

University of Texas at Tyler - Department of Civil & Environmental Engineering  
CENG 4341: Leadership, Professionalism & Public Policy  
Spring 2025

**Instructor:** Shariful Huq                      Office Hours: TuTh 12:30 pm ~ 3:30 pm  
HEC A204    or By Appointment  
[shuq@uttyler.edu](mailto:shuq@uttyler.edu)

**Lectures, Projects and Exams:**

- (i) 28 Classes.
- (ii) 3 Projects - Public Policy Project, Negligence Case Study Project & Ethics Project ~ Class Presentation + Report Submission.
- (iii) 4 Exams - Public Policy Exam, Ethics Exam, Engineering Professionalism Exam & Contract Law Exam

**Lecture - Day, Time and Location:** Tuesday/Thursday: 11:00 AM to 12:20PM in person at HEC B210 and via zoom to Tyler RBS 1031

If you miss a scheduled class, you are still responsible for the material

**Note to Student about a Syllabus**

This syllabus is a statement of intent about how the course will be taught this semester. It outlines what we will cover, what you will need to do in the course, and it explains what and when you must do it to successfully complete the course and get a great final grade. This syllabus is intended to protect you from arbitrary or untimely changes in course requirements and due dates. But I reserve the right to make changes as necessary to the syllabus with announcement of changes. As we learned during 2020, there are many circumstances outside of our direct course control that may require changes to this syllabus in content and schedule. These will always be announced in advance and the syllabus will be updated on Canvas so all can be aware of the required changes.

**Important Artificial Intelligence (AI) Information**

*AI is not permitted in this course at all.* I expect all the work students submit for this course to be their own. I have carefully designed all assignments and class activities to support your learning. Doing your own work, without human or artificial intelligence assistance, is best for your efforts in mastering course learning objectives. **For this course, I expressly forbid using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming.** *Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic honesty values.*

**Important Covid-19 Information for Classrooms and Laboratories**

*It is important to take the necessary precautions to ensure a healthy and successful year.* UT Tyler continues to urge you to protect yourselves against the flu, COVID and any new threats that

may be developing. Be diligent about preventive measures such as washing hands, covering sneezes/coughs, social distancing and vaccinations, which have proven to be successful in slowing the spread of viruses. **Encourage those who don't feel well to stay home, and if they show symptoms, ask them to get tested for the flu or COVID. Self-isolation is important to reduce exposure** ([CDC quarantine/isolation guidelines](#)). Please work with your faculty members to maintain coursework and please consult [existing campus resources](#) for support.

### **Recording of Class Sessions**

Class sessions will be recorded by the instructor for use by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

### **Course Website:**

I will use both – text books and canvas to manage the course material for the semester. Within canvas you will find lecture notes, assigned reading, homework assignments, exams and other material pertaining to the class. **Please check canvas content daily.**

### **Course Description:**

Civil Engineers are required to be leaders of their communities as well as their firms. Leadership, Public Policy, Business Practices, and Asset Management are critical areas that a Civil Engineer must have skills in, albeit the skills that allow entry at the Engineer-in-Training (EIT) level. This course will tie these required skills to tasks Civil Engineers are required to perform.

This is a topical senior class on:

- A. **Public policy** and its connection to the engineering profession
- B. Understanding the **unique “trust” relationship** that “Engineering Profession” has with its client and what that TRUST means to and with Society
- C. **Professionalism** – what is required of you as a professional engineer
- D. WHAT **Ethics** are required from the TRUST given to the professional engineer
- E. Understand what Engineering **Leadership, Management, Followership, and Team Dynamics** are required **for a practicing Engineer**

**ALL** engineers are professionals and serve as leaders and team players in many varied projects over the entire length of your career. Engineers must “BE” a practicing professional which implies you are:

1. An actively participating professional in your “profession”
2. A lifelong learner and a contributor of and to the body of specialized knowledge in your profession,
3. Aware and fully understand your unique relationship to society and role playing with society as professional engineers

4. Aware that as a key decision maker for complex engineering technical issues being solved for your project you must know how to deal with great amounts of uncertainty and of risk that comes with the role as a professional engineer that will challenge you ethically, technically, and professionally.
5. As an engineering leader or as an engineering partner on projects you must learn and master the art of engineering leadership and followship.

