



MASTER COURSE OUTLINE

A. DESL 1103 Applied Diesel Engines Lab

B. COURSE DESCRIPTION:

This course requires students to safely disassemble a diesel training engine. The students clean up, label, measure, evaluate, and properly reassemble all components. Adjustments are made to the engine's fuel system. The project engine must be correctly assembled and run properly at the end of the course. A workbook is completed which tracks progress through the project. This course, along with other program courses, satisfies the task requirements set forth by the Automotive Service Excellence (ASE) Education Foundation accreditation.
(3 Cr – 0 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:

- Diesel engine disassembly
- Parts organization, cleaning, identification, and evaluation
- Precision measuring related to diesel engine repair
- Diesel engine assembly and final adjustments
- Safe engine operation and testing

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 problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.	1. perform disassembly, cleaning, measuring, reassembly, and test run.
<u>CS</u>	demonstrate safe skills in the shop related to engine disassembly, parts cleaning, measuring, and inspection.	1. complete instructor approved preliminary task list.

<u>CS</u>	understand project engine reassembly.	1. reassemble the project engine.
<u>CS</u>	test run and make final adjustments to the project engine.	1. run engine and complete final adjustments.

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 25; Letter Grade

Revision date: 01/10/20; 03/03/26

AASC Approval date: 04/19/11; 03/24/20; 03/17/26

*These five MnTC Goals have been identified as Riverland Community College Core Themes. Every course in the Riverland Community College curriculum shall meet outcomes from one of these themes.

**These five MnTC Goals have been identified as Riverland Community College Disciplines. Riverland's MnTC courses also shall meet outcomes from a Discipline Area.

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 Community College Core Themes	MnTC Goal Number
Critical Thinking (CT)	2
Human Diversity (HD)	7A, 7B, 7A/B
Global Perspective (GP)	8
Ethical and Civic Responsibility (EC)	9
People and the Environment (PE)	10

**Riverland Community College Discipline Areas	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