

CONE 311: Resource Estimating

Fall 2021

3 Credit Hours

Instructor: Mostafa Batouli, PhD, MPA, PMP

Office: 311 LeTellier Hall

Office Hours: MWF 9:30 – 11:00, TR 11:00-12:00

Virtual Office Hours: MW 13:00 – 15:00 by appointment via Zoom

Class Time(s): TR 1:30 – 2:45, LH 304

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Open Door Policy: My students are my priority. You are welcome to knock on my door at any time. Also, you can email me any time and I will respond to your questions/concerns as soon as I can. You are strongly encouraged to seek additional assistance outside of class.

COURSE OVERVIEW

Prerequisites:

CIVIL 101 – Engineering Drawing or 103 – Intro to Civil Engineering

MATH 131 – Calculus I

Course Description: Systems approach to determining required quantities of construction materials; quantification of various types of foundation systems, structural systems and building envelope systems using excerpts of contract documents from a variety of different building projects.

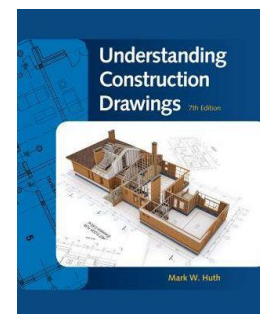
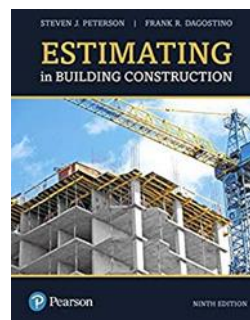
Course Learning Outcomes: Upon completion of this course, students should be able to:

Course Learning Outcome (CLO)
1. <i>Compare construction cost estimating methods and their uses.</i>
2. <i>Explain the role of estimator and the requirements of estimating in construction projects.</i>
3. <i>Discuss contracts, bonds, insurance, and project manual as they relate to resource/cost estimating.</i>
4. <i>Explain Construction Estimating Code of Ethics</i>
5. <i>Identify types and components of overhead and contingencies</i>
6. <i>Determine labor and equipment costs considering productivity adjustment.</i>
7. <i>Explain the role of specialty contractors in project cost.</i>

Required Textbook: The following textbooks are REQUIRED for this course:

Textbook 1: *Dagostino, Frank R. and Peterson, Steven J., Estimating in Building Construction, 9th Edition, Pearson Prentice Hall, 2015.*

Textbook 2: *Huth, Mark, Understanding Construction Drawings, 7th Edition, Cengage Learning, 2013.*



These textbooks are available at the Citadel book store. They are also available from the online book stores such as Barnes & Noble and Amazon.com.

Important note: not all the chapters in the required textbooks will be covered in the course. Selected topics will be covered and presented in the class notes. In addition, materials from other references will be covered in the lectures.

Course Format: This is a three lecture hours per week class that requires active student participation. Students are expected to read the relevant chapters from the textbook *before* coming to class. During class time, students will be assigned in-class activities and drills to have hands-on practice of the material covered.

COURSE RESOURCES

Canvas /Citadel's Approved Learning Management System: Over the course of the semester, I may post reading notes, lesson plans, discussion prompts, self-guided lectures, grades, and other administrative information on the course Canvas site. Students must check Canvas each lesson for pertinent updates and other critical information.

COURSE POLICIES, EXPECTATIONS, AND REQUIREMENTS

COVID-19 Mandatory Mask Policy: While a mask order is in place, you are required to wear a mask while in the classroom and other academic buildings on campus. If you do not wear a mask, you will be asked to leave immediately and/or a disciplinary action will be taken.

Updated Contact Information: Students must update contact information at the start of each semester to ensure instructor-student communication outside of Canvas, if required.

Course Material: Course material is for the sole use of students currently enrolled in the course and not for redistribution to electronic file sharing sites (share drives, Chegg, Course Hero, etc.).

