

Course Outline

COURSE: CARP 206 **DIVISION:** 50 **ALSO LISTED AS:**

TERM EFFECTIVE: Fall 2016 **Inactive Course**

SHORT TITLE: STRUCTURAL FRAMING

LONG TITLE: Structural Framing

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
1	1	Lecture:	6	6
		Lab:	30	30
		Other:	0	0
		Total:	36	36

COURSE DESCRIPTION:

This course covers basic framing systems and layout of walls, ceilings and stairwells.

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: C - Credit - Degree Non Applicable

GRADING MODES

L - Standard Letter Grade

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

02 - Lecture and/or discussion

03 - Lecture/Laboratory

04 - Laboratory/Studio/Activity

STUDENT LEARNING OUTCOMES:

1. The student will safely plan, assemble, erect, fasten, plumb, and brace wall components in the proper sequence.

Measure: Written Exams, Quizzes, Class Performance

PLO: 3

ILO: 1, 2, 3, 7

GE-LO:

Year assessed or anticipated year of assessment: 2012-13

2. The student will layout and install ceiling joist, backing, and blocking.

Measure: Written Exams, Class Performance

PLO: 3

ILO: 1, 2, 3, 7

GE-LO:

Year assessed or anticipated year of assessment: 2012-13

PROGRAM LEARNING OUTCOMES:

1. Demonstrate journey level skills, including those skills necessary to build all concrete infrastructures that comprise the California transportation system.

2. Locate on the blueprints and in the specifications, the information needed to construct various types of structures and assemble its various components.

3. Perform horizontal layout and vertical layout of wood framed wall components. Install interior and exterior trims and moldings. Construct various types of roofs and stairs.

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS

Inactive Course: 11/28/2016

Out-of class assignments: For each topic, the student will read chapters and do homework assignments at the end of those chapters.

2 lec/10 lab hours

A. Framing systems

1. Western platform framing

a. Components

b. Advantages/disadvantages

2. Balloon framing

a. Components

b. Advantages/disadvantages

3. Post and beam framing

a. Components

b. Advantages/disadvantages

SLO: The student will contrast and evaluate the different ways of framing.

B. Building layout

1. Floor plans

2. Exterior wall, interior wall, door, and window locations

3. Wall erection sequence

SLO: The student will examine and perform building layout.

C. Horizontal wall layout

1. Locations and dimensions

2. Layout symbols

3. Components

4. Determine rough openings

a. Single doors

b. Pocket doors

c. Bypass doors

- d. Aluminum windows
- e. Proprietary windows
- 5. Stud locations
 - a. Modular sheathing
 - b. Seismic ties
- 6. Component lengths

SLO: The student will appraise and construct wall layout.

Assignments: Read the chapters covered in the lecture and do the homework exercises at the end of the chapters. Answer the study guide questions on the assigned subject.

Identify and assemble all of the components necessary for western platform framing. Identify and utilize the various species and grades of construction lumber used in framing. Perform building layout.

2 lec/10 lab hours

- D. Vertical layout
 - 1. Components
 - 2. Information sources
 - 3. Component lengths
 - 4. Story poles
 - 5. Cutting lists

SLO: The student will appraise and construct the vertical layout.

mid-term exam

- E. Wall framing

Assembly order

Building code provisions

Wall sheathing

Erection of wall frames

Plumb and alignment procedures

SLO: The student will safely plan, assemble, erect, fasten, plumb, and brace wall components in the proper sequence.

Assignments: Read the chapters covered in the lecture and do the homework exercises at the end of the chapters. Answer the study guide questions on the assigned subject.

Perform horizontal layout and vertical layout of wall components. Determine the rough openings for doors and windows. Safely plan, assemble, erect, fasten, plumb, and brace wall components in the proper sequence.

2 lec/10 lab hours

- F. Resistance to lateral forces and uplift forces
 - 1. Wind and seismic loads
 - 2. Shear walls
 - a. Frame
 - b. Diaphragm
 - c. Anchor bolts
 - d. Hold downs
 - 3. Continuous load path
 - a. Foundation to wall tie
 - b. Floor to floor tie
 - c. Roof to wall tie

SLO: The student will identify and assemble a shear wall.

- G. Ceiling joist
 - 1. Joist layout
 - a. Gable roof

b. Hip roof

c. Joist installation

SLO: The student will layout and install ceiling joist, backing, and blocking.

H. Lumber grade marks

SLO: The student will analyze, compare, and choose different lumber grades.

Assignments: Read the chapters covered in the lecture and do the homework exercises at the end of the chapters. Answer the study guide questions on the assigned subject.

Identify and assemble a shear wall. Identify and assemble a continuous load path. Layout and install ceiling joist, backing, and blocking.

2.0 Hours

METHODS OF INSTRUCTION:

A. Lecture and discussion

B. Visual aids

C. Demonstrations

D. Group hands-on exercise

E. Individual hands-on exercise

F. One-on-one hands-on instruction

METHODS OF EVALUATION:

The types of writing assignments required:

Written homework

Reading reports

Lab reports

Essay exams

The problem-solving assignments required:

Homework problems

Field work

Lab reports

Quizzes

Exams

The types of skill demonstrations required:

Class performance

Field work

Performance exams

The types of objective examinations used in the course:

Multiple choice

True/false

Matching items

Completion

Other category:

None

The basis for assigning students grades in the course:

Writing assignments: 5% - 30%

Problem-solving demonstrations: 10% - 40%

Skill demonstrations: 40% - 80%

Objective examinations: 5% - 30%

Other methods of evaluation: 0% - 0%

REPRESENTATIVE TEXTBOOKS:

Required:

Leonard A. Koel, Barclay. Carpentry 6th edition, Construction Safety Orders 1 & 2. American Technical Publishers, Thomas West, 2013. Or other appropriate college level text.

Reading level of text, Grade: 10 Verified by: publisher/dvt

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Not Transferable

UC TRANSFER:

Not Transferable

SUPPLEMENTAL DATA:

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education:

Program Status: 1 Program Applicable

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department:

CSU Crosswalk Course Number:

Prior to College Level: Y

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: A

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000500339

Sports/Physical Education Course: N

Taxonomy of Program: 095210