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. CRPT. COURSE NUMBER: 2271

NUMBER OF CREDITS: 3 (3 lecture/0 lab)

COURSE TITLE: Construction Drafting, Design, and Blueprint Reading

CATALOG DESCRIPTION:

Introduce the students to the basic principles of mechanical drafting, architectural drafting, and the design of floor plans. Auxiliary views, cross sections, and elevation views will also be studied and drawn. Students will have the opportunity to learn both hand drafting methods and computer aid drafting. The student will be taught the skills needed to accurately read and interpret a complete set of working drawings for residential and light commercial construction projects.

AUDIENCE: Carpentry 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:
N/A

LENGTH OF COURSE: 1 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: The academic objectives of this course are:
   a. Improve writing skills with the completion of required written assignments.
   b. Improve mathematical skills calculating linear measurements, dimensions, area, and volume measurements.
   c. Improve reading skills with the completion of required reading assignments.
2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
   a. Interpretation of blueprints and building product specifications as they apply to construction methods and techniques.
   b. Demonstration by individuals to calculate statistics into current building situations.
   c. Decision making processes that involve recalling facts and specifics about given situations or problems encountered in building construction, evaluating the situation, and reaching a conclusion.

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   a. Group problem solving, collaborative projects and individual demonstrations.
   b. Individual classroom assignments and interactive lectures.

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:
   a. Working in a team with persons of different race, gender, and cultural background.

TOPICS TO BE COVERED:
1. Reading a scale
2. Drawing layout styles
3. Standard dimensioning requirements
4. Drafting symbols
5. Drafting tools and drawing aids
6. Drawing plot plans, foundation plans, floor plans, elevations, sections, and detail plans
7. Styles of residential houses
8. Kitchen and bath designs
9. Computer aided drafting software (CAD)
10. Working drawings done with CAD
11. Reading and interpreting blueprints or working drawings

COURSE LEARNING OUTCOMES (GENERAL):
1. Identify engineer's scale
2. Identify architect's scale
3. Identify parallel drafting boards
4. Identify drawing layout styles
5. Identify standard dimensioning requirements
6. Identify building code requirements
7. Identify drafting symbols
8. Identify divider tools
9. Identify French curve guides
10. identify lettering guides
11. identify compass tools
12. identify 30/60/90 triangle guides
13. identify 45/90 triangle guides
14. draw plot plans
15. draw foundation plans
16. draw wall section plans
17. draw floor plans
18. draw elevation views
19. draw detail plans
20. identify title block information
21. identify different styles of residential houses
22. identify kitchen designs
23. identify bathroom designs
24. identify computer aided drafting software
25. identify computer peripheral equipment
26. demonstrate use of AutoCAD drawing tools
27. plot drawings done with AutoCAD software
28. draw plot plans using AutoCAD
29. draw foundation plans using AutoCAD
30. draw floor plans using AutoCAD
31. draw elevation views using AutoCAD
32. draw 2D drawings using AutoCAD
33. identify blue line copy machine
34. reproduce drawings using blue line copy machine

STUDENT LEARNING OUTCOMES (SPECIFIC):

1. Identify and demonstrate proper use of scales used in architectural drafting.
2. Demonstrate use of drafting board and drafting tools to draw plot plans, foundation plans, floor plans, elevations, and section drawing.
3. Identify symbols used in architectural drafting.
4. Identify building code requirements for residential construction projects.
5. Identify and discuss different styles of residential houses.
6. Identify various kitchen and bath designs and draw cabinet details of each.
7. Demonstrate the use of CAD to draw plot plans, foundation plans, floor plans, elevations, section drawings, and detail plans.
8. Reproduce copies of original drawings using a blue line copy machine

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)

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
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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Revised 10/1/16