Disability Policy: The Citadel complies with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Students with disabilities who seek accommodations must make their request through Services for Students with Disabilities in the Student Success Center (117 Thompson Hall, 843-953-6877) to verify their eligibility and to identify appropriate accommodations. Students should speak to his/her professor and also make requests for academic accommodations to services for students with disabilities so we can ensure these accommodations and facilitate student success. If you have an immediate access need, please reach out to your faculty immediately in person, via email, or during office hours. Students with short-term disabilities, such as a broken arm, can often work with instructors to minimize classroom barriers. In situations where additional assistance is needed, students should contact the Services for Students with Disabilities as noted above. Please know that accommodations are not retroactive, so avoid any delays.

Weather & Campus Emergencies: In case of adverse weather, or other campus emergency, critical information will be posted on the Bulldog Alert homepage, as well as pushed to email addresses and

phone numbers of those people who have updated their contact information within the Bulldog Alerts section of the Lesesne Gateway (or Canvas).

If you have not yet updated your contact information, or set up course notifications within Canvas, you should do so immediately.

Continuity of Instruction (COI): During a pandemic or catastrophic event, and after all face-to-face instruction has been suspended, communication for our class will continue to take place through Citadel email and Canvas. In the event of such an emergency, check your Citadel email account and Canvas course announcements for instructions. The following areas will also adjust during COI:

1. Online Course Requirements

- Computer
- Reliable Internet connection and software (DSL, LAN, or cable connection desirable)
- Access to Canvas
- Webcam
- Scanning (possibly with smartphone)

2. Course Structure

This course will be delivered entirely online through the Citadel's Learning Management System, Canvas. You will need your Citadel CWID and password to login to the course from the Canvas home page (<https://lesesnegateway.citadel.edu/cp/home/displaylogin>).

3. Technical Assistance

If you need technical assistance at any time during the course or to report a problem you can:

- Email the Center for Excellence and Innovation in Teaching, Learning, and Distance Education (CEITL &DE) at ceitlde@citadel.edu
- Visit the Canvas tutorials found in your Citadel Online Student Resource course, or visit the HELP MENU in your course navigation bar.

4. Email

In this course we will use Canvas to send emails to your Canvas email account. Please check your messages regularly.

- Assignments will not be accepted via email.
- Check your Citadel email frequently and at least once daily.

5. Discussion Forums

Discussion Forums are a way for you to engage with each other about the course content. Each lesson module will have a question that links to a forum. You can also access each forum by clicking on the Discussion Board link in the course navigation menu. In order to get full credit for each discussion, you will need to post a thoughtful, well-written response to the prompt and follow the criteria outlined on the forum rubric.

6. Virtual Office Hours

All of my office hours will be held virtually during COI.

7. Attendance Policy:

Distance education (online) students are subject to The Citadel's attendance policy. Attendance in a distance education (online) course is defined by active participation. Logging into Canvas does not qualify as sufficient evidence of attending as per federal financial aid guidelines, and nonattendance may affect financial aid and/or veterans' benefits. Completion of tests, submission/completion of assignments, and participation in discussion forums are activities used to document enrollment.

(Note: logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement). Students who have not documented enrollment and participation by the end of the official drop/add period will be administratively dropped from the roll as “never attended.” Students who fail to maintain active participation throughout a distance education (online) course also may be administratively dropped after the official add-drop date without the possibility of reimbursement. For this purpose, an unexplained absence from the course for more than two weeks is considered “non-participation.”

8. Complete Assignments

All assignments and discussions for this course will be submitted electronically through Canvas unless otherwise instructed. Assignments and discussions must be submitted by the given deadline or special permission must be requested from instructor before the due date. Extensions will not be given beyond the next assignment except under extreme circumstances. Late or missing assignments and discussions will affect the student’s grade.

