ME/AE 210 Professional Topics

Spring, 2024

Course instructor: Doug Aaron

daaron@utk.edu

DO 309

865-974-8211

Meeting times: T/R 2:30 – 3:45 Meeting location: AMB 32 Course modality: Face-to-face

Course credit: 2.0 hours (meet until March 30)

Office hours: M 9:00 – 11:00 in DO 309

*Office hours are not restricted to asking for help with a reflection or presentation – you can come with

any questions on your mind.

Course description

Topics relating to professional responsibility, communications (both written and oral), and organization. Requires a formal oral presentation by each student on an engineering topic chosen by the student.

Outcomes of instruction

Upon completing this course, students are expected to:

- Understand the basic, broad principles of professional behavior.
- Demonstrate a knowledge of the importance of lifelong learning.
- Demonstrate the ability to research, construct, and deliver an oral presentation on a contemporary engineering topic.

Relevant ABET criterion 3 outcomes

- 3. An ability to communicate effectively with a range of audiences.
- 4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- 7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Informal description

This will be an opportunity to discuss topics rarely covered in technical courses – ethics, global aspects of engineering, communicating formally and informally, leadership, finance, and balance. These topics will likely be relevant no matter which direction your career takes (industry, academia, research, development, business, etc).

Homework statement: Homework (here or elsewhere) is intended to help you learn by doing. Yes, we grade it, and grades matter, but this is intended to be a learning opportunity.

Required Book:

Good to Great, Jim Collins

Publisher: Harper Business; 1 edition (October 16, 2001)

ISBN-10: 0066620996

Two major projects:

- 1. Professional mentor acquisition and interaction (two reflections).
- 2. An ethical and technical challenge in engineering (presentation and report).

Grading

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A 89.5 – 100
B+ 86.5 – 89.4
B 79.5 – 86.4
C+ 76.5 – 79.4
C 69.5 – 76.4
D 59.4 – 69.4
F 0 – 59.4
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Oral presentations and written reflections/reports will be assessed via a rubric; this rubric will be posted in the Resources Module on Canvas so that students know how they will be assessed in the course.

Late submissions will be subject to -10% of the maximum credit each weekday (M-F) that they are late, unless otherwise arranged.

Assignments

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Project 1 – The Importance of Mentors (10% for each of 1.1 and 1.2)
Homework 1 – Create/Update a Resume (10%)
Project 2 – Engineering Ethics and Challenges (30% oral presentation, 15% essay)
Homework 2 – Examples of Level 5 Leadership (10%)
Quizzes – 15 total%
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All assignments will be collected via Canvas in PDF or Word format. Please see individual assignments for details. Format for citation and reference should adhere to the IEEE style. Of special note is that all submitted reflections and essays will be screened via TurnItln. Given that some of these are more personal in nature, there should be no need for plagiarism; please do not take others' work without proper attribution.

Attendance: I encourage you to attend all discussions; we will indirectly take attendance on several occasions. Class meetings will have course material, discussion, guest speakers, and clarifications on assignments. Those regularly in class will generally do better as a result; please be to class on-time.

'Rona policy: All slides and other materials will be posted on Canvas.

ACADEMIC INTEGRITY

Each student is responsible for their personal integrity in academic life and for adhering to UT's Honor Statement. The Honor Statement reads: "An essential feature of the University of Tennessee, Knoxville is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."

YOUR ROLE IN IMPROVING THE COURSE THROUGH ASSESSMENT

At UT, it is our collective responsibility to improve the state of teaching and learning. During the semester you may be requested to assess aspects of this course, either during class or at the completion of the class, and through the TNVoice course evaluation. Please take the few moments needed to respond to these requests as they are used by instructors, department heads, deans and others to improve the quality of your UT learning experience.

STUDENTS WITH DISABILITIES - http://sds.utk.edu

The University of Tennessee, Knoxville, is committed to providing an inclusive learning environment for all students. If you anticipate or experience a barrier in this course due to a chronic health condition, a learning, hearing, neurological, mental health, vision, physical, or other kind of disability, or a temporary injury, you are encouraged to contact Student Disability Services (SDS) at 865-974-6087 or sds@utk.edu. An SDS Coordinator will meet with you to develop a plan to ensure you have equitable access to this course. If you are already registered with SDS, please contact your instructor to discuss implementing accommodations included in your course access letter.

