



MASTER COURSE OUTLINE

A. DESL 2130 Agricultural Equipment Technologies I

B. COURSE DESCRIPTION:

This course covers the basic skills needed to understand agricultural equipment: Planters and tractors. Lab work includes preventive maintenance (PM), inspections of equipment, general repair, safety awareness and understanding of electrical components.

(2 Cr – 1 lect, 1 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:

- Maintenance Schedules
 - Timeframe
 - Prevent breakdowns
- Electrical Components
 - Introduction to diagnostics
 - CAN systems
- Preventive maintenance (PM)
 - Inspection
 - Final drives
 - Bearings
 - Hydraulics
 - Power Take Offs (PTOs)
 - Safety awareness and best practices
- Transmissions
 - Standard
 - Power shift
 - Continuous Variable Transmission (CVT)

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

<u>GOAL TYPE</u>	<u>OBJECTIVES</u> Students will be able to	<u>OUTCOMES</u> The student will successfully
<u>**Critical Thinking</u>	gather factual information and apply it to a given equipment problem in a manner that is relevant, clear and comprehensive.	1. articulate the problems found with agricultural equipment. 2. critique the differences between each equipment.
<u>CS</u>	perform inspections on agricultural equipment.	1. analyze techniques and correct procedures with inspections.
<u>CS</u>	perform repairs determined from preventive maintenance (PM).	1. describe the utilization of maintenance schedules.
<u>CS</u>	perform proper diagnostic practices.	1. apply proper diagnostic practices.

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.

The student will need access to and use of a laptop computer capable of running required software.

H. COURSE CODING INFORMATION:

Course Code S/Class Maximum 24; Letter Grade

Revision date: 01/10/20; 10/23/23

AASC Approval date: 3/24/20; 12/11/23

*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.

Riverland