



CEP-956: COMMERCIAL CONSTRUCTION

Effective Term

Fall 2026

BOT Approval Date

06/12/2025

Discipline

CEP - Career Enhancement Program

Course Number

956

Course Title

Commercial Construction

Short Title

Commercial Construction

Credit Status (CB 04)

N - Noncredit

Non-Credit Hours**Minimum Contact Hours**

24

Maximum Contact Hours

80

Distance Education

Yes

Distance Education**Distance Education Type**

Both Fully Online and Hybrid Online

Fully Online Delivery Requirements:

- a. Students must be notified via the college schedule of classes and the syllabus for the class if proctored tests are required for this course
- b. Any planned face-to-face meetings, such as an orientation or study session, must be optional
- c. The MSJC curriculum committee requires the use of accessible, asynchronous discussion as a component of every fully online course

Are you using publisher content?

No

Regular Substantive Interaction

Instructor-to-student, student-to-student, and student-to-content contact shall be distributed in a manner that will ensure regular substantive interaction (RSI) is maintained not only weekly but also for the duration of the course. Instructor interactions should be equivalent in time, quality and consistency to the engagement students would receive in a face-to-face course—for example, through announcements, discussion participation, personalized feedback, video messages, or other instructional communications. Instructors are expected to be responsive to student inquiries within a 24-72 hour time frame excluding holidays. RSI will be maintained through a variety of methods:

- Orientation - Students must be oriented to the online and face-to-face portions at the start of the course.
- Announcements - Announcements using the course management system must be posted at least weekly to keep students current on course events, due dates, materials, etc.
- Discussion Forums - Content-related discussion forums within the designated CMS will include appropriate instructor participation and will be initiated and maintained, with timely feedback provided. Instructors are required to monitor the discussions and related activities to provide guidance and direction. Open-ended discussion boards may be used to further learning and interaction.
- MSJC Communication – Instructor will use MSJC-administered communication tools

(such as email or the designated CMS communication tools) to regularly communicate with and provide ease of access to students.

- **Timely Feedback** - Timely feedback on student work will be provided by the instructor, which may include comments and/or rubrics, within the Grades area of the designated CMS.
- **Scheduled Meetings** – Hybrid and synchronous courses will meet at regularly scheduled times.

ADA Compliance - All course interactions and content must be designed with accessibility in mind and meet ADA requirements.

Catalog Description

This course provides an introduction to the fundamental methods and techniques of commercial construction with a focus on practical skills and vocational applications. Topics include workplace safety, tools and equipment, construction materials, and foundational mathematical principles used in the trade. Additionally, students will develop employability and communication skills needed for success in the construction industry.

Requisites

Prerequisite(s)

Prerequisite(s) (must be taken before)

CEP-954 with a grade of P.

Codes

TOP Code (CB 03)

0952.00* - *Construction Crafts Technology

CIP Code

46.0415 - Building Construction Technology.

Repeatability Code

Yes

Number of times course can be repeated

Unlimited

Reason for Repeatable

Non-credit

Minimum Qualifications

Minimum Qualifications	And/Or
Carpentry	Or
Construction Management	Or
Construction Technology	End

Learning Objectives

Learning Objectives

Learning Objective
1. Evaluate technical and job skills critical for careers in the construction industry ensuring, equitable access and opportunities of individuals of diverse backgrounds.
2. Critique the various phases involved in commercial construction projects.
3. Demonstrate proper techniques and best practices in commercial construction processes.
4. Synthesize problem-solving strategies essential for teamwork that promotes inclusivity and equitable contributions within the construction industry.
5. Demonstrate safe work practices in compliance with OSHA standards for the construction industry.
6. Identify and utilize a wide range of hand and power tools relevant to the construction industry.
7. Differentiate between various building materials and their applications in construction.
8. Calculate and apply math and measuring techniques necessary for tasks in the construction industry.

Learning Outcome Information

Course Learning Outcomes

Learning Outcome

1. Students will identify key skills for a career in construction and understand how to access job opportunities in the field.
2. Students will describe different stages of a commercial construction project and how each step contributed to the final result.
3. Students will practice proper techniques used in commercial construction, such as framing and drywall installation.
4. Students will follow safety rules and procedures to ensure a safe work environment.
5. Students will understand how each material works best for different construction tasks.
6. Students will use math to measure, calculate areas and complete other necessary tasks for construction projects.