ACCESSIBILITY POLICY AND TRAINING - http://accessibility.utk.edu

The University of Tennessee, Knoxville, provides reasonable accommodations for individual students with disabilities through its office of <u>Student Disability Services</u>. The university is also committed to making information and materials accessible, when possible. Resources and assistance to support these efforts can be found at http://accessibility.utk.edu/.

WELLNESS - http://wellness.utk.edu/ and http://counselingcenter.utk.edu/

The <u>Center for Health Education and Wellness</u> empowers all Volunteers to thrive by cultivating personal and community well-being. The Center can answer questions about general wellness, substance use, sexual health, healthy relationships, and sexual assault prevention. The <u>Student Counseling Center</u> is the university's primary facility for personal counseling, psychotherapy, and psychological outreach and consultation services.

Any student who has difficulty affording hygiene products, groceries, or accessing sufficient food to eat every day is urged to contact the <u>Big Orange Pantry</u> for support. The Big Orange Pantry, located in Greve Hall, is a free resource for all students, faculty, and staff, no matter how great or small their need is. Students who need emergency financial assistance can also request funding from the <u>Student Emergency Fund</u>.

Students who are experiencing non-academic difficulty or distress and need assistance should call 974-HELP or <u>submit an online referral</u>. The 974-HELP team specializes in aligning resources and support to students experiencing mental health distress.

EMERGENCY ALERT SYSTEM - http://safety.utk.edu/

The University of Tennessee is committed to providing a safe environment to learn and work. When you are alerted to an emergency, please take appropriate action. Learn more about what to do in an emergency and sign up for <u>UT Alerts</u>. Check the emergency posters near exits and elevators for building specific information. In the event of an emergency, the course schedule and assignments may be subject to change. If changes to graded activities are required, reasonable adjustments will be made, and you will be responsible for meeting revised deadlines.

COVID-19 GUIDELINES

CDC guidance recognizes the changing dynamics of living in a world with COVID-19. It rates COVID-19 community levels as low, medium, and high, with recommendations at each level about the use of masks and other precautions. At all levels of community spread, staying up-to-date with vaccination is the best way to protect yourself from serious illness and to limit the spread of COVID-19. Wearing a mask is always an option for any individual who chooses to do so, and the CDC recommends that those with high risk of severe illness talk with their health care providers. If you are sick, please stay in, avoid being around others as much as possible, and contact your health care provider for any symptoms that are worsening, moderate to severe, or concerning to you. For more information about vaccination or to self-report an illness and receive support, visit http://studenthealth.utk.edu/CommunityHealth. For more information about COVID-19, visit http://studenthealth.utk.edu/covid-19.

Tentative schedule*

Class	Date	Topic	
1	1/23	Welcome and Dean's Message (Dean Mench - TCE)	
2	1/25	No Class Day	
3	1/30	Course Intro, Personal balance, Mentor Assignment	
4	2/1	Writing – reflective to technical	
5	2/6	Intellectual Property (Sechrist - UT Research Foundation)	
6	2/8	Personal finance introduction	
7	2/13	Preparing to start your career (S. Cousino - CCDAE)	
8	2/15	Good to Great discussion	
9	2/20	Optional class - job and internship fair	
10	2/22	When you are the speaker	
11	2/27	When you are the speaker (Cont)	
12	2/29	Global context for engineers	
13	3/5	Research in MABE, Grad School	
14	3/7	Introduction to Project 2	
	3/12	Spring Break!	
	3/14	Spring Break!	
15	3/19	Good to Great and Project 2 ideas	
16	3/21	Personal morals, professional ethics	
17	3/26	Further ethics discussion – frameworks	
18	3/28	No Class Day	
19	4/2	Ethics and licensure (including Professional Engineers)	
20	4/4	Final preparation for Project 2 presentations	
21	4/9	Project 2 presentations	
22	4/11	Project 2 presentations	

Entries in orange are guest speakers who have agreed to share their expertise with students in the course.

Summary of assignment due dates (chronological order)

Assignment	Date	Summary
Project 1.1	2/8	Mentor Project 1.1 (Who, How, Why?)
HW 1	2/22	Draft a resume following Scott Cousino's session
HW 2	3/7	A Level 5 Leader You Know
Project 1.2	3/21	Mentor Project 1.2 (What and When?)
Project 2.1	4/4	Ethics in Engineering Essay (draft should be done)
Project 2.2	4/9 & 4/11	Ethics in Engineering Presentation

^{*}Please note that some dates/topics are tentative. The instructor will change these when necessary.