

TUSKEGEE UNIVERSITY
COLLEGE OF ENGINEERING
Spring 2024

Course: AENG/CENG/EENG/MENG 0390 – Engineering, Ethics and Society- 3 Credits

Class Hours: M 5:00 PM – 8:00 PM, **Face-to-Face**

Instructors: O. Harrison, H. Aglan, M. J. Khan, S. Begum and B. Oni

Course Coordinator: Dr. O. Harrison E-mail: oharrison@tuskegee.edu

Office Hours: MWF 11-1; TTh 10-12 Dr. O. Harrison Rm 526 LHF, Ph: (334) 727-8801

Course Description:

Moral complexities in the engineering profession are highlighted through exposure to historical development and ethical reasoning. Professional codes of ethics are discussed. Impact of engineering solutions in global, economic, environmental, and social contexts are discussed in a multidisciplinary setting. Ethical issues are also presented through guest lectures from industry personnel. An overarching objective is to motivate students to embrace ethical practices of the engineering profession as well as life-long learning.

Prerequisite: **Junior standing**

Textbook: *Ethics in Engineering, Fourth Edition*, Mike W. Martin and Roland Schinzinger (ISBN 9780072831153), McGraw-Hill, New York 2005. Students may find a copy at the website below:

<https://www.bkstr.com/tuskegeestore/home>

Grading Policy:	Assignments (5)	50%	A = 90 -100
	Tests (2)	40%	B = 80 - 89
	Project	10%	C = 70 - 79
			D = 60 - 69
			F = 0 – 59

Attendance: Students are expected to attend all classes.

Electronic Devices: Students are to silence cell phones before entering the classroom (or exam location); these devices should not be used during any class activity. A laptop computer, Android, iPhone, iPad/Netbook may be used to take notes/discussion items during class and/or for presentations.

Other Policies:

1. No late assignments will be accepted. All assignments must be turned in by their due dates.
2. No make-up tests/exams will be given except in exceptional circumstance pre-excused by the instructor. Please DO NOT take this policy lightly!

3. Any unexcused absence from a test/exam/project will lead to a **ZERO** grade for that test/exam/project.
4. Cheating during a test/exam can lead to an "F" grade in the course.
5. Attendance/class participation is required. The student is responsible for his/her own missed lectures/assignments.
6. Test dates are not fixed; they can change slightly.
7. Excuses related to **Covid infection** as well as exposure have to be received from the Dean of Students office. Students should request the excuse for absence from the Dean of Students office as soon as they become aware of covid infection or exposure. Students may request a class missed memo by completing this form (<https://forms.gle/4ozusHX2tTCUW4yK6>) and then contact the Office of the Dean of Students and Student Conduct (334) 727-8421, via e-mail THarper@Tuskegee.edu or by going in to the office located in suite 203 Tompkins Hall.

Course Objectives:

At the end of the course, students will:

1. Learn about the Engineering Code of Ethics and be able to apply it as necessary;
2. Learn about moral complexities involved in many engineering activities and decision-making processes;
3. Learn about some contemporary issues such as global, economic, environmental, and social factors in formulating engineering solutions; and
4. Understand the importance of life-long learning.

Course Outcomes

Outcomes	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Objective 1				X			
Objective 2				X			
Objective 3				X			
Objective 4							X

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
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 judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provides leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies