



## MASTER COURSE OUTLINE

A. DESL 2230 Agricultural Equipment Technologies II

B. COURSE DESCRIPTION:

This course covers the basic skills needed to understand agricultural equipment operations: the flow, repairs, adjustments and inspections of a combine, corn-head and platform. Lab work includes preventive maintenance (PM), understanding crop processing, maintenance scheduling, basic repairs and safe work practices.

**(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:

- Agricultural equipment – crop processing:
  - The flow i.e., steps that come first, then second, then third...
- Preventive Maintenance (PM)
- Inspections:
  - review parts, bearings, belts, defects, failures, number of hours on machine
- Repair:
  - Basic adjustments, adjust and repair, final drives-gear box
- Maintenance schedule
- CAN Systems
- Safe work practices

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 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>	explain flow of grain from input to output as it relates to specific agricultural equipment.	1. perform Preventive Maintenance (PM). 2. complete inspections to review parts for defects and failures.
<u>CS</u>	define proper safety precautions and safety work practices.	1. work in and around equipment utilizing proper safety precautions.
<u>CS</u>	describe the agricultural equipment components.	1. perform basic AG equipment repairs: brakes, hydraulics, final drives-gear box.

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: 03/24/20; 12/11/23

<b>*Riverland Community College Disciplines</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>

<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>

\*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