

Instructor: Michael Fairchild

SPRING 2018

COURSE SYLLABUS
The University of Texas at Arlington
College of Engineering
Department of Civil Engineering
CM 3313 – Construction Estimating 1
(3 Credit Hours)

Name of Instructor: Michael Fairchild, AIA, NCARB, LEED® AP

Office Number: 426 Nedderman Hall

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Office Hours: Monday-Friday 10:00 AM until 12:00 PM

Course Number, Section Number, and Course Title:

CM 3313 – Construction Estimating 1

Section 001, Preston Hall, Room 103

Time and Place of Class Meetings: Monday & Wednesday, 5:30 PM to 6:50 PM

Teaching Assistant (TA): TBD

Description of Course Content: Systems approach to determining required quantities of construction materials; qualification of various types of foundation systems, structural systems and building envelope systems; excerpts of contract documents from a variety of different building project materials. Prerequisite: Grade of C or better in CM 2311.

Student Learning Outcomes:

Upon completion of the course, the student will:

- Understand the basic fundamentals of cost estimating and know the estimating terminology.
- Comprehend the estimating process and preliminary procedures: obtaining bidding documents, bid estimating, bidding the work and scheduling.
- Learn how to read construction documents and develop quantity takeoffs in order to formulate estimates for equipment, labor and material for a given project.
- Develop the skills for estimating sitework, cast-in-place concrete including reinforcement, structural steel, rough carpentry, masonry, conveying equipment and interior finishes.
- Understand the scope of the contractor's general expenses and develop estimates for costs associated with managing the construction project.
- Know how to develop construction project budgets and the various methods used for creating preliminary estimates.
- Develop the skills for evaluating the life cycle costs of projects using value analysis and understand the time value of money.

Specific Course Objectives:

- Apply this knowledge as it pertains to managing a construction project.
- Review and comprehend the construction documents and how to develop quantity takeoffs per the civil, architectural, and structural plans and details.

Requirements: Consent of Professor Dr. Abolmaali.

Recommended Textbooks and Other Course Materials:

- Building Construction Costs with RS Means Data, 75th Ed.-2017, The Gordian Group, Inc., 9781943215485.
- Walker's Building Estimator's Reference Guide, 31st Ed., Frank R. Walker Company, 091159227X.

Descriptions of major assignments and examinations with due dates: There will be two exams (one close to midterm and one final which will be non-comprehensive), one project, and several homework and lab assignments. See Course Outline for specific dates.

Grading Policy: Grades will be determined according to the following scale (the grading scale may be lowered at the discretion of the instructor, but will not be raised):

Grade	% Required
A	90 -100
B	80-89
C	70-79
D	60-69
F	Less than 60

Students will be required to accumulate points from the following:

Daily Quizzes	15%
Homework	15%
Hourly Exams (2)	40%
<u>Final Exam (Comprehensive)</u>	<u>30%</u>
Total	100%

Make-up Exam Policy: All students must take the exams. Only extenuating circumstances will be accepted as excuse for missing the exam. Health related excuses require medical reports and the signature of a physician that provided treatment.

Grade Grievance Policy: Refer to UTA Catalog for more information.

Attendance: At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. Each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor for this course, I will take attendance for each class. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/aao/fao/>).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of **a letter certified**

by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

Non-Discrimination Policy: *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.*

Title IX Policy: The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. *For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.*

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code in their courses by having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. Additional information is available at <https://www.uta.edu/conduct/>.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include [tutoring](#), [major-based learning centers](#), developmental education, [advising and mentoring](#), personal counseling, and [federally funded programs](#). For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>.

Engineering Librarian:

Sylvia George-Williams, Engineering Librarian

UT Arlington Science & Engineering Library

Mailing address: B03B Nedderman Hall, Arlington, TX 76019. Phone: (817) 272 7519, Email: sylvia@uta.edu

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox

regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Campus Carry: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

Student Feedback Survey: At the end of each term, students enrolled in face-to-face and online classes categorized as “lecture,” “seminar,” or “laboratory” are directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback via the SFS database is aggregated with that of other students enrolled in the course. Students’ anonymity will be protected to the extent that the law allows. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week: for semester-long courses, a period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Laptop use in the classroom: In order to minimize distraction, the use of laptop and/or any other digital device (except standard scientific calculators) in the classroom is NOT allowed.

Emergency Exit Procedures: (Applies to face-to-face courses only.) Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, look for illuminated EXIT signs. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

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TENTATIVE COURSE OUTLINE

Day	Date	Topic	Reference	Assignments Due
Week 1				
Monday	January 15	NO CLASS		
Wednesday	January 17	Course Overview		
Week 2				
Monday	January 22	Estimating 101	On Blackboard	
Wednesday	January 24	Estimating Techniques	On Blackboard	
Week 3				
Monday	January 29 (census date)	Conceptual & Square Foot Estimating	On Blackboard	
Wednesday	January 31	Detailed Estimating		
Week 4				
Monday	February 5	Sitework	On Blackboard	
Wednesday	February 7	Concrete	On Blackboard	

Week 5				
Monday	February 12	Concrete	On Blackboard	
Wednesday	February 14	Concrete	On Blackboard	
Week 6				
Monday	February 19	Structural Steel	On Blackboard	
Wednesday	February 21	Structural Steel	On Blackboard	
Week 7				
Monday	February 26	Wood	On Blackboard	
Wednesday	February 28	Wood	On Blackboard	
Week 8				
Monday	March 5	Review for Exam #1		
Wednesday	March 7	EXAM #1		
Week 9				
Monday	March 12	SPRING BREAK		
Wednesday	March 14	SPRING BREAK		
Week 10				
Monday	March 19	Masonry	On Blackboard	
Wednesday	March 21	Masonry	On Blackboard	
Week 11				
Monday	March 26	Equipment	On Blackboard	
Wednesday	March 28 (last day to drop)	Envelope	On Blackboard	
Week 12				
Monday	April 2	Finishes	On Blackboard	
Wednesday	April 4	Finishes	On Blackboard	
Week 13				
Monday	April 9	RS Means Pricing	On Blackboard	
Wednesday	April 11	RS Means Pricing	On Blackboard	
Week 14				
Monday	April 16	RS Means Pricing	On Blackboard	
Wednesday	April 18	Review for Exam #2		
Week 15				
Monday	April 23	EXAM #2		
Wednesday	April 25	Value Engineering	On Blackboard	
Week 16				
Monday	April 30	Review		
Wednesday	May 2	Review		
Week 17				
Monday, May 7 at 5:30 PM-8:00 PM		FINAL EXAM (Comprehensive) – verify date & time		

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. – Michael W. Fairchild

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911.