Content

Non-Credit Content

1. Career Opportunities
 - a. Career Pathways
 - b. Job roles in commercial construction
 - c. Requirements across Different Countries
 - d. Inclusive Hiring Practices
 - e. Inclusive Career Pathways
 - f. Recognizing Barriers to Entry for Diverse Groups
2. Trades
 - a. Carpentry
 - b. Plumbing
 - c. Electrical
 - d. Masonry
 - e. HVAC
 - f. Welding
 - g. Roofing
 - h. Flooring
 - i. Drywalling
 - j. Painting and Decorating
 - k. Ironwork
 - l. Concrete
 - m. Surveying
 - n. Glazing
 - o. Landscaping
 - p. Elevator Installation
 - q. Demolition
 - r. Soundproofing
3. Job Seeking Skills
 - a. Resume Building
 - i. Transferable Skills
 - b. Interview Preparation
 - c. Job Search
 - d. Goal Setting
 - e. Employability Skills
 - i. Teamwork
 1. Collaboration Across Cultures
 2. Team Leadership Inclusivity
 3. Equity/Bias in Team Settings
 - ii. Communication
 1. Inclusive Language Practices
 2. Communication Styles

- iii. Professionalism
 - 1. Workplace Etiquette
 - 2. Respecting Diverse Perspectives
- 4. Safety
 - a. PPE
 - b. Hazard Identification
 - c. Tools
- 5. Project Planning
 - a. Planning Stages
 - b. Materials Identification
 - i. Uses
- 6. Blueprints
 - a. Reading
 - b. Interpreting
 - c. Making
 - d. Assess Plans and Specifications
 - e. Importance of Accuracy
- 7. Materials and Methods
 - a. Identify Materials
 - b. Sustainable materials
- 8. Building Materials and Components
 - a. Organizing on Site
- 9. Construction Concepts
 - a. Laying Out Walls
 - i. Measuring Techniques
 - b. Installing Light-Gauge Metal Framing
 - c. Installing Drywall
 - i. Techniques for Drywall Finishing
 - d. Doors and Hardware
 - i. Installations
 - e. Acoustical Ceilings
 - i. Installing
 - ii. Understanding Function
 - iii. Design for Accessibility
 - f. Floor Tile
 - i. Layout
 - ii. Installation
- 10. Applied Mathematics for Construction
 - a. Problem Solving Approaches
 - b. Various Learning Strategies
 - c. Whole Numbers
 - d. Decimals
 - e. Fractions
 - f. Equal Access to Resources
 - g. Measuring Tools
 - h. Techniques in Measuring
 - i. Layouts
 - j. Area Measure
 - k. Volume Measure

Methods of Instruction

Method

Visiting Lecturers

Integration

Visiting Lectures will be used to engage student in active learning, reinforce key concepts and encourage the application of knowledge to the real-world. An example of this is inviting a industry professional to share their experience in the field and have students ask questions and reflect on key takeaways. Visiting Lecturers will adhere to all accessibility standards.

DE Adaptations for MOI

Students can participate in discussion using the CMS to access and respond to posted prompts by the instructor. Students can also comment on other students comments. In a synchronous classroom meeting, students can use accessible video conferencing software to have live discussions. All discussions will adhere to accessibility standards.

Method

Role Playing/Simulation

Integration

Role-playing and simulations allow students to engage with real-world construction challenges and develop problem-solving skills. For example, students can simulate designing a wheelchair-accessible ramp for a public building, considering factors such as slope, materials, and compliance with accessibility standards.

DE Adaptations for MOI

Role-playing can be conducted synchronously or asynchronously using a CMS or accessible video conferencing software. Students receive instructions and submit their work through the CMS. All role playing/simulation materials will adhere to accessibility standards.

Method

Reading

Integration

Reading prepares students for hands-on applications by connecting theoretical knowledge with real-world scenarios. For example, students can read case studies of successful and failed construction projects to highlight best practices and common pitfalls. These case studies provide valuable insights into project planning, budgeting, safety protocols, and workforce dynamics, helping students develop critical thinking and problem-solving skills. After reading, students engage in discussions to analyze the outcomes, debate alternative approaches, and apply lessons learned to practical exercises. This method bridges classroom learning with industry demands, ensuring students are equipped to navigate real-world construction challenges effectively. Reading will adhere to all accessibility standards.

DE Adaptations for MOI

The instructor can post accessible reading materials using CMS tools and the students can access the information through the CMS. All readings will adhere to accessibility standards.

