

Courses in Construction Management

All CM courses require a grade of C- or better. CM courses may only be re-taken one time without special permission.

Consistently Offered Courses

CM 100 INTRODUCTION TO CONSTRUCTION MANAGEMENT Cr. 3

This course is a survey of the construction industry. Topics include the overall construction process, career opportunities in the construction industry, an introduction to construction materials as well as management and technology tools used in the industry. There will be an emphasis on construction specific vocabulary.

Learning Objectives: 1. Recognize the evolution of the construction management role, the future of the construction industry, and prepare for a career in the industry. 2. Describe the basic sequence of work as well as a broad overview of basic materials and methods for a general construction project. 3. Know the evolution and growing demand for technology in construction. 4. Identify resources for student success at Purdue and life-long learning. 5. Convey professionalism by practicing proper communication, team work, rules and regulations, and level of detail required within a construction company and on a construction jobsite.

CM 110 CONSTRUCTION OSHA TEN-HOUR CERTIFICATION Cr. 1

This course provides safety training following the OSHA (Occupational Safety and Health Administration) requirements for entry level workers of the construction industry. Upon successful completion of this course students will obtain their OSHA 10-hour card.

Learning Objectives: 1. Identify the Focus Four hazards and other hazards on a construction site. 2. Describe the rights and responsibilities of employers and employees under the OSH Act. 3. List the OSHA inspection priorities and steps of the inspection process.

CM 150 CONSTRUCTION MANAGEMENT FUNDAMENTALS Cr. 6

An introductory course dealing with construction materials and methods, contracts, and layout of basic commercial, residential, heavy/civil, and industrial projects. Students will acquire fundamental skills in quantity estimating, construction plan reading, project layout, and project documentation through hands-on laboratory experiences.

Learning Objectives: 1. Identify materials, means, and methods for a construction project throughout the entire project lifecycle. 2. Recognize project controls required during the pre-construction and construction phases of a construction project. 3. Explain project planning tasks relevant to a construction project. 4. Comprehend project administration on a construction project and the required documentation and technology available within the current construction industry. 5. Convey professionalism by practicing proper communication, team work, rules and regulations, and level of detail required within a construction company and on a construction jobsite.

CM 200 INTERMEDIATE PRE-CONSTRUCTION MANAGEMENT Cr. 9

A project course covering intermediate level commercial, residential, heavy/civil, and industrial construction projects. Students will expand their understanding of construction company management, design, cost, project controls, and safety. In addition, students will explore areas of concentration within the construction management program.

Learning Objectives: 1. Calculate design components of a construction project during the pre-construction phase. 2. Produce project controls required during the pre-construction phase of a construction project. 3. Apply project administration to a construction project utilizing the required documentation and technology available within the current construction industry. 4. Identify resources for student success at Purdue and life-long learning. 5. Show professionalism by applying proper communication, team work, rules and regulations, and level of detail required within a construction company and on a construction jobsite.

