ENGR 1030-Section 002

Technological Systems

Fall 2022

Instructor: Salar Shirkhanloo Office: NTDP F115T

Email: salar.shirkhanloo@unt.edu **Lecture Time:** Mo/Wed 5:30 PM - 6:50 PM **Instructor Office Hours:** Mo/Wed 4:30 PM - 5:20 PM

Grader: Mr. Hruthik Yelmagandla

Grader Email Address: HruthikYelmagandla@my.unt.edu

Course Description:

Introduction to technological systems with focus on societal interrelationships; past, present and future trends; and influence and impact on technological literacy.

Additionally, characteristics of the construction industry; types of construction companies, contracts, people involved in a project, their responsibilities and interrelationships; ethical conduct; evolution of a project; interpreting working drawings; construction bonds; contract documents.

Student Learning Outcomes:

The course objective is to prepare students to demonstrate basic understanding of the dynamics of the construction industry.

Specific Course Learning Outcomes: Upon completion of the course, the student will:

- 1. Understand the context of the construction industry.
- 2. Understand the principles of project management.
- 3. Understand how contractors win jobs/projects.
- 4. Understand the legal environment of contracting.
- 5. Understand the typical management of a construction project.

All outcomes are observed implicitly through class participation, exams, homework, reports and formal/informal communications with instructor.

Requirements: SOFTWARE:

Student should have a working knowledge of and access to Microsoft Word®, Microsoft Excel®, Microsoft PowerPoint®.

Textbooks and Other Course Materials:

Dykstra, Allison. 2011. Construction Project Management: A Complete Introduction. Kirshner Publishing, Santa Rosa, CA

Description of Major Assignments and Examinations with Due Dates: Homework assignments, , four tests, one midterm exam and a final exam.

Reading and research assignments will be given.

Hard copies of all assignments must be turned in at the start of the class. Distance learning students or advance special arrangements with the instructor for in-class students where assignments are submitted electronically, emails with attachments must be received prior to the start of the class period in which they are due. Failure to do so will constitute a grade of zero for the assignment in question.

Homework, articles review, project, and exams in this class are the minimum assignments considered adequate to achieve basic proficiency of course material. Homework will be discussed in class. When doing the homework, specify date, name, course, and problem number at top of each page. Include at the beginning of the problem, the problem statement and any diagrams given as well as any additional diagram needed to solve the problem. Then show solution.

One week of advanced notice will be provided in scheduling each exam. The final exam will be given according to the university's published final exams schedule. Note that failure to appear for an exam at the scheduled time will constitute a grade of zero in that exam.

The exams will generally relate to the material covered in the lectures or in assignments. The philosophy of the exam is not to merely test your total recall or memorization, but to extend your thinking from theory and example problems to engineering situations.

Attendance Policy

Attendance will be checked randomly.

Grading Policy:

Weighting of Grades				
Tests 1, 2, 3 and 4: 4 @ 10% each	40%			
Midterm Exam	20%			
Class Homework/Assignment	20%			
Final Exam	20%			
Total Weight	100%			

Grade standards are as follows:

- A (90 100 %)
- B (80 89%)
- C (70 79%)
- D (60 69%)
- F (< 59%)

Canvas

- 1. All homework assignments will be posted on Canvas.
- 2. Announcements regarding test dates, quizzes, and homework will be posted on Canvas.
- 3. All grades will be available on Canvas.
- 4. Each student is responsible for checking Canvas on a routine basis.

Disability Accommodations

If special accommodations are required, the student must first meet with the staff of the Office of Disability Accommodation (ODA), (940) 565-4323. You must have document which verifies the disability and makes you eligible for accommodations. After meeting with that office, please contact me to discuss what accommodations will be necessary. For more information, see http://www.unt.edu/oda.,

Academic Misconduct

There is a zero-tolerance policy for academic dishonesty. Cheating of whatsoever will result in an automatic F in this course and the matter will be turned over to the appropriate student disciplinary committee.

Schedule Overview (Subject to change)

Class	Date	Chapter	Lecture Content	Homework
1			Course Overiew	
	08/29	Introduction		
2	08/31	1	Introduction The Construction Industry: Overview and Trends	
3	09/05	-	Labor Day Holiday	
4	09/07	3	Construction Projects and Players	
5	09/12	4	Project Stages: An Overview	HW 1
6	09/14	5, 6	Owner's Feasibility	
7	09/19		Test 1	
8	09/21	6, 7	Project Delivery Programming and Design	
9	09/26	8, 9	Bidding and Awarding the Job Contractors: Findings and Qualifying for the Right Jobs	
10	09/28	9, 10	Contractors: Findings and Qualifying for the Right Jobs Fundamentals of Estimating	
11	10/03	11	Creating Estimates	HW 2
12	10/05		Test 2	
13	10/10	12, 13	Introduction to Contracts Construction Contracts	
14	10/12		Review Session for midterm exam	
15	10/17		Midterm Exam	
16	10/19	14, 15	The agreement The General and Supplementary Conditions	
17	10/24	16, 17	Contract Documents: The Specifications Pre-construction and Mobilization	
18	10/26	18	Construction	HW 3
19	10/31		Test 3	
20	11/02	19	Fundamentals of Scheduling	
21	11/07	20	Creating and Using a Construction Schedule	
22	11/09	21	Buying out the Job: Subcontracting	
23	11/14	22, 23	Changes in the Work Getting Paid	
24	11/16	24, 25	Claims, Disputes, and Mechanic's Liens Close-out and Occupancy	HW 4
25	11/21		Test 4	
26	11/23	-	No classes scheduled (Because of Thanksgiving Holiday)	
27	11/28		Review Session for final exam	
28	11/30		Invited Speakers	
29	11/05		Invited Speakers	
30	11/07		Invited Speakers	
			Final Exam (per university schedule)	