Methods of Evaluation**Method**

Class Participation

Integration

Class participation evaluates student engagement, understanding, and application of concepts. For example, in a concrete mixing activity, students are assessed on following directions, collaboration, and problem-solving. The Instructor can provide feedback immediately. Class participation will adhere to all accessibility standards.

DE Adaptations for MOE

In an online environment, students can access accessible videos and materials through the CMS. They can respond to the instructors questions and comment on peers posts as well through the CMS. The instructor can provide timely online feedback to make sure students are on track with their responses. All class participation will adhere to accessibility standards.

Method

Homework

Integration

Homework can evaluate the students technical knowledge. An example of this would be to calculate flooring materials for a commercial building based on a given floor plan. The instructor can provide feedback to the student through the CMS tools within a week of submission. Homework will adhere to all accessibility standards.

DE Adaptations for MOE

Students can access and submit homework via the CMS tools or through accessible video conferencing software. All homework will adhere to accessibility standards.

Method

Projects

Integration

Projects can be used to evaluate the students ability to apply concepts, problem solve and demonstrate technical skills. An example of this would be to design a site plan for a small commercial building, incorporating key construction elements. The instructor will provide feedback within a week of submission. Projects will adhere to all accessibility standards.

DE Adaptations for MOE

Projects can be accessed and submitted by the student through CMS tools. All projects will adhere to accessibility standards.

Assignments**Assignment Type**

Reading

In-class and/or outside of class

In-class

Outside of class

Formative or Summative

Formative

Assignment

Read the following article, "A Proactive Approach to Construction Safety" <https://www.thehartford.com/insights/construction/worker-safety>

After reading please answer the following questions:

Why is construction safety a priority despite the declining trend in injuries and illnesses?

What challenges do construction firms face when hiring new workers, and how can they address safety concerns for inexperienced employees?

What are the four most common hazards in construction, and why are they considered the leading causes of fatalities?

What proactive measures can construction companies take to improve worker safety and prevent injuries?

How can addressing mental health and reducing stigma benefit construction workers, and what strategies can employers use to support their employees?

How assignment will be adapted in online format

In an asynchronous online environment students will respond to the instructors posted prompt through CMS tools. The instructor will provide feedback through one of the CMS tools within a week of submission. In a synchronous online environment, the student may answer these questions using accessible video conferencing software. The instructor can give immediate feedback.

Assignment Type

Writing

In-class and/or outside of class

In-class

Outside of class

Formative or Summative

Summative

Assignment

Commercial Construction Project Proposal

Write a detailed project proposal for the construction of a commercial building (e.g., office complex, retail store, restaurant, or warehouse). The proposal should reflect the principles and practices learned during the course, with an emphasis on safety, budgeting, building codes, and construction best practices.

Introduction-

- Briefly introduce the commercial construction project.
- Provide a description of the project type and the building's intended purpose.
- Explain the importance of effective planning in the success of a commercial construction project.

Site Analysis and Preparation

- Choose a location for the construction project and justify your selection based on zoning laws, accessibility, and environmental considerations.
- Discuss any site preparation required, such as clearing land, excavation, or grading.
- Identify and address potential challenges such as soil conditions, weather, and local infrastructure.

Construction Timeline and Budget

- Create a detailed project timeline, including key milestones such as groundbreaking, foundation work, structural framing, and project completion.
- Provide a rough estimate of the total construction costs, breaking down major expenses such as labor, materials, equipment, and permits.
- Discuss strategies to stay within budget and time constraints.

Safety and Risk Management

- Outline the safety measures and protocols that will be implemented on-site to ensure the safety of all workers and visitors.
- Identify the key construction hazards and how you will mitigate them (e.g., falls, electrocution, equipment accidents).
- Discuss the role of OSHA regulations and your plan for compliance.

Conclusion

- Summarize the key points of the proposal and reflect on the importance of a well-structured project plan in ensuring the project's success.
- Discuss how effective project management, from planning to execution, contributes to the overall safety, quality, and timeliness of commercial construction projects.

Evaluation Criteria:

- Clarity & Structure– Well-organized and clear presentation of ideas.
- Application of Knowledge – Demonstrates understanding of construction processes, safety standards, budgeting, and legal compliance.
- Realism & Feasibility– Practicality of the proposed timeline, budget, and safety measures.
- Writing Quality – Coherent, concise, and professional writing with proper grammar and formatting.



How assignment will be adapted in online format

Instructors will post assignment and student will access and respond by uploading their assignment using CMS tools. The instructor will provide feedback within two weeks of submission.

