

### Course Outline

**COURSE:** CARP 218      **DIVISION:** 50      **ALSO LISTED AS:**

**TERM EFFECTIVE:** Fall 2016      **Inactive Course**

**SHORT TITLE:** COMMERCIAL CONCRETE

**LONG TITLE:** Commercial Concrete

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
1	1	Lecture:	11	11
		Lab:	25	25
		Other:	0	0
		Total:	36	36

#### **COURSE DESCRIPTION:**

This course is designed to make apprentices familiar with the concepts and practices of commercial concrete construction. The apprentice will be knowledgeable about the layout and construction of bolt patterns, concrete columns and gang forms. In addition, the student will be familiar with the types and methods used to safely build, shore and place column caps and concrete decks.

**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. Students will read a set of commercial prints and lay out job grid lines.

Measure: Quizzes, Written Exams, Class Performance

PLO: 2

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: 2016

2. Students will construct a bolt pattern and install in proper location and elevation.

Measure: Quizzes, Written Exams, Class Performance

PLO: 2

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: 2016

3. Students will build, set and brace a round fiber form column at the correct location.

Measure: Quizzes, Written Exams, Class Performance

PLO: 1,2

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: Fall 2016

4. Students will build, set and brace a square wood column at the correct location.

Measure: Quizzes, Written Exams, Class Performance

PLO: 3

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: Fall 2016

5. Students will assemble, set and brace a wall using composite metal/plywood panels.

Measure: Quizzes, Written Exams, Class Performance

PLO: 3

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: Fall 2016

6. Students will erect, line and brace a section of Alumawall with taper ties and strongbacks.

Measure: Quizzes, Written Exams, Class Performance

PLO: 2,3

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: Fall 2016

7. Students will correctly identify the components of a traditional wood-shore deck system, including Ellis shores, stringers, joists and deck plywood

Measure: Quizzes, Written Exams, Class Performance

PLO: 1

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: Fall 2016

8. Students will assemble a steel post shoring system and set it to the correct elevation

Measure: Quizzes, Written Exams, Class Performance

PLO: 1,2

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: Fall 2016

9. Students will identify the safety hazards of silica and the corrective measures to mitigate the danger.

12/5/2016

Measure: Quizzes, Written Exams, Class Performance

PLO: 1

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: Fall 2016

10. Students will correctly calculate the amount of concrete needed for various forms.

Measure: Quizzes, Written Exams, Class Performance

PLO: 1

ILO: 1,2,3,7

GE-LO: N/A

Anticipated Year of Assessment: Fall 2016

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

1 Hours

Content:

Introduction Lecture

Student Performance Objectives (SPO): Understanding the content of the course progression

Out-of-Class Assignments: Read chapter assignments

1 Hours

Content:

Chapter 1 Bolt Patterns (Lecture)

Student Performance Objectives (SPO): Prepare for MLP in Lab

Out-of-Class Assignments: None

3 Hours

Content:

Layout and build bolt templates using the given plan (Lab)

Student Performance Objectives (SPO): Demonstrate ability to perform lesson

Out-of-Class Assignments: None

1 Hours

Content:

Chapter 2 Columns (Lecture)

Student Performance Objectives (SPO): Understand chapter material

Out-of-Class Assignments: Read chapter assignments

5 Hours

Content:

Lay out, build and brace round and square columns (Lab)

Student Performance Objectives (SPO): Demonstrate ability to perform assignment

Out-of-Class Assignments: None

2 Hours

Content:

12/5/2016

### Chapter 3 Gang Forms (Lecture)

Student Performance Objectives (SPO): Understand Chapter material and review lab assignment

Out-of-Class Assignments: None

1 Hours

Content:

### Silica Awareness (Lecture)

Student Performance Objectives (SPO): Understand the hazards of working with silica

Out-of-Class Assignments: None

6 Hours

Content:

Assemble the Symons forms and lay out and construct the Aluma Wall forms

Student Performance Objectives (SPO): Demonstrate ability to perform the assignment

Out-of-Class Assignments: None

2 Hours

Content:

### Chapter 4 Traditional Decking (Lecture)

Student Performance Objectives (SPO): Understand the terminology and process of the chapter and review the MLP for the project

Out-of-Class Assignments: None

5 Hours

Content:

### Traditional Deck (Lab)

Student Performance Objectives (SPO): Lay out, build, joist, deck and brace wooden shore project demonstrate proficiency in the work processes defined in the MLP

Out-of-Class Assignments: None

1 Hours

Content:

### Chapter 5 Metal Shoring (Lecture)

Student Performance Objectives (SPO): Understand the terminology and metal shoring process

Out-of-Class Assignments: None

1 Hours

Content:

### Chapter 6 Floor Forms (Lecture)

Student Performance Objectives (SPO): Understand the terminology and floor form work process and related MLP

Out-of-Class Assignments: None

4 Hours

Content:

### Assembly of the Pro-Shore metal deck (Lab)

Student Performance Objectives (SPO): Demonstrate proficiency in the work processes of the MLP

Out-of-Class Assignments: None

1 Hours

Content:

### Chapter 7 Pre-stressed concrete (Lecture)

Student Performance Objectives (SPO): Understand the terminology and work processes for Pre-stressed concrete

2 Hours Final

**METHODS OF INSTRUCTION:**

Lectures, demonstrations, multimedia presentations, discussions, and hands-on lab activities.

**METHODS OF EVALUATION:**

Category 1 - The types of writing assignments required:

Percent range of total grade: 20 % to 30 %

Written Homework

Reading Reports

Other: MLP shop based curriculum performance based

Course primarily involves skill demonstration or problem solving

Category 2 - The problem-solving assignments required:

Percent range of total grade: 30 % to 40 %

Homework Problems

Quizzes

Exams

Category 3 - The types of skill demonstrations required:

Percent range of total grade: 40 % to 50 %

Class Performance/s

Field Work

Category 4 - The types of objective examinations used in the course:

Percent range of total grade: 5 % to 10 %

Multiple Choice

True/False

**REPRESENTATIVE TEXTBOOKS:**

Required:

CITF. Commercial Concrete.

1) Construction Safety Orders, CAL OSHA current edition

2) CTCNC COMMERCIAL CONCRETE, Carpenters International Training Fund, Las Vegas, NV. (2014)

3) Carpentry, Leonard Koel American Technical Publishers Inc., Homewood Illinois 60430-4600 (2012):  
Mosaic, Or other appropriate college level text.

Reading level of text, Grade: 10 Verified by: Director of Training

**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: 1

Minimum Hours: 1

Course Control Number: CCC000558726

Sports/Physical Education Course: N

Taxonomy of Program: 095210