



MASTER COURSE OUTLINE

A. CMBT 1200 Construction Methods and Materials

B. COURSE 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 reviewed as it relates to commercial construction applications. Processes utilized in material handling and installation are examined for their effect on managing design and construction projects. **(3Cr – 2 lect, 1 lab)**

C. * Core Theme: Critical Thinking

D. MAJOR CONTENT AREAS:

- Building and framing systems
- Building terminology
- Project delivery methods
- Product and assemblies
- Building assemblies, materials, and how they integrate with other building systems
- Recognize importance of combining function with aesthetics
- Design phases

E. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

<u>GOAL TYPE</u>	<u>OBJECTIVES</u>	<u>OUTCOMES</u>
**Critical Thinking	Students will be able to gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.	The student will successfully 1. apply an understanding building assemblies.
<u>CS</u>	describe the principles of construction and sustainability.	<ol style="list-style-type: none"> 1. demonstrate an understanding of LEED principles. 2. define various structural frame construction. 3. define the building construction process. 4. define materials that are sustainable.
<u>CS</u>	describe the methods used in steel-framed construction.	<ol style="list-style-type: none"> 1. explain non-loading bearing light-gauge steel framing. 2. explain loading bearing light-gauge steel framing.

		3. define structural steel.
<u>CS</u>	describe the methods used in masonry construction.	<ol style="list-style-type: none"> 1. explain solid masonry construction. 2. define masonry veneer. 3. identify various bonds and patterns.
<u>CS</u>	describe the methods used in concrete construction.	<ol style="list-style-type: none"> 1. define precast concrete construction. 2. define prestressed concrete construction. 3. explain site-cast concrete construction.
<u>CS</u>	identify the components that make up a foundation.	<ol style="list-style-type: none"> 1. define the role of footings. 2. define the role of structural steel. 3. dist the different types of foundation walls.
<u>CS</u>	list the components used in floor construction.	<ol style="list-style-type: none"> 1. identify the basic terms in a floor system. 2. identify conventional floor framing. 3. identify an engineered floor system 4. identify different floor finishes
<u>CS</u>	identify the components used in a structural wall assembly	<ol style="list-style-type: none"> 1. identify the basic terms in wall composition. 2. describe platform and balloon framing. 3. identify various wall finishes.
<u>CS</u>	define the different types of interior wall assemblies	<ol style="list-style-type: none"> 1. identify shaft wall locations and construction. 2. describe Fire-wall construction. 3. describe STC rated wall assemblies. 4. describe fire rated wall assemblies.
<u>CS</u>	identify project delivery methods	<ol style="list-style-type: none"> 1. describe design-build delivery method. 2. describe guaranteed maximum price delivery method. 3. describe fast-trak. 4. describe design-bid-building delivery method.

F. SPECIAL INFORMATION:

This course may require use of the Internet, the submission of electronically prepared documents and the use of a course management software program. Students who have a disability and need accommodations should contact the instructor or the Student Success Center at the beginning of the semester. This information will be made available in alternative format, such as Braille, large print, or current media, upon request.

- laptop computer, calculator,

G. COURSE CODING INFORMATION: Course Code A/Class Maximum 48; Letter Grade

Revision date: 03/01/2021

AASC Approval date:

*Riverland Community College Disciplines	MnTC Goal Number
Communication (CM)	1
Natural Sciences (NS)	3
Mathematics/Logical Reasoning (MA)	4
History and the Social & Behavioral Sciences (SS)	5
Humanities and Fine Arts (HU)	6

**Riverland Community College Core Themes	MnTC Goal Number
Critical Thinking (CT)	2
Human Diversity (HD)	7
Global Perspective (GP)	8
Ethical and Civic Responsibility (EC)	9
People and the Environment (PE)	10

*These five MnTC Goals have been identified as Riverland Community College Disciplines.

** These five MnTC Goals have been identified as Riverland Community College Core Themes.

NOTE: The Minnesota Transfer Curriculum “10 Goal Areas of Emphasis” are reflected in the five required discipline areas and five core themes noted in the Riverland Community College program of study guide and/or college catalog.