

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title: Steering Systems Submitted By: Frank Malone
Semester Course Prefix and Number: MEST 1251 Approval Date:
Old Quarter Course Prefix and Number: Revision Date: Mar.11

Number of Credits: 2 Number of Lecture Credits: 1
Semester(s) Offered: Spring 2010 Number of Lab Credits: 1 Number of Lab Hours: 2
Class Size: 24 Number of Studio/Demonstration/Internship Credits: 0
Negotiated by AASC on:
(date) November 2008

Course Purpose Code:

- 0 - Developmental Courses
1 - Non-transferable, General Education
X 2 - Technical course related to career programs
3 - College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)
4 - Other college course not considered a part of general education (MNTC) (e.g. computer science, health, physical education)
5 - Course which is intended to fulfill the Minnesota Transfer Curriculum (MNTC) requirements or intended for transfer.
9 - Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

Catalog Description:

The purpose of this course is to introduce the student to the basic steering theory pertaining to the steering systems found on mobile equipment. The main course content will include power steering systems, manual steering systems, alignment angles, and tire wear patterns. The student will learn to safely and properly test, diagnose, and repair these systems.

Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): MEST 1246 M.E. Safety and Rigging
MEST 1245 M.E. Fundamentals

Reading Prerequisite:
Composition Prerequisite:
Mathematics Prerequisite:

Career Programs and Transfer Majors Accessing this Course:

Mobile Equipment Service Technician

Minnesota Transfer Curriculum Goal(s) partially met by this course if applicable:

(Notes: No more than two goals may be met by any one course. Curriculum Committee review and the Chief Academic Officer's approval are required.)

- 0. X None
1. Communications
2. Critical Thinking
3. Natural Sciences
4. Mathematical/Logical Reasoning
5. History and the Social and Behavioral Sciences
6. The Humanities and Fine Arts
7. Human Diversity
8. Global Perspectives
9. Ethical and Civic Responsibility
10. People and the Environment

Learning Outcomes: (including any relevant competencies listed in the Minnesota Transfer Curriculum)

Upon completion of this course, the student will be able to:

- 1.) Follow proper electrical safety procedures.
- 2.) Identify different types of steering systems.
- 3.) Diagnosis common steering problems.
- 4.) Describe the common components in a manual steering system.
- 5.) Describe the different types on manual steering systems.
- 6.) Describe the common components of a power steering system.
- 7.) Describe the different types of power steering systems.
- 8.) Identify tire wear problems caused by steering angles.
- 9.) Understand common wheel alignment angles.
- 10.) Perform steering systems maintenance service.
- 11.) Perform steering systems repair procedures.
13. Perform testing, troubleshooting and repairs on various types of steering systems.
- 14.) Perform tasks cooperatively.

Student Assessment Methods:

Homework, Lab Assignments, Hands-on Tests, Written Tests

Use of Instructional Technology: (includes software, interactive video and other instructional technologies):

PowerPoint Presentations, Video Presentations, Equipment Specific Diagnostic Software, Digital Multi-Meters, Personal Computers, Internet.

Outline or Statement of Major Course Content:

See Course Description above

Additional Special Information: (special fees, directives on hazardous materials, etc.)

None

Transfer Information: (Please list colleges/majors that accept this course in transfer.)

Approvals:

Body	Representative Signatures	Date
Curriculum Committee		
Faculty Association		
Academic Affairs Standards Committee		
Chief Academic Officer		

Distribution: Original – Administrative Office

Copies: Curriculum Committee Chair, AASC Chair, Transfer Specialist, Originating Faculty Member, Scheduler, Records, Student Services, Learning Center, Library

Revised: March 2011