Code of Conduct: Responsibility for professional conduct rests with students as adult individuals and as members of The Citadel community. CGC students and cadets are expected to conduct themselves as responsible adults. All members of the campus community are expected to use reasonable judgement in all aspects of campus life and activity and to show due concern for the welfare and rights of others. Students are expected to adhere to all federal, state, and local laws. The Citadel protects freedom of action and speech, so long as the exercise of this freedom is not of an inflammatory or demeaning nature and does not interfere with the operation of the College. The Citadel’s Conduct Policy prohibits the possession of drugs, destruction of property, making false statements of emergency situations, physical or verbal abuse, or harassment of any sort. Students who violate the rules and regulations of The Citadel are subject to expulsion or lesser sanctions. These rules and regulations are published in “Regulations for Non-Cadet Students for Fall and Spring Semester And All Students, Including Cadets, for Maymester or Summer School,” which can be found online at: http://www.citadel.edu/root/images/cgc/cgc_catalog/cgc-academic-catalog.pdf

Academic Integrity Statement: Students will submit only their own work for evaluation in this course, except as appropriately documented. All rules and stipulations of The Citadel’s Honor Manual and Honor Code apply to this course, including its definitions and policies related to cheating, lying, stealing, and non-toleration. Cheating or evidence of academic dishonesty on any work submitted for evaluation will result in an “F” for both the assignment and the course. To ensure academic integrity, you must abide by both the letter and spirit of all honor, documentation, and citation requirements. Plagiarism in any form is unacceptable, as it fails to meet any standard of academic work. It is your responsibility to read and understand what constitutes intentional and negligent plagiarism. Plagiarism, intentional or negligent, may be referred as an honor violation. The complete Honor Manual may be found at: <http://krausecenter.citadel.edu/wp-content/uploads/2019/08/2019-2020-Honor-Manual-WEB.pdf> and the Honor Code can be found in the CGC Course Catalog: <http://www.citadel.edu/root/images/cgc/cgc-academic-catalog.pdf>

Student Use of Electronic Devices: Students may use laptop computers or tablets for taking notes so long as they do so in a manner that does not interfere with the learning of others. Students may not play games, work on other assignments, or use their electronic devices during class except for taking notes and/or completing instructor-assigned work.

Missed or Late Work Policy: Late assignments will not be accepted. However, on Amnesty Day (typically the last day of class) previously un-submitted, complete, and self-assessed assignments may be

submitted for 30% credit. Furthermore, students who have not submitted all regular homework by Amnesty Day may not be permitted to take the final exam.

Attendance and Participation Requirements: I will record and report attendance for every class meeting. It is the student's responsibility to arrive to class on time, and to maintain class attendance throughout the duration of the semester. With this in mind:

- Class attendance is mandatory.
- Students may miss class only for authorized reasons (athletic events, academic travel, special ceremonies, guard duties, etc.)
- Illness and personal emergencies may also cause students to be absent for legitimate reasons.
- Should a student miss class for any reason, he/she will make every reasonable effort to notify the professor in advance of the absence.
- The student will be responsible for any material covered in class.
- If a student knows he/she will be absent for an examination or on the due date of a major graded requirement, that student will coordinate with his/her instructor for completion/submission requirements.
- Active participation in class discussions and activities is an expectation of this course.

Assignments: Students are urged to actively participate in class discussions/activities. For this purpose, in-class activities and drills are held to help students better comprehend the discussed course materials and are included in the course final grade. In addition, homework will be assigned as the term progresses and is normally due in one week at the beginning of the class period, unless otherwise directed by the instructor. Late homework submissions are not accepted. There will be two pop quizzes, one midterm exam and one comprehensive final exam in this course. Make-up examinations will not be given unless an excused absence is approved ahead of time or in the event of a verifiable illness or emergency. Satisfactory performance in all these elements is required for successful completion of the course.