Assignment Type

Reading

In-class and/or outside of class

In-class

Outside of class

Formative or Summative

Formative

Assignment

"Cultural Diversity in Commercial Construction"

Analyze how cultural diversity impacts commercial construction practices and design inclusive spaces.

Assignment Instructions:

Read a case study on diversity in the construction industry (e.g., Turner Construction's 2030 Vision for Diversity and Inclusion). Explore how cultural influences shape construction practices, such as material choices and design aesthetics.

In small groups, discuss:

- How cultural diversity enhances innovation and productivity in construction projects.
- The importance of accessibility standards in creating inclusive commercial spaces.

Assessment Criteria-

Research and Analysis: Demonstrates understanding of cultural influences and accessibility requirements.

Collaboration: Active participation in group discussions.

How assignment will be adapted in online format

Instructors will post assignment and student will access and respond by uploading their assignment using CMS tools. The instructor will provide feedback within two weeks of submission.

Course Materials**Textbooks**

Miller, Jack (2025) Construction Project Management & Estimating for Beginners: [2 in 1] From Estimates to Execution - Mastering Project Bids, Estimating Techniques and Management Essentials for New Professionals ISBN: 979-8309409716

Andres, C., Smith, R., Woods, R (2019). Principles and Practices of Commercial Construction Pearson. ISBN: 9780134704654

Madsen, David. (2021). Commercial Building Construction: Materials and Methods McGraw-Hill Education. ISBN: 9781260460407

Class Size Information**Class Size**

30

Class Size Category

F - Individualized, skills#based instruction/field practice 30

Diversity and Inclusion

Course Design and Materials: Course will incorporate diverse perspectives, authors, and examples that reflect a variety of cultures, identities, and lived experiences. Instructional materials will be reviewed regularly to ensure representation, inclusivity, and alignment with equity-minded practices across disciplines.

Inclusive Learning Environment: Instructors will establish classroom norms and policies that promote respect, civil discourse, and belonging in both online and face-to-face classes. Clear expectations for communication and engagement will support a learning space where all students feel valued and heard.

Accessible Instruction: Course content will be delivered using accessible design. Materials will follow accessibility guidelines within the CMS, including captioned media, readable document formats, and multiple means of engagement to support diverse learning.

Equitable Teaching Practices: Instructors will use transparent and grading criteria, varied assessment methods, and timely feedback to promote fairness and student success. Opportunities for revision, reflection, and multiple demonstrations of learning may be incorporated when appropriate to the discipline.

Culturally Responsive Pedagogies: Instructional strategies will encourage critical thinking about diverse perspectives and systems of power relevant to the course content. Faculty will foster opportunities for students to connect course material to real-world contexts.

Ongoing Reflection and Improvement: Faculty will engage in continuous professional development related to IDEAA principles and reflect on course practices using metacognition to identify opportunities for increased equity, inclusion, and accessibility.

Explain how diversity and inclusion(e.g., gender, culture/race, sexuality, etc.) is infused into the course.

This course is designed to equip students with the skills and knowledge required for success in the commercial construction industry. Instructors create a hands-on, student-centered learning environment that fosters teamwork, technical proficiency, and inclusivity. Students will engage in practical construction projects, collaborate with peers from diverse backgrounds, and apply critical problem-solving strategies in a supportive setting. Discussions will explore how cultural, gender, and regional influences shape commercial construction practices, including variations in building materials, safety regulations, and workforce dynamics. Course materials, such as blueprints, instructional videos, and case studies, will be inclusive and accessible, ensuring that all students, regardless of background or ability, can actively participate and succeed in the field.

Describe how assignments, instruction, evaluation, course content, and interactions are contextualized for diverse learners promoting an equitable course.

In this commercial construction course, assignments are designed to be flexible, accommodating diverse learning styles, backgrounds, and levels of experience. Students will have multiple ways to demonstrate their understanding, ensuring equitable participation. Assignments will incorporate diverse perspectives, allowing students to analyze commercial construction techniques, materials, and structural approaches used in various cultural and regional contexts. Instruction will engage students with different learning preferences by incorporating accessible visual aids such as blueprints, technical diagrams, and instructional videos alongside verbal explanations and hands-on construction activities. Instructors will create an inclusive learning environment where each student's input is valued, and peer collaboration is encouraged. Evaluation in this course prioritizes individual progress and skill mastery rather than one-time performance. Regular formative assessments will track students' understanding, providing timely feedback and opportunities for improvement. This approach allows instructors to adjust their teaching methods to ensure all students achieve proficiency in key construction competencies. Course content is designed to be relevant, inclusive, and accessible. Materials, case studies, and project examples will reflect the diversity of the commercial construction industry, addressing topics such as sustainable building methods, evolving safety protocols, and regional construction regulations. Instruction will also incorporate real-world examples from various cultural and economic perspectives, emphasizing the global nature of commercial construction. All materials and resources will be accessible to ensure students of different abilities and backgrounds can fully engage with the content. Classroom interactions will be guided by respect, inclusivity, and collaboration. Group projects will encourage peer learning, allowing students from diverse backgrounds to share their insights and experiences. Instructors will foster an open and supportive environment where all students feel comfortable expressing their ideas and perspectives.

