



## MASTER COURSE OUTLINE

A. CARP 1135 Roof Framing, Shingling, and Flashing

B. COURSE DESCRIPTION:

This course addresses how to properly install exterior wall components and roof framing. The student installs sheathing, siding, and completes a gable roof structure. Different types of materials and procedures for each process are covered. This course also introduces the erection of trusses and hand-framing of rafters. Correct methods of shingling, flashing, and proper ventilation are included. This course is part of the Carpentry program which is accredited by the Home Builders Institute (HBI) and the National Association of Home Builders (NAHB). Prerequisites: CARP 1110.  
**(4 Cr – 1 lect, 3 lab)**

C. \*Core Theme: Critical Thinking

D. RIVERLAND INSTITUTIONAL LEARNING OUTCOMES:

This course addresses the following Riverland Institutional Learning Outcome(s):

- ILO 1: critical thinking (*Core Theme Goal 2*)
- ILO 2: awareness of the larger global community (*Core Theme Goal 7 or 8*)
- ILO 3: ethical, engaged citizenship (*Core Theme Goal 9 or Goal 10*)
- ILO 4: communication and collaboration (*Discipline Goal 1 and by any learning outcome(s) involving communication or collaboration*)

E. MAJOR CONTENT AREAS:

- Cutting and installation of gable roof rafters
- Types of roof coverings and applications
- Safety methods used in roof framing, shingling, and flashing
- Framing rafters and trusses
- Installation of asphalt shingles and other weatherproofing materials
- Shingles and flashing
- Roof and soffit installation and venting procedures
- Scaffold safety with fall protection

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

<u>GOAL TYPE</u>	<u>OBJECTIVES</u>	<u>OUTCOMES</u>
	<b>Students will be able to</b>	<b>The student will successfully</b>
<u>*Critical Thinking</u>	gather factual information and apply it to a given problem in a manner that is relevant,	1. gather and install roofing material required for a construction project.

	clear, comprehensive, and conscious of possible bias in the information selected.	<ol style="list-style-type: none"> <li>2. calculate and complete all necessary procedures for a roof covering.</li> <li>3. perform all roof covering to code.</li> </ol>
<u>CS</u>	examine different types and procedures of wall and roof sheathing.	<ol style="list-style-type: none"> <li>1. identify and explain application of oriented strand board (OSB) plywood and fiberboard sheathing.</li> </ol>
<u>CS</u>	create safe work area.	<ol style="list-style-type: none"> <li>1. demonstrate safe work habits and properly use safety equipment.</li> <li>2. identify tools and equipment that need repair or removal from service.</li> </ol>
<u>CS</u>	examine different roof types and cut and install gable rafters.	<ol style="list-style-type: none"> <li>1. list four different roof types and compare functions.</li> <li>2. explain and demonstrate different rafter layout procedures.</li> <li>3. cut and install gable rafter.</li> </ol>
<u>CS</u>	understand shingling and flashing.	<ol style="list-style-type: none"> <li>1. complete roof correctly to warranty standards.</li> <li>2. flash roof as needed according to code.</li> </ol>
<u>CS</u>	understand venting and soffit.	<ol style="list-style-type: none"> <li>1. complete soffit and venting correctly to industry standards.</li> <li>2. identify roof vent using various methods.</li> <li>3. identify soffit and fascia installation methods and materials.</li> </ol>
<u>CS</u>	understand framing rafters, trusses, and shingling methods.	<ol style="list-style-type: none"> <li>1. follow plan for truss layout.</li> <li>2. hand frame areas as needed.</li> <li>3. brace roof according to specifications.</li> <li>4. install drip edge, asphalt shingles, and roof venting.</li> </ol>

#### G. 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 Accessibility Services 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.

#### H. COURSE CODING INFORMATION:

Course Code S/Class Maximum 28; Letter Grade

Revision date: 03/10/14; 04/03/18; 04/02/24

AASC Approval date: 04/17/18; 04/16/24

\*These five MnTC Goals have been identified as Riverland Community College Core Themes. Every course in the Riverland Community College curriculum shall meet outcomes from one of these themes.

\*\*These five MnTC Goals have been identified as Riverland Community College Disciplines. Riverland's MnTC courses also shall meet outcomes from a Discipline Area.

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.

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

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