



MASTER COURSE OUTLINE

A. AUTO 1321 Steering and Suspension

B. COURSE DESCRIPTION:

This course covers the theory, diagnosis, and repair of electronic and conventional suspension and steering systems. Wheel balance theory and operation are included. This course, along with other program courses, satisfies the task requirements set forth in Section IV of the National Automotive Technicians Education Foundation (NATEF) accreditation.

(3 Cr – 1 lect, 2 lab)

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

D. MAJOR CONTENT AREAS:

- Suspension and steering types, components and operation
- Ball joints, springs, shock absorbers, and suspension repair
- Steering systems
- Wheels, wheel bearings, and tires
- Electronic suspension and steering controls

E. GOAL TYPES, OBJECTIVES, AND OUTCOMES:

<u>GOAL</u>	<u>OBJECTIVES</u> Students will be able to	<u>OUTCOMES</u> 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.	<ol style="list-style-type: none"> 1. analyze customer's complaint. 2. use analytical skills to determine the proper repair for the given problem.
**People and the Environment	articulate and defend the actions they would take on various environmental issues.	<ol style="list-style-type: none"> 1. relate the consequences of improper disposal of automotive chemicals such as those found in shock absorbers.
CS	repair suspension and steering system problems on cars and light trucks.	<ol style="list-style-type: none"> 1. identify suspension types and the parts and adjustments for each type. 2. perform repair on Short-Long arm suspensions. 3. perform repairs on Mac-Pherson Strut suspensions.

		<ol style="list-style-type: none"> 4. describe and test operation of power-assist steering. 5. perform repairs on rack and pinion steering systems 6. perform repairs on re-circulating ball steering systems. 7. test for problems involving noise, harshness, and vibration complaints.
<u>CS</u>	demonstrate the proper procedures needed to ensure the vehicle is repaired to a condition which is safe for the road.	<ol style="list-style-type: none"> 1. identify the need for safe and proper suspension repair procedures. 2. follow published manufacturer procedures for suspension repair. 3. test and repair electronic suspension systems.

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

*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: 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.

Riverland