

- B. Understanding the unique “trust” relationship that “Engineering Profession” has with its client and what that TRUST means to/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 Leadership, Management, Followership, and Team Dynamics for an Engineer

ALL engineers are professionals and leaders. Engineers must “BE” a practicing professional which also implies that they are lifelong learners and contributors to their profession and to society. **As** the key decision maker for complex technical issues being solved for your project (by you or your teams of highly qualified team players) you must know how to deal with great amounts of uncertainty and of risk AND you must also learn and master the art of leadership. The tools we will study in this leadership course are real and can be scientific in nature but their application in leading is focused on people and project success – two very metaphysical things. We will also study how to make, influence and change public policy which is critical for all engineers and for your design freedom as you begin your engineering professional career as an engineer in training (EIT). This course will tie all these learnings specifically to the required skills and tasks Civil Engineers are required to perform.

Learning Objectives:

1. Know what an “engineer” is and what is engineering. We will investigate what society has defined as required engineering skills expected of an engineer professionally.
2. We will look at the link between Engineering and Society which is public policy and we will investigate the “public policy” model we practice engineering in.
3. This course will investigate what is public policy, how it is made, and we will discuss why engineers must understand and participate in public policy formation.
4. Understand the professional T model of development for a profession
5. We will investigate what knowledge, practice, competence is required for society to recognize a profession.
6. We will investigate the professional requirements for you to become a professional in a professional association. Also examine how this impacts concepts of identity and community.
7. Understand the concepts in “leadership” and specifically engineering leadership.
8. Understand what a manager is and what management does.
9. Understand what a team player/follower is and how they best support a team.
10. Understand what is required *in practice* and *character* of an engineer and a leader
11. Look at the TRUST between a professional and society and why this is so critical to sustain TRUST.
12. Look briefly at contracts, Contract Law, obligations under contractual arrangements.
13. 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 6th Edition** by Michael Kraft and Scott Furlong SAGE , ISBN 9781506358154
2. **Leadership** by Northouse 8th edition , ISBN 9781506362311, Sage Publishing
3. **Common Sense Construction LAW** by Smith & Currie, Wiley, ISBN 978-1-118-85810-3

Final Grade Contribution

Projects & Presentations (3 Total – 20 points each)	60%
Ethics Exam (100 points)	12.5%
Contract Exam (100 points)	12.5%
Team Reports (lessons 13 to 17) + Professional Practice*	15%
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	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”.

***Professional Practice** – this grade is based upon your attendance plus participation in this course and ASCE student chapter activity. I will assign 20% percentage of the professional grade towards joining and attending a minimum of 2 ASCE meetings and submission of one mini report describing the meeting contents. I will provide a document template and an example of what needs to be submitted.

****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 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 5 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.***

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 –this is your participation and professionalism grade.

Class Discussion Post Participation Activities:

You will be required to participate in class discussion and 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! I may ask team mates to anonymously grade their team mates and this team-mate grade will count for your grade.
2. Express your ideas and thoughts clearly and openly but remember 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 29th 2021**.

Census dates:

The university requires that instructors report the attendance to the register at various points in the semester. Therefore, on **January 25th 2021**, 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 instructors 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
- [UT Tyler Tutoring Center](http://www.uttyler.edu/tutoring) (903.565.5964), 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

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

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4341 Course Schedule (Subject to change as needed throughout the semester)				
<i>Date</i>	<i>Lesson</i>	<i>Topic for Class</i>	<i>Reading</i>	<i>Assignment</i>
1/12	1	Syllabus and Intro/Project	Canvas Module 1	Teams for next class
1/14	2	Public Policy	TEXT Chapter 1	
1/19	3	Public Policy -	Chapter 2	
1/21	4	Public Policy	Chapter 3	
1/26	5	Public Policy application to Engineering and our profession – Select Case Study by Teams	Canvas	Team presentation
1/28	6	PP Project Time		
2/2	7	PP Project Time		
2/4	8	PP Project Time		
2/9	9	PP Project Presentations	For Grade	
2/11	10	Lecture	Canvas: Texas PP Engineering Law	Read Pages 1-11 to Qualified Scientists
2/16	11	Lecture	Canvas: Texas PP Engineering Law	Read pages 19-27; 41-49
2/18	12	No Class— Ethics Exam	Canvas: Texas PP Engineering Law	Pg 59-61 AND Ethics exam For Grade
2/23	13	What is Profession? What is a professional? Should you be an active member? Do we have the right ones? Required of all? Team Report & Paper	Canvas - Colby Sullivan Paper and Fledderman article For Grade	Team presentation to class
2/25	14	Professional Duties and Bolam Test for Negligence Case Study Application	Canvas Paper and Duty of Care article For Grade	Team presentation to class
3/2	15	Define Lead-er-ship and Management in Engineering context	Northrup TEXT Chapter 1 For Grade	Team presentation to class
3/4	16	Follow-ship in project team	Northrup Chapter 12 For Grade	Team presentation to class
3/16	17	Can there be a Common Leadership and Followship Ethics for a Whole Project?	Northrup Chapter 13 For Grade	Team presentation in class
3/18	18	Dean's COE Ethics Project: Professional Accountability for Ethics/Morals	Project Sheet in Canvas	
3/23	19	"		
3/25	20	"		
3/30	21	Ethics Project Briefing to Dean and Dept. Heads (Survey Analysis)	For Grade	Team presentation
4/1	22	KR Engineering Law & Construction (ECP Focus)	Smith/Currie TEXT Chapter 1	
4/6	23	KR Interpretation	Smith/Currie Chapter 2	
4/8	24	ECP and P3 Projects for the Engineering Designer	Smith/Currie Chapter 4	

4/13	25	Duties and Accountabilities of Design Professional	Smith/Currie Chapter 9	
4/15	26	Contract Exam	For Grade	
4/20	27	Guest Speaker –what next		
4/22	28	Course Survey		

CENG 4341 Project Selection:

Public Policy Project Topics:

1. Should City of Tyler adopt the Advance Framing Standard as City Code?
2. College of Engineering Lab Safety and Culture Training Program?
3. ALL CE required to pass FE exam for graduation?
4. Mandatory Specific Ethics training and exam for all CE students (based on Texas law)?
5. Should all CE students belong to and prove active in ASCE?
6. Should all CE students participate in an ASCE contest?

Negligence Case Study Topics

1. Challenger Space Shuttle
2. Columbia Space Shuttle
3. Schlitterbahn Ride Failure
4. Apollo Capsule Fire 1967
5. Ronan Point Apartment Tower Failure

Dean Ethics:

Based on the results of the survey - What ethical training plans should be developed to get the curve to a

1. What single written ethical standard should college adopt to train all CE students for the ASCE professional and the State Ethics Exam standards?
2. Does current survey capture these ethical standards?
3. Is there a gap between expected/required standards and students' ethical positions in survey?
4. Is there a gap between faculty to train and enforce this standard in student education?
5. How do you recommend we close the gaps?

Goal: Measure ethical development of students
Practice and enforce these standards.
Ensures passing of the Texas PE Ethics test.