DEPT. INDT  COURSE NUMBER: 1105

NUMBER OF CREDITS: 3 (2 lecture, 1 lab)

COURSE TITLE: Industrial Drafting and Design

CATALOG DESCRIPTION:

Demonstrate the ability to edit and design mechanical, electrical, and structural schematics using AutoCAD. Course time will include instruction on drawing setup and commands along with hands-on lab time working with and creating drawings.

AUDIENCE: Industrial Technology 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:

LENGTH OF COURSE: semester

THIS COURSE IS USUALLY OFFERED:

Every other year ☐ fall ☐ spring ☒ summer ☐ undetermined ☐

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

1) ACADEMIC CONTENT: The academic objectives of this course are:

   The student will acquire the knowledge and skills needed to design, draw, edit, and publish various industrial schematics and drawings in an AutoCAD environment.

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
   a. Completing homework (reading, reports, labs, and worksheets)
   b. Participating in classroom discussions and activities
c. Taking open and closed book quizzes and tests
d. Design, draw, edit and publish AutoCAD drawings.

3) COMMUNICATIONS SKILLS: This course will help students improve their oral
and written communication skills through:
a. Participating in class discussions and reports
b. Participating in assignments, worksheets, and reports

4) HUMAN DIVERSITY: This course will help students recognize, understand, and
appreciate human diversity through:
a. Participating in classroom discussions
b. Working with other students on research and lab activities
c. Working with students from other cultures

TOPICS TO BE COVERED:

1. Understanding the workspace
2. Basic drawing setup
3. Create and edit drawings
4. Basic drawing commands
5. Drawing units and scales
6. Models and layouts
7. Linetypes and layers
8. Dimensioning
9. Coordinate systems
10. Grid and snap controls
11. Templates
12. Print and plot drawings

LIST OF EXPECTED COURSE OUTCOMES:
1. Students will be able to identify various mechanical, electrical, fluid power and structural
schematics.
2. Students will have an understanding of setup, drawing commands, and editing features.
3. Students will apply skills in designing, drawing, and publishing AutoCAD drawings.

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:
EXPECTED STUDENT LEARNING OUTCOMES:

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.

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.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or via your preferred Telecommunications Relay Service.

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