### **Learning Objectives:**

1. Define legally What is an “engineer”? And What legally constitutes “engineering.”
2. We will investigate what PUBLIC POLICY by society is required to muse this service title and to practice engineering.
3. Define What an “engineering professional” is.
4. What is the *link between Engineering and Society* encompassed in the current public policy Engineering LAW and we will investigate the “public policy” boundaries we can practice engineering in as defined by these boundaries.
5. We will discuss why engineers must understand and participate in public policy formation.
6. Understand the T model of development for a profession
7. We will show how society recognizes a profession.
8. We will investigate how a “professional association” impacts the concepts of professional identity and their service to the greater community of mankind.
9. Understand the concepts in “leadership” and specifically engineering leadership.
10. Understand what a manager is; what management is; what engineering management is.
11. Understand what a professional does on a team.
12. What is a professional “followship” how does that help with a team?
13. Understand what is the required *character* of an engineer and a leader
14. Look at the TRUST between a professional and society and why this is so critical to sustain.
15. Look briefly at contracts, Kr Law, obligations under contractual arrangements.
16. Look at the ethics expected of you as an engineering/technology leader and professional.

### **Prerequisite:**

Senior standing and department chair approval

### **Required Text:**

1. **Public Policy 6<sup>th</sup> Edition** by Michael Kraft and Scott Furlong SAGE , ISBN 9781506358154
2. **Leadership** by Northouse 8<sup>th</sup> edition , ISBN 9781506362311, Sage Publishing
3. **Common Sense Construction LAW by Smith & Currie, Wiley, ISBN 978-1-118-85810-3**

### **Final Grade Contribution**

Team Instructional Grade	20%
Team Projects (Presentation & Report, 2 Total = 15%*2)	30%
Exam # 1 (Public Policy)	10%
Exam # 2 (Ethics)	10%
Exam # 3 (Professionalism & Negligence)	10%
Exam # 4 (Contract)	10%
Attendance / Professional Practice	10%
	<hr/>
	100%

There is **NO Final Examination.**

**“If necessary, I reserve the right to adjust the grade scale at the end of the semester to your benefit”.**

#### **\*\*NOTE:**

- There will be no makeup work or extra credit allowed/granted at the end of the semester. All assignments must be turned in at the appropriate due date and time to receive credit. *There is NO credit given for late assignments unless an extension was given by the instructor prior to the due date.*
- *There is no way to ADD to your grade once an exercise is graded – the cumulative grade is the FINAL grade – there are NO adjustments made at the end of course*

**THERE ARE NO MAKE-UP EXAMS GIVEN WITHOUT AN EXCUSED ABSENSE DUE TO ILLNESS.** A note from a medical professional is required for any absence due to illness.

All Graded Events are mandatory and becomes part of your grade. Failure to submit any required work will result in an incomplete. As an engineer your goal is to make a clear, logical, and professional presentation of your work, which is both accurate and correct. As such both your presentation and the accuracy of your work is important, and both will be graded. All submissions are due on the due date assigned through Canvas. **Assignments are due by 11:59 PM on their due date. No late submissions will be awarded credit unless an extension was given by the instructor prior to the due date.**

#### **Professional Practice:**

Your professional practice grade will be computed based upon your attendance (35% of professional practice grade) plus participation in this course (35% of professional practice grade) plus ASCE, ITE, CMSA, IEEE, ASME, SAE, etc. student chapter or local branch meetings or when these student chapters host guest speakers. I will assign 30% percentage of the professional grade towards joining and attending a minimum of 3 meetings and submission of one mini report describing the meeting contents. A document template is posted on canvas within assignment module.

#### **Reading Discussion Questions:**

Reading or videos will be assigned when necessary for a lesson for your review. You are required to review these prior to the next lesson. There will be questions you will need to answer in class

or take a quiz on during class. These are important and will be part of your participation and professionalism grade.

