

CNET 3160 – Construction Cost Estimating

Credit Hours: 3 (2,3)

Fall 2018 Syllabus

Meeting Times: Mon.: 11:30 a.m. – 01:20 p.m. (001) in **Room B142**
 Mon.: 04:00 p.m. – 06:50 p.m. (101) in **Room F187**
 Thu.: 02:00 p.m. – 04:50 p.m. (102) in **Room F187**

INSTRUCTOR	Aloysius (Al) Attah, P.E.	EVALUATION
OFFICE:	NTDP F115G	Lab Exercises 20%
PHONE:	(940) 565 – 2022	Bid Submission 20%
E-MAIL:	alloysius.attah@unt.edu	Test 1 15%
		Test 2 15%
		Final Exam 30%
		TOTAL 100%
Office Hours		Final Grade
Mon: 1:30 p.m. – 03:00 p.m.		90-100 = A
Wed: 9:30 a.m. – 11:00 a.m.		80-89 = B
Thu: 9:30 a.m. – 10:00 a.m.		70-79 = C
Fri: 9:30 a.m. – 11:00 a.m.		60-69 = D
Or		0 – 59 = F
By appointment		

COURSE DESCRIPTION:

The course covers procedures, techniques, and systems of construction cost estimating. Coverage includes work classification, quantity detailing, specification interpretation and bid preparation.

COURSE PREREQUISITES

CNET 1160, 2180, and 2300

COURSE MATERIALS

- *Construction Estimating Using Excel (3rd Edition)* by Steven J. Peterson (Prentice Hall, 2012, ISBN 9780134405506 – available at the bookstore, online, etc.
- Additional materials to be provided in class/on website, including excerpts from manuals, etc.

COURSE OBJECTIVES:

At the conclusion of this course, the student should be able to:

- *explain* the estimation process for construction projects, including bid preparation, project progress, and closeout.
- *carry out* estimation procedures for the various aspects of a construction project.
- *utilize* computer methods, including Excel and OnCenter estimation software, to carry out estimation from plan sets.
- *prepare* a complete bid submission for a typical construction project.

COURSE OUTCOMES: (ABET Student Outcomes addressed):

- #1 Estimating costs and quantities, and evaluating materials for construction projects. (ABET #1: an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline).
- #10 Functioning effectively as a member or leader on a technical team. (ABET #4: an ability to function effectively as a member of a technical team).

COURSE POLICY/GRADING:

Lab Exercises and Bid Submission:

- There will be 6 lab exercises worth 20% of the overall course grade.
- The exercises will be done in groups of 3 to 4, all of whom will receive the same grade for the exercises.
- These exercises will be due strictly based on the schedule shown in the course outline, unless otherwise specifically stated by the instructor.
- The exercises will be graded based on four areas:
 - organization (format) and completeness of submission
 - adherence to procedure
 - written discussion of exercise in relevant sections
 - accuracy of results
- The reports must follow a prescribed format to be provided.
- **Only one late lab exercise will be accepted during the semester.** It must be submitted no later than the next lab session following the due date, and it will be graded at a 40% penalty (i.e. the maximum grade possible will be 60%).
- The bid submission:
 - is a culmination of the work done for the lab exercises.
 - is a separate submission, to be submitted by each group.
 - will have separate grading criteria to be provided.
 - must be submitted on the due date; **no late submissions will be accepted.**

Tests and Final Exam:

- There will be two tests worth 15 % each (a total of 30%) towards your overall grade.
- There will be a comprehensive final exam worth 30% towards your overall grade.
- One make-up test will be allowed with an excused absence from the instructor.
- Both tests and final exam will be open book. They will be cumulative, covering all topics including:
 - all presentations and any topics discussed in class
 - any chapters of the text noted in the outline
 - any work carried out to complete lab exercises and the bid submission

Extra Credit

- There is none.