Interactions

Explain how the course will incorporate student-to-student interaction.

Students in a commercial construction course will actively engage in collaborative activities that promote hands-on learning and peer interaction. In an in-person setting, students will work in teams on practical construction projects, such as assembling structural frameworks, interpreting commercial blueprints, and calculating material quantities. These group activities will allow students to exchange ideas, troubleshoot challenges, and refine their technical skills while simulating real-world construction teamwork. Class discussions will focus on practical applications relevant to commercial construction, such as comparing structural steel vs. reinforced concrete framing methods, evaluating cost-effective material selections, and solving job-site logistical challenges. Peer collaboration will be encouraged through role-based team exercises that reflect industry scenarios, fostering problem-solving and

communication skills for the field. In an online course environment, students will interact through accessible video conferencing software, virtual breakout rooms, and discussion forums in the CMS. Team-based activities may include analyzing commercial building plans, evaluating sustainability strategies for large-scale projects, and discussing compliance with commercial building codes. Students will contribute to discussion forums by responding to peers' analyses, offering feedback on construction strategies, and sharing insights into best practices within the commercial construction industry.

Explain how the course will incorporate instructor-to-student interaction.

The instructor in a commercial construction course will actively engage with students through hands-on demonstrations, real-time feedback, and individualized support to ensure their success. In an in-person setting, the instructor will provide live demonstrations of commercial construction techniques, such as steel framing, concrete forming, and advanced blueprint reading. They will supervise group projects, monitor tool usage, and offer immediate guidance on best practices for efficiency, accuracy, and safety. During class discussions and problem-solving activities, the instructor will facilitate critical thinking by asking guiding questions and encouraging students to analyze real-world commercial construction challenges. In an online environment, the instructor will use CMS tools and accessible video conferencing to conduct virtual demonstrations, lead discussions, and provide personalized feedback. Timely feedback will be given on assessments, discussion posts, and project submissions, ensuring students understand how to refine their techniques and decision-making processes. For example, the instructor may provide detailed critiques on structural calculations, recommendations for improving project cost-efficiency, or insights on navigating commercial building codes. Instructor interactions will occur through in-person coaching, live virtual sessions, recorded instructional content, email correspondence, and office hours. By maintaining multiple avenues of communication, the instructor will create a supportive and interactive learning environment where students feel confident seeking clarification, applying feedback, and developing the skills necessary for success in commercial construction.

Explain how the course will incorporate student-to-content interaction.

This commercial construction course will incorporate student-to-content interaction through hands-on exercises, applied learning projects, and critical discussions, ensuring students develop industry skills. Students will engage with a variety of instructional materials to reinforce key commercial construction concepts. Students will actively participate in practical assignments such as reading and interpreting commercial construction plans, estimating materials and costs, assembling structural components, and adhering to commercial building codes. For online learning environments CMS tools and accessible video conferencing software will facilitate interactive lessons, virtual site walkthroughs, and digital assessments. Online discussions through the CMS will allow students to analyze construction techniques, compare industry best practices, and collaborate on case studies related to commercial projects. Additionally, students will have access to accessible supplemental resources such as OSHA safety guidelines, energy-efficient building standards, and advanced material specifications, encouraging a deeper exploration of industry innovations.

Explain how the course will incorporate student-to-self interaction (metacognitive).

This commercial construction course will encourage student-to-self interaction by promoting metacognitive reflection on skill development and problem-solving abilities. Throughout the course, students will engage in regular self-assessment exercises to evaluate their understanding of key commercial construction concepts, techniques, and safety protocols. Students will also analyze their decision-making processes during construction tasks, identifying challenges they faced and strategies they used to overcome them. By reflecting on their learning journey, students will gain a deeper understanding of their strengths and areas for improvement needed for success in the commercial construction industry.