MASTER COURSE OUTLINE

A. IMMR 2855 Maintenance Capstone

B. COURSE DESCRIPTION:

The Capstone Project is an opportunity for students to demonstrate what they know and to showcase their achievement. The project must be successfully completed as a component of the Industrial Maintenance, Welding or Automation Robotics Engineering Technology program, which can apply their prior learning into a final internship or lab project. The Capstone is a fitting conclusion to a student's education because through this endeavor, one can demonstrate accumulated skills in reasoning, research, problem solving, human interaction, organization, and public speaking. This course may also include an internship and will follow the Riverland internship guidelines. This course may also be taken in variable increments of 1 to 5 credits. Prerequisite: Successful completion of 12 technical credits in Welding, Industrial Maintenance or Automation Robotics Engineering Technology or consent of instructor.
(1-5 Variable Cr, 0 lect, 48-240 lab hours)

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:

- Demonstrate job interviewing and application skills.
- Exhibit acceptable work attire and grooming techniques.
- Demonstrate time management.
- Demonstrate safety practices.
- Demonstrate initiative courtesy, punctuality, dependability.
- Demonstrate cooperation and professional attitude.
- Accept constructive criticism.
- Follow employer's policies/procedures and supervisor's instructions.
- Identify organizational structure.
- Demonstrate confidentiality.

- Apply professional ethics.
- Demonstrate professional image, positive communication, and problem-solving skills.
- Carry out training plan goal.

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

GOAL TYPE	OBJECTIVES Students will be able to	OUTCOMES The student will successfully
**Critical Thinking	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. review project or internship plan. 2. get approval from instructor and/or work supervisor. 3. develop a timeline to complete the project with set work or lab hours. 4. analyze problem solving activities. 5. demonstrate prior program technical skills to internship or project.
CS	demonstrate work/lab safety.	1. review lab safety. 2. demonstrate lab safety. 3. explain safety systems.
CS	validate project requirements.	1. identify project validation. 2. demonstrate validation methods. 3. objectives define project as compared to requirements. 4. document project validation results.
CS	construct project.	1. explain project concept. 2. develop project plan. 3. gather components.
CS	keep project research journal.	1. record necessary data organized in a notebook. 2. arrange information in logical fashion. 3. assemble a Bill of Materials (BOM).
CS	present final model/project or summary of internship.	1. describe project concept. 2. discuss improvements and gather peer feedback. 3. measure success based on data verses project concept. 4. present project results.

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 I /Class Maximum 30; Pass/No Credit

Revision date:
AASC Approval date: 12/13/22

*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.