MASTER COURSE OUTLINE

A. AUTO 2446 Drivability Diagnosis

B. COURSE DESCRIPTION:

This course covers the theory, design, operation, diagnosis and repair of the systems related to vehicle drivability. This course, along with other program courses, satisfies the task requirements set forth in Section VIII of the National Institute for Automotive Service Excellence (ASE) accreditation. Prerequisites: AUTO 1341, AUTO 1431, or instructor approval.
(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:

- Automotive computer control theory
- Sensor operation and testing
- Fuel control and drivability diagnosis
- Emission testing and fault diagnosis

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

GOAL TYPE	**OBJECTIVES** **Students will be able to**	**OUTCOMES** **The student will successfully**
**Critical Thinking	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 inputs and outputs for proper operation.
**Critical Thinking	analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or	1. use test results to develop a diagnosis of an automotive emission fault.

	claim; generate and evaluate implications that follow from them.	
CS	Perform drivability diagnosis.	1. read vehicle wiring diagrams. 2. apply wiring diagram circuits to circuit boards. 3. use appropriate tools to diagnose drivability vehicle problems. 4. test various automotive computer inputs. 5. identify and repair vehicles based on customer complaints.

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: 03/09/11; 11/29/17; 07/08/22
AASC Approval date: 12/12/17; 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.