

COURSE SYLLABUS
The University of Texas at Arlington
College of Engineering
Department of Civil Engineering
CE 3311 - Construction Engineering
(3 Credit Hours)
Fall 2016

Instructor: Dr. Sharareh Kermanshachi

Office Number: 438 Nedderman Hall

Office Telephone Number: 817-272-6704

Email Address: sharareh.kermanshachi@uta.edu

Faculty Profile: <https://www.uta.edu/profiles/sharareh-kermanshachi>

Office Hours:

Monday, Wednesday and Friday: 11:00 AM-12:30 PM-Additional Office Hours by Appointment.

Section Information:

CE 3311- Construction Engineering-Section 001 and 002

Time and Place of Class Meetings:

Monday, Wednesday and Friday, 10:00-10:50 AM, NH 203

Description of Course Content: Principles of construction engineering and the project management process, value engineering, specifications, different construction contracts and delivery methods, estimating and scheduling fundamentals and project control, and management of construction process. Prerequisite: Grade of C or better in IE 2308.

Student Learning Outcomes: Upon completion of the course, the student will be able to:

- Demonstrate the interaction and influences of engineering principles and decision making with the construction project management process and product delivery.
- Describe project delivery methods and contract types.
- Perform project estimating process.
- Conduct scheduling fundamentals, network construction, activity duration and network calculations.
- Calculate cost and schedule performance.
- Analyze project control and resource control process
- Assess financial aspects of engineering projects and evaluate alternatives.

Required Textbooks and Other Course Materials: Managing the Construction Process, Estimating, Scheduling, and Project Control by Frederick E. Gould, Fourth Edition, Pearson, Prentice Hall, 2012.

Descriptions of major assignments and examinations: There will be three exams (two midterms, and one final which will be comprehensive), one term project, and several homework assignments. See Course Outline for specific dates.

Attendance: At the University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating his or her students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I have established the following attendance policy: students are expected to attend all classes. For total professional development, class participation and oral discussions will be encouraged. Everyone is asked to arrive and be seated promptly for duration of class to minimize the disruption to others.

Grading: 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:

Class Attendance & Participation	5 %
Homework	15%
Midterm Exams (both midterm exams have equal weights)	40%
Term Project	10%
Final Exam (Comprehensive)	30%
Total	100%

Assignments must be uploaded on blackboard. Late assignments will not be accepted.

*Online students should reply to the instructor's emails as soon as possible to answer her questions and facilitate a constant communication. They can also send their questions to the instructor via email. This constant communication via email will be considered as 5% of their grade, marked above as "Class Attendance and Participation".

Make-up Exams: 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 Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog. See below:

<http://catalog.uta.edu/academicregulations/grades/#undergraduatetext>

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/>.

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.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. 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.

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>.

The IDEAS Center (2nd Floor of Central Library) offers **free** tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email IDEAS@uta.edu or call (817) 272-6593.

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

CE 3311- Construction Engineering Course Schedule
TENTATIVE COURSE OUTLINE

Day	Date	Topic	Text Reference	Assignment Due
Week 1				
Friday	August 26	Introduction to the Course		
Week 2				
Monday	August 29	The Construction Players	Chapter 1	
Wednesday	August 31	Categories of Construction Project	Chapter 1	
Friday	September 2	Project Management Process	Chapter 2	
Week 3				
Monday	September 5	Labor Day Holiday		
Wednesday	September 7	Project Phases	Chapter 2	
Friday	September 9	Project Delivery Methods	Chapter 3	Assignment 1
Week 4				
Monday	September 12	Construction Contracts	Chapter 3	
Wednesday	September 14	Contract Changes	Chapter 3	
Friday	September 16	Types of Estimates	Chapter 4	
Week 5				
Monday	September 19	Estimate Considerations	Chapter 4	
Wednesday	September 21	Conceptual Estimate	Chapter 5	
Friday	September 23	Square Foot and Residential Estimating	Chapter 5	Assignment 2
Week 6				
Monday	September 26	MIDTERM EXAM 1		
Wednesday	September 28	Assembles Estimating	Chapter 6	
Friday	September 30	Compilation and Adjustment	Chapter 6	
Week 7				
Monday	October 3	Detailed Estimating-Quantity Take off	Chapter 7	
Wednesday	October 5	Unit Pricing	Chapter 7	
Friday	October 7	Estimate Setup	Chapter 7	Assignment 3
Week 8				
Monday	October 10	Scheduling Fundamentals	Chapter 8	
Wednesday	October 12	When to Schedule	Chapter 8	
Friday	October 14	Scheduling Methods	Chapter 8	Assignment 4
Week 9				
Monday	October 17	Network Schedules	Chapter 9	
Wednesday	October 19	Project Planning Process	Chapter 9	
Friday	October 21	Network Diagram	Chapter 9	
Week 10				
Monday	October 24	Scheduling-Forward Pass Calculations	Chapter 10	
Wednesday	October 26	Scheduling-Backward Pass Calculations	Chapter 10	
Friday	October 28	Float Calculations and Critical Path	Chapter 10	Assignment 5
Week 11				
Monday	October 31	MIDTERM EXAM 2		
Wednesday	November 2	Fundamentals of Project Control	Chapter 11	
Friday	November 4	Basic Control Theory	Chapter 11	
Week 12				
Monday	November 7	Project Team Responsibilities	Chapter 11	
Wednesday	November 9	Cost Engineering	Chapter 11	
Friday	November 11	Cost and Schedule Performance	Chapter 11	Assignment 6
Week 13				
Monday	November 14	Construction Resources	Chapter 12	

Wednesday	November 16	Optimum Project Duration	Chapter 12	
Friday	November 18	Labor and Equipment Studies	Chapter 12	
Week 14				
Monday	November 21	Cash Flow Analysis	Chapter 12	
Wednesday	November 23	Measuring Project Completion Status	Chapter 13	Assignment 7
Friday	November 25	Thanksgiving Holiday		
Week 15				
Monday	November 28	Material Cost and Schedule Control	Chapter 13	
Wednesday	November 30	Labor and Equipment Control	Chapter 13	
Friday	December 2	Project Documentation Process	Chapter 13	Assignment 8
Week 16				
Monday	December 5	Review Session	Term Project	
Wednesday	December 7	Review Session		
Week 17				
Monday, December 12 th 8:00 – 10:30 AM		FINAL EXAM		

“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. –First M. Last.”

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. Non-emergency number 817-272-3381