MASTER COURSE OUTLINE

A. MATH 1020 Technical Math

B. COURSE DESCRIPTION:

This course covers basic mathematics and elements of algebra that will prepare students for success in their specific technical areas. Students will develop their problem-solving skills and master mathematical concepts. Students will receive a grade for this course. Prerequisite: Appropriate placement in course based on Multiple Measures for Course Placement – Math Decision Band Chart.
(2 Cr – 2 lect, 0 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:

- Fractional operations
- Prime numbers
- Calculator usage
- Exponents
- Scientific notation
- Exponential, decimal, and mixed number operations
- English measurement
- Metric measurement
- Metric-English, English-metric conversions
- Percentages
- Industrial formulas
- Algebraic expressions
- Ratio/proportion

- Geometric shapes
- Trigonometric functions

F. GOAL TYPES, OBJECTIVES, AND OUTCOMES:

GOAL TYPE	OBJECTIVES Students will be able to	OUTCOMES The student will successfully
**Critical Thinking	imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.	1. analyze and find solutions to applied problems.
CS	demonstrate the basic skills of arithmetic fundamentals using fractions, decimals, ratios, proportions and percents.	1. apply basic math skills to solve applied problems.
CS	demonstrate an understanding of using trigonometric ratios involving right triangles.	1. solve right triangles using trigonometric ratios.
CS	demonstrate accuracy when converting units in applied technical problems.	1. accurately convert measures in English and metric units.

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. A scientific calculator is required.

H. COURSE CODING INFORMATION:

Course Code A/Class Maximum 48; Letter Grade

Revision date: 01/22/19; 09/29/22; 03/14/23
AASC Approval date: 02/19/19; 10/18/22; 03/28/23

***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.