Course Grades:

The final grade for the course will be based on the student's understanding of the course material as evidenced by his/her performance on term project, examinations, assignments, and class participation in consonance with the following:

Course Requirement	# of Items	Total Points Available	Weight
Homework	6	300	30%
Code of Ethics Reflection Essay	1	50	5%
In-Class Activities	10	100	10%
Pop Quizzes	2	100	10%
Midterm Exam	1	150	15%
Final Exam	1	200	20%
Plickers Quizzes	As needed	50	5%
Participation	-	50	5%
Total		1000	100%

These weights may be changed at the discretion of the professor to reflect the emphasis placed on the material presented during the course. All examinations, homework, and other student work are the intellectual property of the student, but may be retained by the professor. Examination dates are indicated in the Course Schedule, but are subject to change at the professor's discretion. It is the responsibility of

the student to keep abreast of the class schedule. Absence from class will not be acceptable as a valid reason for missing a scheduled assignment such as a HW or an exam.

Grading Scale:

Final Grading is based on the following scale:

(A \geq 90%, B \geq 80%, C \geq 70%, D \geq 60%, F < 60%)

COURSE SCHEDULE

Note: Schedule subject to change. Additional reading/activities will be assigned as needed.

Class	Day	Date	Class Topic	Assignment	Textbook (Ch)
1	R	26-Aug	Class introduction and syllabus review; Introduction to Estimating		1 (1)
2	T	31-Aug	Contracts, Bonds, and Insurance, Project Manual	HW 1	1 (2-3)
3	R	2-Sep	Drawings: Alphabet of Design	In-Class Activity 1	2 (1-5)
4	T	7-Sep	Plan Views, Elevations, Sections and Details	In-Class Activity 2	2 (6-8)
5	R	9-Sep	Clearing and Rough Grading the Site, Locating the Building, Site Utilities	In-Class Activity 3	2 (9-11)
6	T	14-Sep	Footings and Foundation Walls	In-Class Activity 4	2 (12-13)
7	R	16-Sep	Drainage, Insulation, and Concrete Slabs, Framing Systems	In-Class Activity 5	2 (14-15)
8	T	21-Sep	Columns, Piers, Girders, and Floor Framing	In-Class Activity 6	2 (16-17)
9	R	23-Sep	Laying Out Walls and Partitions, Framing Openings in Walls	In-Class Activity 7	2 (18-19)
10	T	28-Sep	Roof Construction Terms, Roof Trusses, Rafters, Hip and Valley Framing, Cornices	In-Class Activity 8	2 (20-24)
11	R	30-Sep	Windows and Doors, Exterior Wall Coverings, Decks	In-Class Activity 9	2 (25-27)
12	T	5-Oct	Finishing Sitework, Fireplaces, Stairs, Insulation and Other Finishing	In-Class Activity 10	2 (28-33)
13	R	7-Oct	Review for Midterm Exam		
14	T	12-Oct	Midterm Exam		
15	R	14-Oct	The Estimate		1 (4)
16	T	19-Oct	Estimating Mathematics 1	HW 2	-
17	R	21-Oct	Estimating Mathematics 2		-
18	T	26-Oct	Computers in Estimating		1 (5)
19	R	28-Oct	Overhead and Contingencies	HW 3	1 (6)
20	T	2-Nov	Labor Hours and Productivity		1 (7)
21	R	4-Nov	Pricing Labor	HW 4	1 (7)

22	T	9-Nov	Estimating Code of Ethics	Code of Ethics Reflection Essay	
23	R	11-Nov	Guest Lecture (Tentative)	Guest Lecture Reflection Essay	-
24	T	16-Nov	Equipment Productivity and Cost	HW 5	1 (8)
25	R	18-Nov	Calculating Present Value of Equipment Cost		1 (8)
26	T	23-Nov	Fall Furlough		
27	R	25-Nov	Fall Furlough		
28	T	30-Nov	Specialty Contractors	HW 6	1 (9)
29	R	2-Dec	Working Session		
30	T	7-Dec	Review for Final Exam		
29	T	11-Dec	Final Exam		

DISCLAIMER

The course schedule is a plan. The professor reserves the right to make changes in the schedule. Students will be notified accordingly.

RIGHT TO REVISE

The instructor reserves the right to modify, solely at his discretion, the course content, and the number, format, and due dates of exams, assignments, quizzes, or projects as well as their weights that will be used to determine the final grade.