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:  1105

NUMBER OF CREDITS: 4  (1 lecture, 3 lab)

COURSE TITLE: Floor & Wall Framing

CATALOG DESCRIPTION: Students gain hands-on experience laying out, building, straightening, bracing and leveling walls and floors. During lab activities they will layout and erect the supporting structures for residential floor and wall components.

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. Common materials used for floor and wall components including engineered lumber.
2. Layout of sills, floor joists, headers joists, and trimmer joists.
3. Function of floor joist bridging and/or solid blocking, and strongbacks.
4. Subfloor materials and their application.
5. Use of a story pole as an aid for vertical layouts.
6. The layout of exterior and interior walls on the subfloor.
7. Stud layout on sole and top plates.
8. Types of headers and their construction.
9. Calculating rough opening sizes of windows and doors.
10. Common materials used for wall sheathing and their application.

LIST OF EXPECTED COURSE OUTCOMES:
1. identify mud sill
2. identify sill sealer
3. layout floor joists
4. identify common materials used for floor joists
5. identify floor joist bridging and blocking
6. identify common materials used for subfloor
7. identify joist spans
8. cut mudsills
9. cut floor joists to length
10. identify and cut sole plates
11. identify and cut top plates
12. layout stud spacing
13. identify and assemble corner posts
14. cut studs to length
15. identify and cut to length trimmer studs
16. identify king studs
17. identify and cut to length cripple studs
18. identify types of materials used for window and door headers
19. identify and calculate built up beam lengths
20. cut header materials
21. frame window and door openings
22. assemble window and door headers
23. assemble wood frame wall components
24. install subfloor materials
25. identify common materials used for wall sheathing
26. install wall sheathing
27. install backing for partitions
28. layout story pole elevations
29. identify dead loads
30. identify live loads
31. demonstrate proper safety procedures
32. install rim joist
33. identify engineered lumber used for wood framed wall and floors
34. identify parallel chord trusses used for framing floor systems

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. Explain the difference between platform and balloon framing.
2. Identify the main parts of a platform frame.
3. Calculate the load on girders and beams used in residential construction.
4. Lay out and install sills on a foundation wall.
5. Describe how layouts are made on header joists.
6. Describe kinds of material used for subflooring.
7. Identify components of wood frame wall.
8. Lay out and install floor joists on a sill.
9. Explain the function of bridging and solid blocking used with floor joists.
10. Lay out and install studs, king studs, trimmer studs, and cripple studs on wall plates.
11. Measure, cut, and install window and door headers.
12. Install subfloor on floor joists.
13. Use a story pole to do vertical layout of plates, headers, and window sills.
14. Apply exterior sheathing to a wall section.

**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.*