## **CENG 4341 Project Selections:**

### **Project 1 ~ *Public Policy Project Topics:***

**Using one of the listed topics -**

- **Develop a proposal that would get your leadership to agree that**

1. All CE majors must pass FE exam for graduation from UT Tyler?
2. All CE majors are REQUIRED to undergo ‘Specific Ethics Training’ and MUST pass the ‘Texas State’ ethics exam (based on Texas law) to graduate?
3. All CE students MUST belong to ASCE organization and MUST participate in one or more ASCE contests to graduate (reflects student experience component)?

### **Project 2 ~ *Negligence Case Study Topics:***

**Using one of the listed six topics -**

- **Explain why and how the engineering leaders failed in their ‘Duty of Care’ and ‘Professional Practice Obligation’**  
- **What were the impacts of these failed decisions/actions?**  
- **In hindsight how should the engineering leadership have solved the problem presented**

1. Florida International Univ. Pedestrian Bridge Failure – March 15, 2018
2. Schlitterbahn Ride Failure Tragedy – August 7, 2016
3. Columbia Space Shuttle Disaster – February 1, 2003
4. Challenger Space Shuttle Disaster – January 28, 1986
5. Ronan Point Apartment Tower Failure May 16, 1968
6. Apollo Capsule Fire – January 27, 1967

### **Project/Team Grades are not “fail-able”:**

In CENG 4341 we have a team project policy where any team failing to get a C average grade for an exercise when graded by a team of professionals then that team will repeat the exercise –your team will redo the exercise until you do attain a *max grade of a C* for the exercise. The ability to *develop* a well-rounded and sound technical recommendation or solution to some critical problem and then *present a professional briefing* for this problem is absolutely required for you as an engineer BEFORE you graduate from UT Tyler. Just getting a poor grade and letting you move on will not accomplish three key fiduciary responsibilities we have as a trustee organization which are:

1. Training and then ensuring you can analyze and formulate a design, system, or a process to meet desired needs.
2. Giving you the opportunity to demonstrate that you have the proven ability to communicate effectively with a wide range of audiences.
3. Ensuring to our outside partners and industry constituents that we are developing

engineering technical leaders and that can be productive professional engineers in their organization from the moment they walk into their organizations.

IF your team does not attain a C within a max of 2 times of repeats of the exercise then in fact you will get an F for the exercise. We cannot in good conscience and in fulfillment of our fiduciary responsibilities as a Trustee University graduate an engineer that fails to pass an ABET Outcomes for the program here at UT Tyler.

**Team Grade and YOUR Grade:**

Every project grading team will be composed of the faculty member(s) and other teams. The rubric will be based on what would be required of a team to earn a C.

EVERY team member will be required to participate in various project tasks for a grade. You should:

1. Give the project your best efforts and equally carry the load – don't be the weak link!  
*NOTE: Each team member will grade their team mates and this team grade average for you will count for your grade!*
2. Express your ideas and thoughts clearly and openly but remember to keep the dialogue professional and focused on the issues of the course. These should be a learning/growth tool used for your professional development.

**Final day to withdraw:**

The final day to withdraw from the course without penalty is **March 31<sup>st</sup>, 2025**.

**Census dates:**

The university requires that instructors report the attendance to the register at various points in the semester. Therefore, on **January 27<sup>th</sup>, 2025**, I will be taking attendance. Please make sure you are there for class on that date or notify ahead of time if you will not be there. An unauthorized absence will impact your final grade.

**Academic Misconduct:** Plagiarism of homework, submitted written paper assignments and cheating on examinations will be interpreted as academic misconduct and will not be tolerated. Please refer to the University of Texas at Tyler current Undergraduate Catalog for academic policies and Manual of Policies and Procedures for Student Affairs (MOPPS, Chapter 8), regarding academic integrity, cheating and plagiarism. Allegations of academic dishonesty will be immediately referred to the office of Student Affairs and the UT Tyler Judicial Affairs. Ignorance of the rules and policies provides no protection from the consequences.

