



MASTER COURSE OUTLINE

A. AUTO 1341 Fuel Systems I

B. COURSE DESCRIPTIONS:

This course covers the fundamentals of theory, principles, diagnosis, adjustments, and repair of complete automotive fuel and emissions control systems. This course, along with other program courses, satisfies the task requirements set forth in Section VIII of the National Automotive Technical Education Foundation (NATEF) accreditation.
(4 Cr – 2 lect, 2 lab)

C. ****Core Theme:** Critical Thinking, Global Perspective, and People and the Environment

D. MAJOR CONTENT AREAS:

- Automotive engine design and operation
- Gasoline and diesel factors of combustion
- Pollution, emissions, and emission controls
- Intake and exhaust systems
- Fuel delivery systems
- Fuel injection components, operations, and diagnosis

E. GOAL TYPES, OBJECTIVES, AND OUTCOMES:

<u>GOAL</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.	The student will successfully 1. perform minor service and diagnostics on fuel and emission systems.
**Global Perspective	understand the role of a world citizen and the responsibility world citizens share for their common global future.	1. advocate responsible maintenance of emission control systems.
**People and the Environment	evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.	1. describe the effects of pollution on the environment.
CS	obtain a basic understanding of automotive fuel systems.	1. identify the parts and explain the operation of a fuel system.
CS	gain an understanding of automotive emission control systems.	1. identify the parts and explain the operation of an evaporative emission recovery system.

		2. identify the parts and explain the operation of an exhaust gas recirculation system.
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F. 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 the instructor or the Student Success Center 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.

G. COURSE CODING INFORMATION: Course Code S/Class Maximum 25; Letter Grade

Revision date: 03/09/11; 11/29/17

AASC Approval date: 12/12/17 ; 03/26/2019

*Riverland Community College Disciplines	MnTC Goal Number
Communication	1
Natural Sciences	3
Mathematics/Logical Reasoning	4
History and the Social & Behavioral Sciences	5
Humanities and Fine Arts	6

**Riverland Community College Core Themes	MnTC Goal Number
Critical Thinking	2
Human Diversity	7
Global Perspective	8
Ethical and Civic Responsibility	9
People and the Environment	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: 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.