

# ENGR/PHIL 482 Ethics and Engineering: Fall 2017

## Tuesdays or Thursdays in EABA 121 plus Friday recitations

### PHIL Faculty

Dr. Glen Miller  
YMCA 418 | 979-847-6131  
glenmiller@tamu.edu  
Office Hrs: W 10 am-noon

Dr. Martin Peterson  
YMCA 428B | 979-847-6132  
martinpeter@tamu.edu  
Office Hrs: W 2-3:30 pm

Mr. Rob Reed  
YMCA 315 | (979) 845-5660  
rpr82@tamu.edu  
Office Hrs: Th 1-3 pm

### ENGR Faculty

Dr. Morad Atif  
EABA 116 | 979-862-9137  
matif@tamu.edu  
Office Hrs: W 11-1 pm

Mr. Rodney Boehm  
EIC | 979-458-5978  
rodneyboehm@tamu.edu  
Office Hrs: M/W 10:00-11:00 am

Dr. Pete Hamilton  
EABB 106 | 979-458-2548  
pshamil@tamu.edu  
Office Hrs: T 2-3 pm, Th 2-5 pm

Mr. Les Pittmann, P.E.  
DLOB 201N | 979-862-8375  
lwpittman74@tamu.edu  
Office Hrs: T/Th 10-11 am

Ms. Shayla Rivera  
EABC 106 | 979-458-8447  
smrivera@tamu.edu  
Office Hrs: M/W 10-11 am

Mr. Alton G. Rogers, P.E.  
CVEN 201N | 979-862-8375  
altonrogers@tamu.edu  
Office Hrs: M/W 10-11 am

## COURSE DESCRIPTION

Development of techniques of moral analysis and their application to ethical problems encountered by engineers, such as professional employee rights and whistle blowing; environmental issues; ethical aspects of safety, risk and liability, and public welfare; conflicts of interest; emphasis on developing the capacity for independent ethical analysis of real and hypothetical cases.

## LEARNING OUTCOMES AND MAJOR OBJECTIVES

As a result of meeting the requirements in this course, students will:

- Know some common methods for identifying, analyzing, and resolving ethical problems.
- Develop the capacity to think analytically, critically, and creatively about ethical issues in engineering.
- Know some of the classic cases in engineering ethics and some of the typical ethical and professional issues that arise in engineering work.
- Know the NSPE code, the code of one's own professional society, and the major professional societies and organizations in engineering.
- Develop a basic understanding of ethical theories and how they inform engineering codes of ethics and common engineering practices.
- Improve oral and written communication skills.

To achieve these outcomes and objectives, students are given the opportunity and encouragement to participate actively in class discussions. Students are required to do a substantial amount of writing in response to the material presented in the course. They are expected to write clearly and concisely. Students will receive frequent feedback on their submissions, and they have access to a suite of writing instruction material on eCampus.

**PREREQUISITES:** Junior classification

**REQUIRED TEXT:** Charles E. Harris, Michael S. Pritchard, Michael J. Rabins, Ray James, and Elaine Englehardt, *Engineering Ethics: Concepts and Cases*, 5th ed. (Belmont, CA: Wadsworth, 2014). Electronic versions are acceptable.

Additional materials are available on the course website, which can be accessed through eCampus at <http://eCampus.tamu.edu>. Select the Ethics and Engineering course.

## STRUCTURE OF THE COURSE

Each week, students will complete a 25-minute online session and attend two meetings, a 75-minute face-to-face (F2F) meeting, and a one-hour-fifty-minute recitation on Friday. These meetings will be supplemented with other online content and readings delivered through eCampus.

## TECHNOLOGY POLICY

Laptops, cell phones, and other media devices should not be used in the F2F meetings without prior approval from the instructors, which will not be given absent a compelling reason. The use of prohibited devices may result in the student being marked absent for the F2F meeting. The technology policy for each recitation is set by the TA.

## ATTENDANCE AND PARTICIPATION

Attendance is required for F2F meetings and Friday recitations. The best way to master material for this class is to prepare properly, listen attentively, participate in activities, and ask questions when a topic is unclear. Students who arrive late, leave early, or are clearly unprepared may be counted as absent based on an assessment made by their TA. *Proper preparation includes bringing a copy of assigned texts to the meeting.* Students must attend the F2F meeting for which they are registered unless they have coordinated in advance with their TA or their absence was such that prior planning was not possible.