- CM 210** CONSTRUCTION MANAGEMENT PORTFOLIO I Cr. 0.5
Creation of a portfolio demonstrating developing and emerging levels of competence within the construction management discipline. Students will meet individually and in small groups with faculty mentors to review and critique progress.
Learning Outcomes: 1. Demonstrate a developing to emerging level of understanding of the competencies within the construction management discipline. 2. Demonstrate a developing to emerging level of skill in developing individual portfolio.
- CM 250** INTERMEDIATE CONSTRUCTION MANAGEMENT Cr. 9
A project course covering intermediate level commercial, residential, heavy/civil, and industrial construction projects. Students will expand their understanding of construction materials and methods, layout, documentation, site planning, site supervision, cost control, and MEP systems.
Learning Objectives: 1. Relate materials, means, and methods to a construction project throughout the project lifecycle. 2. Apply company management concepts to a construction project during the construction phase. 3. Produce project controls required during the construction phase of a construction project. 4. Construct site planning documentation for a construction project throughout the construction lifecycle. 5. Show professionalism by applying proper communication, team work, rules and regulations, and level of detail required within a construction company and on a construction jobsite.
- CM 300** ADVANCED PRE-CONSTRUCTION MANAGEMENT Cr. 9
A project course covering advanced level commercial, residential, heavy/civil, and industrial construction projects. Students will further develop their understanding of construction company management, design, cost, project controls, and safety. In addition, students will pursue their desired area of concentration within the construction management program.
Learning Objectives: 1. Select design systems for a construction project during the pre-construction phase. 2. Illustrate project controls required during the pre-construction phase of a construction project. 3. Analyze pre-planning tasks relevant to beginning a construction project. 4. Differentiate project administration on a construction project utilizing the required documentation and technology available within the current construction industry. 5. Demonstrate professionalism by analyzing proper communication, team work, rules and regulations, and level of detail required within a construction company and on a construction jobsite.
- CM 350** ADVANCED CONSTRUCTION MANAGEMENT Cr. 9
A project course covering advanced level commercial, residential, heavy/civil, and industrial construction projects. Students will further develop their understanding of construction materials and methods, layout, documentation, site planning, site supervision, cost control, and MEP systems.
Learning Objectives: 1. Differentiate materials, means, and methods required for a construction project throughout the project lifecycle. 2. Relate company management concepts of a construction project to the construction phase. 3. Illustrate project controls required during the construction phase of a construction project. 4. Analyze site planning of a construction project throughout the construction lifecycle. 5. Demonstrate professionalism by analyzing proper communication, team work, rules and regulations, and level of detail required within a construction company and on a construction jobsite.
- CM 390** CONSTRUCTION WORK EXPERIENCE I Cr. 1
This course shall be taken when approximately half of a student's required 800 hours of work experience within the construction industry are completed. Students will be required to share their experiences with faculty and other construction management students. Permission of department required.
Learning Objectives: 1. Create an oral presentation sharing experience(s) acquired within the construction industry. 2. Write a formal paper summarizing knowledge gained through the requirement of work experience. 3. Critique fellow students on their written and oral communication of experiences.
- CM 400** CONSTRUCTION CAPSTONE I Cr. 6
A project course covering specialized construction projects related to a student's area of concentration within the construction management program. Students will synthesize their previous knowledge of pre-construction management into a capstone project.
Learning Objectives: 1. Design systems for a construction project during the pre-construction phase. 2. Create project controls required during the pre-construction phase of a construction project. 3. Evaluate pre-planning tasks relevant to beginning a construction project. 4. Generate project administration for

a construction project utilizing the required documentation and technology available within the current construction industry. 5. Display professionalism by creating proper communication, team work, rules and regulations, and level of detail required within a construction company and on a construction jobsite.

CM 410 CONSTRUCTION MANAGEMENT PORTFOLIO II Cr. 0.5

Creation of a portfolio demonstrating emerging and proficient levels of competence within the construction management discipline. Students will meet individually and in small groups with faculty mentors to review and critique progress.

Learning Outcomes: 1. Demonstrate an emerging to proficient level of understanding of the competencies within the construction management discipline. 2. Demonstrate an emerging to proficient level of skill in developing individual portfolio.

CM 450 CONSTRUCTION CAPSTONE II Cr. 6

A project course covering specialized construction projects related to a student's area of concentration within the construction management program. Students will synthesize their previous knowledge of construction management into a capstone project.

Learning Objectives: 1. Evaluate materials, means, and methods required for a construction project throughout the project lifecycle. 2. Interpret company management concepts for a construction project during the construction phase. 3. Create project controls required during the construction phase of a construction project. 4. Design site planning for a construction project throughout the construction lifecycle. 5. Display professionalism by creating proper communication, team work, rules and regulations, and level of detail required within a construction company and on a construction jobsite.

CM 490 CONSTRUCTION WORK EXPERIENCE II Cr. 1

This course completes a student's required 800 hours of work experience within the construction industry. Students will be required to share their experiences with faculty and other construction management students. Permission of department required.

Learning Objectives: 1. Create an oral presentation sharing experience(s) acquired within the construction industry. 2. Write a formal paper summarizing knowledge gained through the requirement of work experience. 3. Critique fellow students on their written and oral communications of experiences.

Effective Date: August 2019