**UT Tyler Honor Code:**

*I embrace honor and integrity. Therefore, I choose not to lie, cheat or steal, nor to accept the actions of those who do.*

**Student Standards of Academic Conduct:** Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

- i. "Cheating" includes, but is not limited to:
  - copying from another student's test paper;
  - using, during a test, materials not authorized by the person giving the test;
  - failure to comply with instructions given by the person administering the test;
  - possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;
  - using, buying, stealing, transporting, or soliciting in whole or part the contents of an un-administered test, test key, homework solution, or computer program;
  - collaborating with or seeking aid from another student during a test or other assignment without authority;
  - discussing the contents of an examination with another student who will take the examination;
  - divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructor has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
  - substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
  - paying or offering money or other valuable thing to, or coercing another person to obtain an un-administered test, test key, homework solution, or computer program or information about an un-administered test, test key, home solution or computer program;
  - falsifying research data, laboratory reports, and/or other academic work offered for credit;
  - taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
  - misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.
- ii. "Plagiarism" includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the submission of it as one's own academic work offered for credit.
- iii. "Collusion" includes, but is not limited to, the unauthorized collaboration with

another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

- iv. All written work that is submitted will be subject to review by plagiarism software.

#### **UT Tyler Resources for Students:**

- [UT Tyler Writing Center](http://www.uttyler.edu/writingcenter) (903.565.5995), [writingcenter@uttyler.edu](mailto:writingcenter@uttyler.edu)
- [UT Tyler Tutoring Center](http://www.uttyler.edu/tutoring) (903.565.5964), [tutoring@uttyler.edu](mailto:tutoring@uttyler.edu)
- The Mathematics Learning Center, RBN 4021, this is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- [UT Tyler Counseling Center](http://www.uttyler.edu/counseling) (903.566.7254)

#### **Collection of Student Work:**

Throughout the semester I will collect student work (best, average, and worst) for the ABET outcomes notebooks. This will require me to make a copy of your work, keep your original and return a copy of the graded work to you. I will not draw attention as to what level of work you accomplished. **NOTE: On certain assignments, if your work is deemed to be unsatisfactory you may be asked to resubmit the assignment until it becomes satisfactory.**

**Students Rights and Responsibilities:** To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link:

<http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html> .

**Grade Replacement/Forgiveness and Census Date Polices:** Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date is the deadline for many forms and enrollment actions that students need to be aware of. These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment



- Completing the process for tuition exemptions or waivers through Financial Aid

**State-Mandated Course Drop Policy:** Texas law prohibits a student who began college for the first time in fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance. Please contact the Registrar's Office if you have any questions.

**Disability Services:** In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to [cstaples@uttyler.edu](mailto:cstaples@uttyler.edu)

**Student Absence due to Religious Observance:** Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

**Student Absence for University-Sponsored Events and Activities:** If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

**Social Security and FERPA Statement:** It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

**Emergency Exits and Evacuation:** Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do Not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Prepared by: Shariful Huq  
Assistant Professor of Practice  
Department of Civil Engineering and Construction Mgmt.