In addition to absences that are considered excused by the university, three absences related to job interviews or academic conferences will be considered excused for the purpose of the course. Documentation must be submitted to the TA before the F2F session or recitation meeting, preferably a week in advance. *For both university and course excused absences, a short make-up assignment must be completed in a timely manner, normally within a week.* Those with excused absences should coordinate with their TA to attend another F2F or recitation session if their class schedules permit.

All students are expected to attend the Sue G. and Harry E. Bovay Lecture, in which a distinguished individual from academia, industry, or government addresses the class.

In addition to the aforementioned absences that are considered excused for the purpose of the course, students can miss two meetings other than the Bovay lecture without penalty, and no make-up assignment is required. Further absences each result in a 2.5% deduction from the student's course grade. *The attendance record in the eCampus Grade Book is considered final two weeks after the date of the activity.*

## A NOTE ON E-MAIL COMMUNICATION

As preparation for writing effectively in their careers, students are expected to communicate professionally with instructors and TAs using email. Professional style includes an appropriate salutation and closing and reasonable care in the construction of the message. *Emails to instructors should always include the student's course prefix (PHIL or ENGR), their section number, and the name of the student's TA.*

## GRADED COMPONENTS

### Exams

There will be three exams. They may include multiple-choice, short answer, and essay questions. Exams are cumulative.

### Online Quizzes

Students should take two kinds of graded online quizzes. The first is in the online sessions, in which students will be asked two kinds of questions. Knowledge Checks are ungraded questions that are interspersed in each session. They are intended to prepare the student for the concluding Quiz, which is graded. The second kind of graded online quiz covers assigned readings and is offered through the eCampus quiz assessment tool. Students are responsible for completing these quizzes before the deadlines listed on the course schedule.

The lowest three quiz grades will be excluded from the calculation of this portion of the course grade.

\*\*\* Note: for issues related to online quizzes, please email [techhelp482@tamu.edu](mailto:techhelp482@tamu.edu).  
Please allow two business days for a response. \*\*\*

## **In-class Presentation**

Students will work in groups of four or five on an in-class presentation. Groups will be assigned by TAs. Presentations must include visual aids. Students are expected to prepare their presentations outside class. Each student in the group must give part of the presentation in class. More detailed instructions will be provided during the semester.

## **Writing Assignments**

Writing assignments are an opportunity for students to gain fluency with the theories, ideas, issues, and cases presented in the class and to develop their own thoughts on these topics. Students will write two brief Responses, two Short Papers, and one longer Essay. Responses, which are about 500 words in length, are based on supplemental readings assigned in the course and emphasize grammar, syntax, and style and the development of the author's voice. The Short Papers include short reports and longer responses over material covered in the class. Each Short Paper should be between 750 and 1000 words in length. The Essay gives students the opportunity to develop a more extensive argument over the material covered in the course. It must be at least 2000 words in length.

Students will have two opportunities to write Short Papers. Each Short Paper is worth 5% of the course grade. Students can revise the first Short Paper. To earn a better grade, the resubmission should be substantially better than the initial submission and should respond to relevant TA comments. It will be due a week after the paper has been returned to the student. The maximum score that a revision can earn is 20 points above the grade given the initial submission.

The Essay assignment consists of several parts. The first step is a submission of a short (250 word) proposal. The second step is an Initial Submission of the paper, which is a full-length paper completed to the best of the student's abilities. It is worth 5% of the course grade. Students will then participate in a Peer Review. Failure to provide substantive feedback to their peers will result in a penalty of up to 10% on the grade for the initial submission. Students will then prepare a Final Submission that responds to relevant comments from their peers and their TA. It is worth 15% of the course grade. *Students who do not submit a final submission or who submit a revision that is not reasonably improved compared to the initial submission will receive a zero for the assignment.*

Detailed requirements for the Responses, Short Papers, and the Essay will be distributed via eCampus. All papers must be submitted to the appropriate turnitin.com link on eCampus. Failure to submit your essay to turnitin.com will result in a zero (0) for the assignment. Your TA may also require you to turn in a hard copy (paper copy) of your essay. A standard penalty of five (5) percentage points per day is assessed to papers submitted after the deadline, either electronically to turnitin.com or the hard copy to the TA, though the penalty may be modified based on the TA's discretion. Students are encouraged to use the supplemental resources posted on eCampus to improve their writing mechanics and the coherence, conciseness, and clarity of their papers.

