



MASTER COURSE OUTLINE

A. AUTO 2475 AV Technology and Applications

B. COURSE DESCRIPTION:

This course will give the student a thorough understanding of what Autonomous Vehicles (AV) are, how to diagnose, and calibrate those systems. The student will utilize AV equipped vehicles, aftermarket and factory diagnostic equipment. Prerequisite: AUTO 2470
(4 Cr – 2 lect, 2 lab)

C. Core Theme: Critical Thinking; Ethical and Civic Responsibility

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:

- Understand, diagnose and calibrate AV systems

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

<u>GOAL TYPE</u>	<u>OBJECTIVES</u>	<u>OUTCOMES</u>
**Critical Thinking	Students will be able to 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. The student will be able to diagnose actual AV-related problems using information gathered.
**People and the Environment	articulate and defend the actions they would take on various environmental issues.	1. The student will understand the important of minimizing pollution and resource usage.
<u>CS</u>	identify AV technology found in a particular vehicle.	2. Successfully identify technology used by visual inspection and/or electronic service information.
<u>CS</u>	perform AV diagnosis and calibration.	1. As a lab competency, successfully perform an AV calibration on a provided vehicle.

<u>CS</u>	recognize common AV problems.	1. Successfully diagnose common AV problems using service information and diagnostic tools.
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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:

AASC Approval date: 10/18/22

*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.