



## MASTER COURSE OUTLINE

A. IMMR 2750 Piping Systems and Plumbing

B. COURSE DESCRIPTION:

This course introduces basic piping practices and identification of fittings, appliances and fixtures including galvanized and black pipe, plastic pipe, and copper tubing. Students are required to follow blueprints to fabricate, install, and repair piping projects.  
**(3 Cr – 1 lect, 2 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:

- Shop safety
- Pipe types
- Fittings
- Piping tools
- Pipe joining
- Pipe assembly
- Blueprint requirements

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

<u>GOAL TYPE</u>	<u>OBJECTIVES</u>	<u>OUTCOMES</u>
<u>**Critical Thinking</u>	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.	1. identify pipes and fittings used to join them.
<u>CS</u>	identify different piping methods and fittings.	1. complete a pipe threading project.

<u>CS</u>	determine threading operations.	1. use hand and power threader to install threads on black pipe.
<u>CS</u>	determine soldering operations on copper pipe.	1. perform proper steps required to join copper pipe.
<u>CS</u>	determine plastic pipe joining.	1. perform proper steps required to join plastic pipe.
<u>CS</u>	identify tools and brakes used for sheet metal fabrication.	1. use tools and brakes for the fabrication of sheet metal parts following a blueprint.

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 24; Letter Grade

Revision date: 01/14/11; 10/03/22

AASC Approval date: 03/22/11; 12/13/22

<b>*Riverland Community College Disciplines</b>	<b>MnTC Goal Number</b>
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

<b>**Riverland Community College Core Themes</b>	<b>MnTC Goal Number</b>
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.