Course Outline

Course Title: Mobile Equipment Electronics I
Submitted By: Andy White
Semester Course Prefix and Number: MEST 1258
Approval Date: April 2009
Old Quarter Course Prefix and Number:
Revision Date: March 31, 2009

Number of Credits: 4
Number of Lecture Credits: 2
Number of Lab Credits: 2
Number of Lab Hours: 4
Number of Studio/Demonstration/Internship Credits: 0

Semester(s) Offered: Fall
Class Size: 24
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 electronics and electronic controls found on various mobile equipment systems. The main course content will provide an understanding of inputs, outputs, and basic computer controls. The student will learn to test and repair these systems safely and properly.

Prerequisites and/or recommended entry skills/knowledge:
Course Prerequisite(s): MEST 1250 Basic Electrical Systems
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.) Interpret electrical schematics.
3.) Identify damaged electronic terminals and connectors.
4.) Perform repairs to electronic terminals and connectors.
5.) Perform related math calculations.
6.) Explain the function of electronic controllers.
7.) Explain the function of inputs and outputs.
8.) Identify various electronic components.
9.) Explain on board diagnostic systems.
10.) Explain the difference between electricity and electronics.
11.) Demonstrate proper use of DMMS, Carbon Pile Testers, and other related testing tools.
12.) 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):


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:

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Distribution: Original – Administrative Office
Copies: Curriculum Committee Chair, AASC Chair, Transfer Specialist, Originating Faculty Member, Scheduler, Records, Student Services, Learning Center, Library
Revised: October 2006