



MASTER COURSE OUTLINE

A. AUTO 1205 Automotive Fundamentals

B. COURSE DESCRIPTION:

This course provides the knowledge and skills the student will need to start their career as an entry level general service professional automotive technician. The student's ability to follow instructions, interpret and convert measurements and specifications are developed. Professional skills such as computer proficiency, work environments, and following diagnostic processes will begin to be developed. The student will also have gain proficiency in the writing of repair orders, parts requisitions, and the use of electronic service information systems. The student will also learn, in general terms, the correct procedures for general service of vehicles including precision measuring. The course covers procedures and safety in the automotive shop, the use of hand tools, power tools, hoists, jacks as well as other equipment used by automotive technicians. The proper use of various hand and power tools for the purpose of making various fastener and thread repairs is also taught. Minor automotive service and basic shop skills will be emphasized in the shop.

(3 Cr – 1 lect, 2 lab)

C. Core Theme: Ethical and Civic Responsibility; 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:

- Hazardous materials, and pollution issues
- General automotive skills
- Fasteners, torque, and thread repairing
- Seals, sealants, and gaskets
- Hand, shop, and power tools
- Cooling system
- Automotive professionalism
- Automotive maintenance
- Automotive measuring

- Automotive systems with inherent special safety considerations

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
**Ethical and Civic Responsibility (CS)	identify ways to exercise the rights and responsibilities of citizenship.	<ol style="list-style-type: none"> 1. demonstrate an understanding of the "Right to Know" laws. 2. identify the relevant sections of a Material Safety Data Sheet. 3. define hazardous materials. 4. handle and dispose of hazardous materials and pollutants responsibly.
** <u>People and the Environment</u>	describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.	<ol style="list-style-type: none"> 1. define the purpose and role of the Occupational Safety and Health Administration. 2. define the purpose and role of the Environmental Protection Agency.
<u>CS</u>	diagnostic and analytical skills.	<ol style="list-style-type: none"> 1. locate service information using online service information systems. 2. use an online service information system to diagnose and repair vehicle malfunctions. 3. diagnose vehicles using strategy based diagnostic procedures.
<u>CS</u>	skills need to work safely in an automotive repair shop environment.	<ol style="list-style-type: none"> 1. pass a comprehensive automotive safety exam. 2. complete and pass S/P2 safety certification tests. 3. identify hazardous materials and their procedures for handling and disposal.
<u>CS</u>	basic automotive service skills.	<ol style="list-style-type: none"> 1. measure, drill, tap, and repair internal as well as external threads. 2. identify fastener size, strength, and pitch. 3. properly position a vehicle on a lift. 4. perform tire removal, dismount, mount, center, balance, and perform road force variation checks. 5. properly reinstall wheels. 6. perform headlight aiming. 7. perform safety and maintenance inspections. 8. perform cooling system flushes.
<u>CS</u>	understand pay systems and types of work commonly performed. Professional and professionalism skills will be acquired by starting on the path to becoming Automotive Service Excellence certified by taking one or more ASE certification tests.	<ol style="list-style-type: none"> 1. successfully pass one or more ASE (Automotive Service Excellence) tests.

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: 10/31/2014; 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.