MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
COURSE OUTLINE

Faculty are 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 Collegewide Curriculum Committee.

DEPT. HVAC COURSE NO. 1145

NUMBER OF CREDITS: 2

COURSE TITLE: Basic Electronics

CATALOG DESCRIPTION: This Course covers industrial electronic components and circuits explained in a straightforward and practical manner, as opposed to the traditional mathematical explanations used in more comprehensive courses. Content includes diodes, transistors, rectifiers, filters, SCR=s, triacs, diacs, power supplies, and photo devices.

AUDIENCE: Persons that would like to become a certified technician in the HVAC/R fields.

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: Electric Circuit Fundamentals

LENGTH OF COURSE 1 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: Math, Reading

2) THINKING SKILLS: Problem solving.

3) COMMUNICATIONS SKILLS: Must communicated well with others and communicate problems well that will arise in the field.

4) HUMAN DIVERSITY:
TOPICS TO BE COVERED: This course will cover all types of electronic devices used in today’s industrial workplace. The student will get a basic theory of how a piece of equipment works and learn also how to troubleshoot that piece of equipment in the field.

LIST OF EXPECTED COURSE OUTCOMES:
1. The student will list and identify all the different types of controls used in all types of systems.
2. The student will identify controls and their location in or on a schematic.
3. The student will match controls and symbols of different types of equipment.
4. The student will use proper tools and techniques for troubleshooting
5. The student will define schematics (ladder, and pictorial)
6. The student will identify schematic components

LEARNING/TEACHING TECHNIQUES used in the course are:
X Collaborative Learning  X Problem Solving
   Student Presentations  X Interactive Lectures
X Creative Projects  Individual Coaching
X Lecture  X Films/Videos/Slides
X Demonstrations  Other (describe below)
X Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
X Reading  X Tests  X Individual Projects
   Oral Presentations  X Worksheets  Collaborative Projects
X Textbook Problems  X Papers  Portfolio
X Group Problems  Term Paper
   Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES: The student at the end of the semester will be able to troubleshoot all types of electronic devices that are used in industry today. Also will learn the proper techniques in finding the components on a schematic or diagram.

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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*The information in this course outline is subject to revision.*