



MASTER COURSE OUTLINE

A. DESL 2119 Commercial Vehicle Steering and Suspension Systems

B. COURSE DESCRIPTION:

This course covers manual and power steering systems common on today's medium and heavy trucks. Steering axle alignment and repair are covered as well as tire wear analysis. The second part of the course introduces popular suspension systems found on commercial vehicles. Drive axle alignment, frames, spring and air ride suspension repair and adjustment are also covered. This course, along with other program courses, satisfies the task requirements set forth by Automotive Service Excellence (ASE) Education Foundation accreditation. Prerequisites: DESL 1101.
(3 Cr – 1 lect, 2 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:

- Vehicle frame repair and maintenance
- Commercial vehicle (CV) suspension systems identification, maintenance, and repair
- CV steering systems identification, maintenance, and repair
- CV axle alignment

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

<u>GOAL TYPE</u>	<u>OBJECTIVES</u>	<u>OUTCOMES</u>
	Students will be able to	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. analyze commercial vehicle (CV) steering and suspension systems.
<u>CS</u>	identify common CV suspension systems.	1. analyze each suspension present.

<u>CS</u>	identify common CV suspension system problems.	1. repair vehicle suspension.
<u>CS</u>	diagnose common CV steering system problems.	1. determine and correct steering problems.
<u>CS</u>	maintain and repair common CV steering systems.	1. complete repair of a vehicle's steering system.

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; 3/24/20; 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