequisites

None

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 Competencies

1. Describe the principles of construction and sustainability.

Learning Objectives

Demonstrate an understanding of LEED prinicples
Define various structural frame construction.
Define the building construction process.
Define materials that are sustainable.

2. Describe the methods used in steel-framed construction.

Learning Objectives

Explain non-loading bearing light-gauge steel framing.
Explain loading bearing light-gauge steel framing.
Define structural steel.

3. Describe the methods used in masonry construction.

Learning Objectives
Explain solid masonry construction.
Define masonry veneer.
Identify various bonds and patterns.

4. Describe the methods used in concrete construction.

Learning Objectives
Define precast concrete construction.
Define prestressed concrete construction.
Explain site-cast concrete construction.

5. Identify the components that make up a foundation.

Learning Objectives
Define the role of footings.
Define the role of structural steel.
List the different types of foundation walls.

6. List the components used in floor construction.

Learning Objectives
Identify the basic terms in a floor system.
Identify conventional floor framing.
Determine lumber sizes from the span tables in the IBC.
Identify an engineered floor system.
Identify different floor finishes.

7. Identify the components used in a structural wall assembly.

Learning Objectives
Identify the basic terms in wall composition.
Describe platform and balloon framing.
Identify various wall finishes.

8. List the components used in roof construction.

Learning Objectives
Identify the basic terms in a roof system.
Identify conventional roof framing.
Determine lumber sizes from the span tables in the IBC.
Identify a trussed roof system.
Identify various roof finishes.

9. Define the different types of interior wall assemblies.

Learning Objectives
Identify casement, awning, sliding, double-hung, hopper, and fixed windows.
Select single, double, bifold, sliding, dutch, patio, accordion, and overhead doors.
List the materials used in window and door construction.

SCC Accessibility Statement

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: www.southcentral.edu/disability

This material can be made available in alternative formats by contacting the Academic Support Center at 507-389-7222.