

# BI 0006 - INTRODUCTION TO CONSTRUCTION MANAGEMENT

## Catalog Description

Prerequisite: Completion of BI 5 with grade of "C" or better

Hours: 54 lecture

Description: Introduction to Construction Management. Topics are based on learning outcomes from the American Council for Construction Education (ACCE). This course introduces the structure of construction estimation, financing, and proper planning. (CSU)

## Course Student Learning Outcomes

- CSLO #1: Develop in detail a logical construction project process focusing on cost control, quality control, and the regulatory laws managing the project.
- CSLO #2: Construct, evaluate, and modify a construction safety plan.
- CSLO #3: Develop the feasibility of a commercial construction project within the local jurisdiction.

## Effective Term

Fall 2022

## Course Type

Credit - Degree-applicable

## Contact Hours

54

## Outside of Class Hours

108

## Total Student Learning Hours

162

## Course Objectives

Lecture

1. Define the terms, stages, and processes related to various construction projects (residential, commercial, institutional, industrial, and infrastructure).
2. Explain and apply the various documentation and written communications utilized in the built environment.
3. List the common roles and responsibilities for the typical entities involved in construction projects.
  - a. Contractor coordination
  - b. Team management
  - c. Professional ethics
4. Describe the various construction delivery methods.
  - a. Staging
  - b. Project Flow
5. Discuss the purpose of various project controls/processes, such as:
  - a. Project feasibility and scope
  - b. Local, state, and federal regulations

- c. Project schedules
- d. Project documents
- e. Contracts
- f. Estimates and contingencies
- g. Bidding and proposals
- h. Safety
- i. Cost control and budget tracking
- j. Quality control and quality assurance
- l. Changes in work
- m. Project closeout

## General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

## Articulation Information

- CSU Transferable

## Methods of Evaluation

- Problem Solving Examinations
  - Example: Students will be tested on reading and lecture material. Sample question: Analyze professional decisions based on ethical principles and the effects on the industry. Points will be assigned to each question and converted to a letter grade.
- Projects
  - Example: Students are required to make a 15-minute presentation to the class. The presentation includes a summary of key points from interviewing various agencies, support data, and research on an assigned construction topic. The grading is determined by a grading rubric.

## Repeatable

No

## Methods of Instruction

- Lecture/Discussion
- Distance Learning

Lecture:

1. Instructor facilitates classroom discussion referencing common roles and responsibilities for typical entities involved in construction projects. Students will perform research and calculate the associated costs for labor and labor availability in the jurisdiction that they live. (Objective 1)
2. Industry experts present lectures on various industry topics and career pathways. Students will take notes and ask relevant questions. (Objective 3)

Distance Learning

1. Students in online classes participate, individually and in groups, in discussion boards and respond to weekly assignments via the Learning Management System. The instructor will provide documented material (including videos) explaining or exploring the course content and provide individual feedback on all assignments. The instructor will lecture and provide examples of costs associated

with building construction. Student will develop a proposal with costs and a timeline. (Objective 5)

## **Typical Out of Class Assignments**

### **Reading Assignments**

1. Research your local government websites and be prepared to discuss the local, state, and federal regulations for new construction projects. Identify the required primary agencies and processes for project completion within the scope. 2. Read articles from the media on the current status of the construction industry and develop a building construction forecast.

### **Writing, Problem Solving or Performance**

1. Calculate the correct cost of labor, materials, and government fees. 2. Prepare a written report on project feasibility within the jurisdiction that the students live.

### **Other (Term projects, research papers, portfolios, etc.)**

1. Present a project feasibility report summarizing your conclusions based on data derived.

### **Required Materials**

- California Contractors License Law and Reference Book
  - Author: Contractors State License Board State of California
  - Publisher: Matthew Bender & Co.
  - Publication Date: 2019
  - Text Edition:
  - Classic Textbook?: No
  - OER Link:
  - OER:
- Construction Project Management - A Complete Introduction
  - Author: Allison Dykstra
  - Publisher: Kirshner Books
  - Publication Date: 2018
  - Text Edition: 2nd
  - Classic Textbook?: No
  - OER Link:
  - OER:

**Other materials and-or supplies required of students that contribute to the cost of the course.**