

COURSE OUTLINE

FLOOR, WALL & CEILING FRAMING

Course title

CT122

Dept. & Course No.

I. COURSE DESCRIPTION:

This course deals with floor framing, wall parts, wall construction, and installation of ceiling joists. Students will gain knowledge and skills through construction of a full scale house.

II. SEMESTER CREDITS: 3

III. CONTACT HOURS PER WEEK: 1 6 7

Lecture Lab Total

IV. PREREQUISITES: CT 112 & CT113

V. STUDENT LEARNING OUTCOME:

Upon completion of this course, students will be able, with 65% accuracy to:

1. Demonstrate proper methods used to install different types of floor and wall frame.
2. Estimate, layout, cut floor frame members and construct.

VI. COURSE CONTENT

- A. Types of framing
 1. Western framing
 2. Balloon framing
 3. Plank – and – beam framing
- B. Frame members
 1. Sill plate
 2. Joist header
 3. Joist
 4. Tail joist
 5. Double trimmer
 6. Ledger
 7. Bridging
 8. Blocking
 9. Sub-floor
 10. Finish floor

3. Estimate, Layout, cut wall frame member and rough opening for door and window.

- C. Door / Window
1. Sole plate
 2. Stud
 3. Rough sill
 3. Trimmer stud
 4. Cripple stud
 5. Window header
 6. Corner stud
 7. Blocking
 8. Fire stop
 9. Top plate
 10. Sheathing
 11. Baseboard and trims

4. Estimate, layout, cut and construct ceiling Frame members.

- D. Ceiling frame work
1. Install joist
 2. Runners
 3. Ceiling panel
 4. Trim
 5. Molding

VII. MATERIALS AND EQUIPMENT:

1. Hand tools
2. Overhead projector
3. Transparencies
4. Shop equipments
5. Power tools
6. Hand outs
7. TV & DVD
8. Transportation
9. Required Materials

VIII. TEXT AND REFERENCES:

1. TEXT: Instructor made hand outs

2. REFERENCES:

- a. Wagner, Willis H. and Smith, Howard B. Modern Carpentry. South Holland, Ill: The Goodheart- Wilcox, 1996.
- b. Curriculum and Instructional Materials Center. Fundamentals of Carpentry. Stillwater, OK: Oklahoma Department of Vocational and Technical Education, 1999.

IX. METHOD OF INSTRUCTION:

1. Lecture
2. Discussion
3. Demonstration
4. Laboratory work
5. Field trip (Site observation)

X. METHOD OF EVALUATION:

Lecture presentation is tested on written test. Lab evaluation is based on skill development and knowledge acquisition.

Four criteria is used in evaluating projects and operation performance are:

1. Accuracy
2. Techniques
3. Appearance
4. Completion

The components used in the computation of the final grade are:

1. Participation.....	25%
2. Quizzes/Homework.....	10%
3. Mid – Term and Final Test.....	25%
4. Projects.....	40%
Total.....	100%

The transmutation of percent to letter grade are:

90 – 100.....	A
80 – 89.....	B
70 – 79.....	C
65 – 69.....	D
0 – 64.....	F

TASK LISTING SHEET

CT122 FLOOR, WALL & CEILING FRAMING

Course No. & Title

CREDITS: 1 2 96
Lecture Lab Total Lab Hrs

TASK

TIME

SLO #1

2 hrs.

1. Illustrate the difference between the western framing balloon framing and plank - and - beam framing.

SLO #2

34 hrs.

1. Layout each floor framing member
2. Estimate the number of floor joist
3. Estimate the number of joist header
4. Estimate the number of joist blocking and bridging
5. Estimate the number of plywood for floor
6. Estimate the number of tile for floor
7. Estimate by pounds for common and finishing nails
8. Apply safety rules when operating and using power tools
9. Assemble floor frames
10. Install plywood floor
11. Layout and cut floor framing member

SLO #3

30 hrs.

1. Layout each wall framing member
2. Estimate the number of stud
3. Estimate the number of fire stop
4. Estimate the number of sole plate
5. Estimate the number of double plate
6. Estimate the number of outside and inside wall sheathing
7. Estimate by pounds for common and finishing nails
8. Cut, layout, and assemble wall framing
9. Install outside wall sheathing
10. Layout and cut door and window opening
11. Tilt the wall into place
12. Plumb the wall and brace
13. install the top plate

SLO #4

30 hrs.

1. Layout each ceiling framing member
2. Layout ceiling joist and runners
3. Install ceiling hangers
4. install ceiling boards

TOTAL LAB HOURS: 96 hrs

**Course Level Achievement
Form A
(Used for shop courses as well as other program courses)
CT122 FLOOR, WALL & CEILING FRAMING**

Student's Name (print): _____
Instructor's Name (Print): _____

Semester/Year: _____

Directions: Evaluate the student using the rating scale below and encircle the appropriate number to indicate the degree of competency. The numerical ratings of 5, 4, 3, 2, and 1 are not intended to represent the traditional school grading system of A, B, C, D, and F. The descriptions opposite the numbers will determine the level of student performance for each of the competencies listed below.