### *A Helpful Writing Resource*

The **University Writing Center (UWC)**, located in 214 Evans Library and 205 West Campus Library, offers one-on-one consultations to writers. UWC consultations are highly recommended but are not required. Help is available with brainstorming, researching, drafting, documenting, revising, and more; no concern is too large or too small. UWC consultants will also help you improve your proofreading and editing skills. If you visit the UWC, take a copy of your writing assignment, a hard copy of your draft or any notes you may have, as well as any material you need help with. To find out more about UWC services or to schedule an appointment, call 458-1455, visit the web page at [writingcenter.tamu.edu](http://writingcenter.tamu.edu), or stop by in person.

## COMPONENT WEIGHTING FOR COURSE GRADE CALCULATION

Online Quizzes	15%	Responses	5%
Presentation	5%	Short Papers	10%
First Exam	15%	Essay–Initial	5%
Second Exam	15%	Essay–Final	15%
Third Exam	15%		

## GRADING

A	90% - 100%
B	80% - <90%
C	70% - <80%
D	60% - <70%
F	<60%

This is a Writing Intensive course. According to University guidelines, failure to earn an average of at least a D on the writing assignments (Responses, Short Papers, and the Essay submissions) will result in a grade of F in the course, regardless of other grades.

## AGGIE HONOR CODE & ACADEMIC INTEGRITY

“An Aggie does not lie, cheat, or steal or tolerate those who do.”

The Honor Code and the Honor Council Rules and Procedures can be found at <http://aggiehonor.tamu.edu/>.

University rules concerning scholastic dishonesty will be rigorously enforced in this class. Plagiarism is defined in the TAMU Student Rules as the “appropriation of another person’s ideas, processes, results, or words without giving appropriate credit.” You should credit your use of anyone else’s words, graphic images, or ideas using standard citation styles. Moreover, you may not submit your own work from another course or work submitted for this course in a previous semester. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System. A single incident of cheating may lead to an F\* in the class.

**Submitting an assignment late is far better than plagiarizing. The standard penalty for late submission is a 5% deduction (for the paper, not the course) for each day the paper is late.**

## GRADE COMPLAINTS

We are happy to discuss and possibly change grades provided two conditions are met. First, the student must have waited at least 24 hours after he or she received the graded assignment. Take this time to carefully review all the comments give by instructors. Second, the student must bring a written statement that explains the discrepancy he or she sees between the quality of the work and the grade it received. The appeal must be made within 7 days from the time the student received the graded assignment.

## AMERICANS WITH DISABILITIES ACT (ADA) POLICY STATEMENT

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit <http://disability.tamu.edu>.

## FALL 2017 AT A GLANCE

Week	Topic
Aug 28	Introduction & Egoism
<b>Ethical Theory: The Foundation</b>	
Sep 4	Utilitarianism
Sep 11	Duty Ethics
Sep 18	Virtue Ethics & ABET
<b>Microethics: Engineers as Professionals in Organizations</b>	
Sep 25	Risk; <b>first exam in recitation</b>
Oct 2	Engineers in Organizations: <i>Challenger</i> and <i>Columbia</i>
Oct 9	TEPA, NSPE Code of Ethics, Engineering Societies
Oct 16	Engineering Professionalism and Macondo; <b>second exam in recitation</b>
<b>Macroethics: Impacts of Engineering on Society and the Environment</b>	
Oct 23	Ethics & Technology
Oct 30	Technology & Society
Nov 6	Computing Ethics and Intellectual Property
Nov 13	Environmental Ethics and Sustainability
Nov 20	<b>Thanksgiving: no F2F, online session only</b>
Nov 27	International Engineering; <b>essay final submission, Nov 27; third exam in recitation</b>
Dec 4	<b>Dec 4<sup>th</sup> Redefined Day: reserved for third exam make-up</b>

\* The instructors reserve the right to change this schedule. Any changes will be communicated via eCampus as soon as possible.