MASTER COURSE OUTLINE

A. AUTO 2453 Automatic Transmission Theory

B. COURSE DESCRIPTION:

This course covers theory, principles, design, diagnosis, service and repair of modern automotive automatic transmissions. This course, along with other program courses, satisfies the task requirements set forth in Section II of the National Institute for Automotive Service Excellence (ASE) accreditation. Prerequisites: AUTO 1205 and AUTO 1431.
(3 Cr – 1 lect, 2 lab)

C. Core Themes : Critical Thinking; People and the Environment

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:

- Automatic transmission theory
- External service
- Torque converter
- Internal components

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. diagnose automatic transmission and transaxle concerns.
**Critical Thinking	imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which	1. interpret test results to determine the best approach to a particular repair.

	can give alternative means or solutions to given situations or problems.	
**People and the Environment	articulate and defend the actions they would take on various environmental issues.	1. explain the necessity of recovering and recycling of auto fluids.
CS	demonstrate an understanding of transmissions operation.	1. explain planetary gear flow. 2. explain torque converter operation. 3. explain hydraulic operation. 4. make linkage adjustments. 5. trace hydraulic circuits. 6. explain shifting operation. 7. explain valve body function. 8. check for external leakage. 9. explain application or range reference chart.

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 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.