MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

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. Electrical COURSE NUMBER: ELEC 2200

NUMBER OF CREDITS: 2

COURSE TITLE: Low Voltage

CATALOG DESCRIPTION:

Investigate low voltage circuits and controls along with data, phone, CATV, fire alarm and home security methods and materials. This course will also cover the rules and regulations of installation and termination of communication wire and components.

Audience: Electrician students

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

Area: by meeting the following competencies:

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PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:

ELCO 1100 or ELCO 1110

LENGTH OF COURSE: One semester

THIS COURSE IS USUALLY OFFERED:

Every other year fall X spring summer undetermined

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT: Students will gain a basic understanding of low voltage systems and the proper installation methods for different low voltage systems. In addition, students will learn the National Electrical requirements as they pertain to low voltage systems.

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:

a. Identify parts and cables for low voltage systems
b. Describe how low voltage systems operate

c. Troubleshoot low voltage systems

d. Demonstrate proper installation techniques of low voltage systems

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:

a. Participate in classroom discussion

b. Work cooperatively with other students

c. Communicate with students, faculty and staff while completing installations

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:

a. Working with others in the classroom and lab

b. Working with a culturally diverse group of students

TOPICS TO BE COVERED: Low voltage systems including: Computer network cabling, CATV, fire alarms, and home security.

LIST OF EXPECTED COURSE OUTCOMES:

1) Students will be able to identify low voltage systems and components.

2) Students will be able to wire low voltage systems.

3) Students will be able to terminate connections on low voltage systems.

4) Students will be able to test and troubleshoot low voltage systems.

5) Students will gain a better understanding of the low voltage industry.

LEARNING/TEACHING TECHNIQUES used in the course are:

Collaborative Learning Problem Solving

Student Presentations Interactive Lectures

Creative Projects Individual Coaching

Lecture Films/Videos/Slides

Demonstrations Other (describe below)
Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

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

EXPECTED STUDENT LEARNING OUTCOMES:

1.) Ability to properly identify low voltage systems.
2.) Ability to identify parts and proper installation methods.
3.) Ability to install and troubleshoot low voltage systems.
4.) Apply codes and standards to low voltage systems.
5.) Display professional behavior while working around students, faculty and staff.

The information in this course outline is subject to revision

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.

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.

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 or by using your preferred relay service.

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