COURSE OUTLINE: *Subject to change*

WEEK	TOPIC	WORK DUE	CHAPTER
1	Introduction to course. <i>Presentation #1:</i> About Estimating.		Ch. 1, 2
	<i>Lab 1:</i> Introduction (Re-orientation) to Excel.		Ch. 3
2	<i>No Class (Labor Day) – University Closed.</i>		
3	<i>Presentation #2:</i> Quantity Takeoffs.		Ch. 4
	<i>Lab 1:</i> (cont'd)		
4	<i>Presentation #3:</i> Concrete.		Ch. 5
	<i>Lab 2:</i> Concrete Estimation.	Lab Ex. #1	
5	<i>Presentation #4:</i> Masonry.		Ch. 6
	<i>Lab 3:</i> Masonry Estimation.	Lab Ex. #2	
6	<i>Presentation #5:</i> Steel and Other Metals.		Ch. 7
	<i>Lab 4:</i> Steel Estimation.	Lab Ex. #3	
	<i>Test 1</i>		
7	<i>Presentation #6:</i> Woods, Plastics, and Composites.		Ch. 8
	<i>Lab 5:</i> Timber Estimation.		
8	<i>Presentation #7:</i> Thermal and Moisture Protection.		Ch. 9
	<i>Presentation #8:</i> Openings.	Lab Ex. #4	Ch. 10
9	<i>Presentation #9:</i> Finishes/Fire Suppression		
	<i>Presentation #9:</i> Plumbing		Ch. 11, 12
10	<i>Presentation #10:</i> HVAC/Electrical.		Ch. 13 Ch. 14, 15
	<i>Bid Submission:</i> Introduction <i>Lab 6:</i> Intro to Estimating Software	Lab Ex. #5	
11	<i>Presentation #11:</i> Earthwork.		Ch. 16 Ch. 17, 18
	<i>Presentation #12:</i> Exterior Improvements and Utilities.		
	<i>Bid Submission:</i> (cont'd). <i>Test 2</i>		
12	<i>Presentation #13:</i> Materials Pricing.		Ch. 19 Ch. 20, 21
	<i>Presentation #14:</i> Labor Pricing. <i>Bid Submission:</i> (cont'd).		
13	<i>Presentation #15:</i> Equipment Costs. <i>Presentation #16:</i> Crew Pricing/Subcontracts/Markups.	Lab Ex. #6	Ch. 22 Ch. 23, 24, 25
	<i>Bid Submission:</i> (cont'd).		
14	<i>Presentation #17:</i> Extensions and Errors. <i>Presentation #18:</i> Project Buyout, Scheduling, Ethics.		Ch. 26, 27 Ch. 28-31
	<i>Bid Submission</i>	Bid Sub.	
15	Review for Final Exam. <i>Bid Submission: Review Results</i>	(12/3)	
16	<i>Final Exam</i> (10:30 a.m. – 12:30 p.m.)		

OTHER POLICIES

Academic Integrity: <https://deanofstudents.unt.edu/academic-integrity>

This course will adhere to UNT academic policies, including those for academic integrity (<http://vpaa.unt.edu/academic-integrity.htm>) and overall conduct (<http://deanofstudents.unt.edu/conduct>). It is your responsibility as a UNT student to be familiar with these policies, but feel free to ask the instructor any questions pertaining to these.

ADA Policy

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Office of Disability Accommodation website at <http://disability.unt.edu/>. You may also contact them by phone at [940.565.4323](tel:940.565.4323).

Important Notice for F-1 Students taking Distance Education Courses

Federal Regulation

To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the Electronic Code of Federal Regulations website at <http://www.ecfr.gov/>. The specific portion concerning distance education courses is located at Title 8 CFR 214.2 Paragraph (f)(6)(i)(G).

The paragraph reads:

(G) For F-1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F-1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

University of North Texas Compliance

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student's responsibility to do the following:

- (1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.
- (2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email internationaladvising@unt.edu) to get clarification before the one-week deadline.