<b>4341 Course Schedule (Subject to change as needed throughout the semester)</b>				
<i>Date</i>	<i>Lesson</i>	<i>Topic for Class</i>	<i>Reading Assignment</i>	<i>Activity</i>
1/14	1	Syllabus and Intro/Project	Canvas Module 1	<b>Teams for next class</b>
1/16	2	Public Policy (PP)	TEXT Chapter 1	
<b>1/20</b>	-	<b>Martin Luther King, Jr. Holiday</b>	-	<b>All offices closed, No classes</b>
1/21	3	Public Policy	Chapter 2	
1/23	4	Public Policy	Chapter 3	
<b>1/27</b>	-	<b>Census Date</b>	-	<b>Deadline for Submitting Census Work via Canvas</b>
<b>1/28</b>	<b>5</b>	<b>Exam # 1 – Public Policy Exam</b>	-	<b>For Grade: Public Policy exam</b>
1/30	6	PP Project Time		Intro and Rubric in class
2/4	7	PP Project Time		NO CLASS
<b>2/6</b>	<b>8</b>	<b>PP Project - Team Presentations Team TBD</b>	-	<b>For Grade: 1<sup>st</sup> Team Presentation</b>
2/11	9	Engineering Ethics (Day 1)	Student Team Lecture: Articles (1) "4341 Solving Ethical Dilemmas ..." (2) "Do I need a PE in Texas" (3) "Architect Required Flowchart" (4) "4341 Ethics Background Reading"	Canvas: Lessons 9 to 12 - Texas Engineering Law Engineering Professional Ethics
2/13	10	Engineering Ethics (Day 2)	Student Team Lecture: Articles (1) "ASCE Professional Ethics" (2) "how do we think about engineering failures ..." (3) "Ethics Exam Scenario 2 Explained" (4) "Ethics Exam Scenario 3 Explained"	Canvas: Lessons 9 to 12 - Texas Engineering Law Engineering Professional Ethics
2/18	11	Engineering Ethics (Day 3)	Student Team Lecture: Articles (1) "Ethics Exam Scenario 5 Explained" (2) "TBPE Records_ An Inventory at the TX State ..." (3) "Ethics Exam Scenario 6 & 7 Explained"	Canvas: Lessons 9 to 12 - Texas Engineering Law Engineering Professional Ethics
<b>2/20</b>	<b>12</b>	<b>Exam # 2 – Engineering Professional Ethics Exam (Day 4)</b>	-	<b>For Grade: Ethics exam</b>
2/25	13	What is a Profession? Who is a professional? Professional ethics – aren't personal ethics enough?	Student Team Lecture: Articles (1) "Colby and Sullivan.pdf" (2) "Fleddermann article.pdf"	-
2/27	14	Professional Duties and Bolam Test for Negligence  Duties and Accountabilities of a Design Professional (Smith/Currie)	Student Team Lecture: Articles (1) "Duty of Care .... Study Cases.pdf" (2) "Smith/Currie Textbook Chapter 9, Sections I to IVB, p. 199 to 216"	-
3/4	15	Duties and Accountabilities of a Design Professional	Student Team Lecture: Articles (1) "Smith/Currie Textbook Chapter 9, Sections IVC to VI, p. 216 to 232" (2) "Smith/Currie Textbook Chapter 9, Sections VII to XI, p. 232 to 247"	-
3/6	16	Negligence Case Study – Team Preparation	-	NO CLASS

3/13	17	Negligence Case Study – Team Presentation		For Grade: Team Presentation
3/13	18	Define Lead-er-ship and Management	Instructor Lecture: Northouse (Textbook Chapter 1)	Guest Lecturer via ZOOM - TBD
3/17 ~ 3/21	-	<b>SPRING BREAK</b>		
3/25	19	Define Lead-er-ship and Management in Engineering context	Instructor Lecture: Northouse (Textbook Chapters 1 & 12)	Guest Lecturer via ZOOM – John Holly
3/27	20	Define Engineering Follow-ship and High Value Teams	Instructor Lecture: Northouse (Textbook Chapter 12 Cont’d)	Guest Lecturer via ZOOM - TBD
3/31	-	Last day to withdraw from one or more courses		Deadline for Submitting Census Work via Canvas
4/1	21	Exam # 3 – Lessons 18 to 20		For Grade
4/3	22	Anatomy of a Construction Project (ECPM)	Student Team Lecture: Articles??	Zoom to Tyler Instructor – Mr. Boylan
4/4	23	Project Status Reporting EVM	Student Team Lecture: Articles??	Zoom to Tyler Instructor – Mr. Boylan
4/6	24	KR Engineering Law & Construction (EPC Focus)	Student Team Lecture: Smith/Currie (Textbook Chapter 1)	Zoom to Tyler Instructor – Mr. Boylan
4/11	25	KR Interpretation	Student Team Lecture: Smith/Currie (Textbook Chapter 2)	Zoom to Tyler Instructor – Mr. Boylan
4/13	26	EPC and P3 Projects for the Engineering Designer	Student Team Lecture: Smith/Currie (Textbook Chapter 4)	Zoom to Tyler Instructor – Mr. Boylan
4/18	27	Change Orders	Student Team Lecture: Smith/Currie (Textbook Chapter 7)	Zoom to Tyler Instructor – Mr. Boylan
4/28	28	Exam # 4 – Contract Exam		For Grade