- Rating Scale: 5 Excellent
4 Above average
3 Average
2 Below average
1 Unacceptable

COMPETENCY	RATING
1. Interpret Floor Plan, Floor Framing Plan, Wall Framing Plan, and Ceiling Framing Plan.	5 4 3 2 1
2. Estimate floor, wall, and ceiling framing materials.	5 4 3 2 1
3. Layout and install selected floor frames.	5 4 3 2 1
4. Layout and install selected wall and rough opening frames.	5 4 3 2 1
5. Layout and install selected ceiling frames.	5 4 3 2 1

I certify that the student has completed all the competencies in this program and has achieved ratings as shown under each respective competency.

Instructor's signature

Date

COMPETENCE # 1 Interpret Floor Plan, Floor Framing Plan, Wall Framing Plan, and Ceiling Framing Plan.

5. Interpret dimensions, materials size and types, and specifications and notes in the Floor Plan, Floor Framing Plan, Wall Framing Plan, and Ceiling Framing Plan with 90 – 100% accuracy.
4. Interpret dimensions, materials size and types, and specifications and notes in the Floor Plan, Floor Framing Plan, Wall Framing Plan, and Ceiling Framing Plan with 80 – 89% accuracy.
3. Interpret dimensions, materials size and types, and specifications and notes in the Floor Plan, Floor Framing Plan, Wall Framing Plan, and Ceiling Framing Plan with 70 – 79% accuracy.
2. Interpret dimensions, materials size and types, and specifications and notes in the Floor Plan, Floor Framing Plan, Wall Framing Plan, and Ceiling Framing Plan with 65 – 69% accuracy.
1. Interpret dimensions, materials size and types, and specifications and notes in the Floor Plan, Floor Framing Plan, Wall Framing Plan, and Ceiling Framing Plan with below 65% accuracy.

COMPETENCY # 2 Estimate floor, wall, and ceiling framing materials.

5. Demonstrate ability to accurately estimate - using linear, area, ratio proportion, and volume formulas - required amount of materials including all types of lumber and metal products commonly used in floor, wall, and ceiling framing according to plan with 90 – 100% accuracy.
4. Demonstrate ability to accurately estimate - using linear, area, ratio proportion, and volume formulas - required amount of materials including all types of lumber and metal products commonly used in floor, wall, and ceiling framing according to plan with 80- 89% accuracy.
3. Demonstrate ability to accurately estimate - using linear, area, ratio proportion, and volume formulas - required amount of materials including all types of lumber and metal products commonly used in floor, wall, and ceiling framing according to plan with 70- 79% accuracy.
2. Demonstrate ability to accurately estimate - using linear, area, ratio proportion, and volume formulas - required amount of materials including all types of lumber and metal products commonly used in floor, wall, and ceiling framing according to plan with 65- 69% accuracy.
1. Demonstrate ability to accurately estimate - using linear, area, ratio proportion, and volume formulas - required amount of materials including all types of lumber and metal products commonly used in floor, wall, and ceiling framing according to plan with below 65% accuracy.

COMPETENCY # 3 Layout and install selected floor frames.

5. Demonstrate ability to perform all of the skills – materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install floor frames according to plan with 90 – 100% accuracy.
4. Demonstrate ability to perform all of the skills – materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install floor frames according to plan with 80 – 89% accuracy.
3. Demonstrate ability to perform all of the skills – materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install floor frames

according to plan with 70 – 79% accuracy.

2. Demonstrate ability to perform all of the skills – materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install floor frames according to plan with 65 – 69% accuracy.
1. Demonstrate ability to perform all of the skills – materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install floor frames according to plan with below 65% accuracy.

COMPETENCY # 4 Layout and install selected wall and rough opening frames.

5. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install wall and rough opening frames according to plan with 90-100% accuracy.
4. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install wall and rough opening frames according to plan with 80-89% accuracy.
3. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install wall and rough opening frames according to plan with 70-79% accuracy.
2. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install wall and rough opening frames according to plan with 65-69% accuracy.
1. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install wall and rough opening frames according to plan with below 65% accuracy.

COMPETENCY # 5 Layout and install selected ceiling frames.

5. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install ceiling frames according to plan with 90 – 100% accuracy.
4. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install ceiling frames according to plan with 80 – 89% accuracy.
3. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install ceiling frames according to plan with 70 – 79% accuracy.
2. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install ceiling frames according to plan with 65 – 69% accuracy.
1. Demonstrate ability to perform all of the skills - materials identification and selection, layout, cutting, and fastening, set-up and installation - required to properly select, layout, and install ceiling frames according to plan with below 65% accuracy.