

CMCE 2321 CONSTRUCTION MANAGEMENT II

Equivalent to old course: CMCE 2320

Course Description

An introduction to advanced planning, management techniques and computer applications. Topics covered include an expanded knowledge of the pre-construction and construction processes; a further understanding of construction and labor law; risk allocation and safety; accounting principles; material testing and quality control techniques; and changes, claims and disputes as well as discussion of the role of the project manager and project superintendent during the entire process. Students also study the LEED rating system and take a LEED certification exam at the end of this course (if qualified).

Prerequisites: CMCE 1110, CMCE 1221; or Co-requisite: CMCE 1224
3 Class hours, 3 credits

Textbook: Construction Project Administration, Fisk & Reynolds, 10th Edition, Pearson 2014.
Certification: Optional: LEED GA or LEED AP (If qualified)

Program Criteria

ABET, Inc. is the nationally recognized accrediting body for engineering technology programs. The CMCE department has adopted the most current ABET Program Criteria. Graduates of baccalaureate degree programs typically specify project methods and materials, perform cost estimates and analyses, and manage construction activities. The CMCE curriculum provides instruction in the following areas:

- Utilization of techniques that are appropriate to administer and evaluate construction contracts, documents, and codes (Criterion a);
- Estimation of costs, estimation of quantities, and evaluation of materials for construction projects (Criterion b);
- Production and utilization of documents related to design, construction, and operations (Criterion e);
- Performance of economic analyses and cost estimates related to design, construction, and maintenance of systems associated with construction engineering; (Criterion f);
- Selection of appropriate construction materials and practices (Criterion g);
- Application of appropriate principles of construction management, law, and ethics (Criterion h);

Student Outcomes

The CMCE department has adopted the most current ABET student outcomes criteria. Student performance in this course will be assessed based on the following learned capabilities:

- An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline (Criterion 1);
- An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline (Criterion

- 2);
- An ability to apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature (Criterion 3);

Academic Integrity Policy

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity.

Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, or expulsion.

Course Outline

| Week | Class Schedule | Topic | Reading Assignment | Homework |
|-------------|-----------------------|---------------------------|---------------------------|-----------------|
| 1 | | Introduction | Chapter 8 | |
| 2 | Lecture 1 | Constr. Law & Labor | Chapter 9 | Assignment 1 |
| 3 | Lecture 2 | Construction Safety | Chapter 10 | |
| 4 | Lecture 3 | Meetings & Negotiations | Chapter 11 | |
| 5 | Lecture 4 | Risk allocation/liability | Chapter 14 | |
| 6 | Lecture 5 | Cpm Scheduling | Chapter 15 | Assignment 2 |
| 7 | Lecture 6 | Construction Operations | Midterm Study | |
| 8 | Midterm | Lectures 1-6 | Chapter 16 | |
| 9 | Lecture 7 | Value Engineering | Chapter 17 | Assignment 3 |
| 10 | Lecture 8 | Measurement & Payment | Chapter 18 | |
| 11 | Lecture 9 | Materials & Workmanship | Chapter 19 | Assignment 4 |
| 12 | Lecture 10 | Changes & Extras | Chapter 20 | |
| 13 | Lecture 11 | Claims & Disputes | Chapter 21 | Assignment 5 |
| 14 | Lecture 12 | Project Closeout | | |
| 15 | Final Exam | | | |