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 Academic Affairs and Standards Council.

DEPT.  CRPT                         COURSE NUMBER:  1130

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

COURSE TITLE:  Stairway Construction

CATALOG DESCRIPTION :  Stairway construction is considered one of the more highly skilled areas of carpentry work. Students will learn stair terminology, layout and construction by building a straight stairway and a quarter turn stairway.

AUDIENCE  : Carpentry I 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: Desire to learn through a combination of lecture and hand-on activities. Career interest in the building construction trade.

LENGTH OF COURSE : One 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:
   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. Types of stairs.
2. Basic stair parts.
3. Prefabricated stair parts.
4. Calculating risers, treads, and stringer length.
5. Layout of stair stringers with a framing square.
6. Cutting stair stringers.
7. Installing stair stringers, risers, treads, and skirt boards.

LIST OF EXPECTED COURSE OUTCOMES:
1. identify unit rise
2. identify unit run
3. identify stair riser
4. identify tread
5. identify stringer types
6. identify headroom
7. identify stairwell rough opening
8. calculate riser height
9. calculate tread width
10. calculate stringer length
11. calculate stairwell rough opening
12. calculate total rise
13. calculate total run
14. calculate headroom
15. identify balusters
16. identify newel posts
17. identify handrail
18. identify handrail brackets
19. identify volute
20. identify turnout fitting
21. identify starting easing
22. identify shoe rail
23. identify upeasing fitting
24. identify rail drop
25. identify starting steps
26. identify skirt board
27. identify rosettes
28. identify straight stairs
29. identify winder stairs
30. identify L-stairs
31. identify spiral stairways
32. identify circular stairs
33. identify “disappearing stairs”
34. layout and cut stringer for a given rise and run
35. install stringer
36. measure treads and risers to length
37. cut treads and risers to length
38. install treads and risers

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
- Group Projects
- Term Paper
- Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:
1. Recognize the types of stairs.
2. Identify and define basic stair parts and terms.
3. Calculate “rise-run-ratio”, number and size of risers and treads, and stairwell length.
4. Lay out stringers for a given stair rise and run.
5. Cut out stringers for a given stair rise and run.
6. Install stringers, risers, and treads for a given stairs.
7. List prefabricated stair parts that are commonly available.
**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 or by using your preferred relay service.

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