Faculty is required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. DSL (Diesel) COURSE NUMBER: 2190

NUMBER OF CREDITS: 2

COURSE TITLE: GPS Systems Operation

CATALOG DESCRIPTION: Provide an understanding of the operation, installation, adjustment, and repair of the GPS in accordance to the system principals.

AUDIENCE: Diesel students

FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)

Area: by meeting the following competencies:
Area: by meeting the following competencies:
Area: by meeting the following competencies:

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:
DSL 1110 Electrical Theory & DSL 1115 Electrical Lab

LENGTH OF COURSE:
One Semester

THIS COURSE IS USUALLY OFFERED:
Every other year □ fall □ spring X□ summer □ undetermined □
Four goals are emphasized in course at Minnesota West Community & Technical College:

1) **ACADEMIC CONTENT**: The academic objectives of this course are:
   a. To learn parts of global positioning hardware
   b. Understand theory of GPS
   c. Understand how parts operate together

2) **THINKING SKILLS**: This course will help students improve the effectiveness of their thinking skills through:
   a. Troubleshoot GPS scenarios
   b. Understand Electrical readings of components
   c. 
   d.

3) **COMMUNICATIONS SKILLS**: This course will help students improve their oral and written communication skills through:
   a. Class participation
   b. Active questioning

4) **HUMAN DIVERSITY**: This course will help students recognize, understand, and appreciate human diversity through:
   a. Understand the role of the technician in communicating with diverse population
   b. Express personal philosophies on diverse issues

**TOPICS TO BE COVERED:**
Global positioning fundamentals, service and repair.

**LIST OF EXPECTED COURSE OUTCOMES:**
An understanding of how GPS systems are used in the industry of Ag production, over-the-road trucks, travel/log books, and heavy equipment operation. The student will learn proper installation, adjustment, troubleshooting, and repair of the systems.

**LEARNING/TEACHING TECHNIQUES** used in the course are:

- [X] Collaborative Learning
- [X] Problem Solving
- [ ] Student Presentations
- [ ] Interactive Lectures
- [ ] Creative Projects
- [ ] Individual Coaching
- [X] Lecture
- [X] Films/Videos/Slides
- [ ] Demonstrations
- [ ] Other (describe below)
- [ ] Lab
ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- [ ] Reading
- [ ] Tests
- [ ] Individual Projects
- [ ] Oral Presentations
- [ ] Worksheets
- [ ] Collaborative Projects
- [x] Textbook Problems
- [ ] Papers
- [ ] Portfolio
- [ ] Group Problems
- [ ] Term Paper
- [ ] Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:
The students will demonstrate an understanding of the GPS operation concepts through classroom lecture, homework and testing.

The information in this course outline is subject to revision

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the

Student Services Advisor or by calling 800-658-2330 or

Minnesota Relay Service at 800-627-3529

A Member of the Minnesota State Colleges and Universities System

An Affirmative Action Equal Opportunity Educator/Employer

March 2013