

University of Texas at Tyler - Department of Civil & Environmental Engineering
CENG 4341: Leadership, Professionalism & Public Policy
Spring 2021

Instructor:	Joseph Boylan RBS 1037 (903) 565-5872 jboylan@uttyler.edu	Office Hours: Daily 9 AM – 5 PM HELP by appointment (email for time)
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Lectures:

We meet every Tuesday and Thursday from 11 to 12:20 RBN 3040

Course Canvas:

I will use both the texts and Canvas reading material to manage the course material for the semester. There you will find current grades, lectures, assigned reading, homework assignments, handouts, exams and other material pertaining to the class. *Please check there 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 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** profession engineering has with its clients and what that TRUST means with society
- C. **Professionalism** – what is required of you as a professional engineer
- D. WHAT **Ethics** are required from that TRUST given to the professional engineer
- E. Understand what Engineering **Leadership, Management, Followership, and Project Team Dynamics** are **for a practicing Engineer.**

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

1. Active participating professionals in your “profession”
2. You are lifelong learners and contributors of and to the body of specialized knowledge in your profession,
3. You understand your unique relationship to society and role playing with society as professional engineers

4. As key decision makers 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 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 is an “engineering professional”.
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 how does society to recognize a profession.
8. We will investigate how a “professional association” impacts the concepts of professional identify 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 is management; what is engineering management.
11. Understand what a professional on a team.
12. What is a professional “followship” how does that help with a team.
13. Understand what is 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 at 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 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 and Currie, Wiley, ISBN 978-1-118-85810-3

Final Grade Contribution

Team Projects (2 team project reports and 1 Ethics project)	50%*
Exams (4 each)	50%
	100%

CENG 4341 Team Presentations for Grade:

ALL TEAMS MUST DO #1

Public Policy Project #1

1. Task: to develop a proposal that would get your leadership to agree!
2. CE majors must pass FE exam for graduation from UT Tyler?
3. Mandatory Specific Ethics training should be required and all CE majors must pass the state ethics exam to graduate (based on Texas law).
4. All CE students MUST belong to ASCE organization and MUST participate in one or more ASCE contests to graduate as part of their student experience component?

Teams must pick one of the cases to study

Negligence Case Study Project #2

TASK: Explain why and how the engineering leaders failed in their Duty of Care and Professional Practice obligations -what were the impacts of these failed decisions/actions AND How they should have solved the problem presented!

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

ALL TEAMS MUST DO #3

Project #3 Dean Ethics: (affirm and contest)

Given the ASCE Updated professional code of Ethics and the State LAW develop a Department of CE and CM Student Ethical "Code of Conduct" AND justify why it must be a mandatory training block for all CE major students at UT Tyler?

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

In CMGT 43241 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 and ultimately the course. We cannot in good conscience and in fulfillment of our fiduciary responsibilities as a Trustee University graduate an engineer that fails to pass a 2 key ABET Outcomes for the program here at UT Tyler.

Team Grade and YOUR Grade

Every project grading team will be composed of 2 or more faculty members and an industry partner. The rubric will be based on what would be required of a team in that industry reps company to get a C – not what we have traditionally done in class here at UT Tyler. This is a big jump in quality and depth of thinking, quality of presentation, professional communication and speaking by each team member – **REMEMBER** in 4 months you will be their employee!

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 keep the dialogue professional and focused on the issues of the course. These should be a learning/growth tool used for your professional development.

You always know where you stand for your grade. *I will return all graded exercise to you quickly –I will post grades in Canvas so can see what your cumulative grade looks like. If you do not agree with a posted grade see me ASAP –right after they are posted. DO NOT bring a disputed grade to me if that grade has been posted for more than 14 days. DO NOT wait till the last week of the course to talk about how to improve or salvage a poor grade. This is a cumulative process – not a single event.*

Note: 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 end of course

There is NO credit given for late assignments. Emergencies will be handled on a case by case basis. **IF you miss a deadline please contact me as soon as possible for a possible LATE SUBMISSION approval. I reserve the right to grant or deny this approval for a late assignment.**

THERE ARE NO MAKE-UP grades GIVEN WITHOUT AN EXCUSED ABSENCES. 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 the Canvas which **should be uploaded to 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 or take a quiz on during class. These are important and will be part of your participation and professionalism grade.

Final day to withdraw:

The final day to withdraw from the course without penalty is **3/23/2023!**

Census dates:

The university requires that instructors to report the attendance to the register at various points in the semester. In Canvas I will have a class leader take roll and mark your attendance for that lecture. These lectures are required. 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.

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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 Department of Civil Engineering and Construction Mgmt.

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>
1/10	1	Syllabus and Intro	Canvas Module 1	Teams for next class
1/12	2	Public Policy 1	TEXT Chapter 1	
1/17	3	Public Policy 2	Chapter 2	
1/29	4	Public Policy 3	Chapter 3	
1/24	5	Exam #1 (PP)		
1/26	6	PP Project Time		Intro and Rubric in class
1/31	7	PP Project Time		No CLASS
2/2	8	PP Project Presentations: Team TBD		This is a Graded MUST PASS exercise!
2/7	9	Engineering - a matter of PP in Texas		Canvas Texas PP Engineering Law
2/9	10	"	Canvas Texas PP Engineering Law	Read Pages 1-11 to Qualified Scientists
2/14	11	"	Canvas Texas PP Engineering Law	Read pages 19-27; 41-49
2/16	12	Engineering Professional Ethics Exam #2	Canvas Texas PP Engineering Law	Pg 59-61 AND Take exam in Canvas -this is a MUST pass exercise!
2/21	13	What is Profession? What is a professional? Professional ethics –aren't personal ethics enough?	Canvas - Colby Sullivan Paper and Fledderman article	
2/23	14	Professional Duty of Care and Bolam Test for Negligence	Canvas Paper and Duty of Care article	
2/28	15	Duties and Accountabilities of Design Professional	CHP 9 of Smith and Currie	Team Ethics presentations this is a MUST pass exercise!
3/2	16	Case Study Application Prep		NO CLASS
3/7	17	Team Negligence Case Study		This is a MUST PASS graded Team Presentation
3/9	18	Define Lead-er-ship and Management	Northrup Chp 1 TEXT	Guest Lecturer ZOOM
3/21	19	Define Lead-er-ship and Management in Engineering context		Guest Lecturer Zoom/John Holly
3/23	20	Define Engineering Followship and High Value Teams	Northrup Chp 12	Guest Lecturer Zoom
3/28	21	EXAM #2 (Isn 13 -16)		
3/30	22	Anatomy of a Construction Project (ECPM)		Canvas
4/4	23	Project Status Reporting EVM		Canvas
4/6	23	KR Engineering Law & Construction (ECP Focus)	Smith/Currie TEXT CHP 1	
4/11	24	KR Interpretation	Chp 2	

4/13	25	ECP and P3 Projects for the Engineering Designer	Chp 4	
4/18	26	Change Orders	Chp 7	
4/20	27	EXAM #3		