

Professor: Nathan Hanna¹

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Office hours: by appointment

Note 1: All deadlines in this syllabus are in Eastern Standard Time (Philadelphia time).

Note 2: As of the start of this term, I have a toddler at home and no childcare. So it may take me 24hrs or more to respond to email. Be patient when contacting me. And if you contact me about an assignment, be sure to do so well in advance of the deadline.

1. Readings: All readings are on BbLearn, including the textbook. If you want to buy a hard copy of the textbook, here's the info: Martin and Schinzinger, Introduction to Engineering Ethics, 2nd ed., ISBN: 0072483113.

2. Course Description and Objectives:

This course covers ethical issues in engineering. Topics include general ethical theory, social and environmental responsibility, safety, discrimination, and whistle-blowing.

Traditional engineering courses teach you some of the skills necessary to be a technically competent engineer. This course supplements that education by teaching you some of the skills necessary to be an ethical engineer. Note my use of the word *necessary* instead of *sufficient*. Your engineering courses won't make you a competent engineer and this course won't make you an ethical one. That requires professional experience in addition to academic training. This course is meant to help you develop a good intellectual foundation for ethical engineering practice, one that you can build on and use to draw the right lessons from experience. In this course you will:

- Familiarize yourself with some important ethical issues that engineers face.
- Develop an awareness of the ethical dimensions of engineering and a readiness to identify and address potential ethical problems.
- Learn how to think through these issues, both individually and cooperatively.
- Critically examine and evaluate the positions and arguments that some thinkers – including engineers and ethicists – endorse about these issues.
- Learn how to effectively communicate in speech and writing.
- Learn to respectfully give and receive constructive criticism.
- Develop important intellectual virtues, including honesty and objectivity.

This is a philosophy class. There are many misconceptions about philosophy: that it's useless, impractical, only about the meaning of life, etc. I take philosophy to be applied logic: using good reasoning to determine the truth. So understood, no subject is more useful, important, or fundamental. All areas of inquiry require the ability to reason well. Developing this skill is our primary task. Whatever your major or intended career path, you'll benefit by developing it. So don't underestimate this class's importance.²

¹ B.S. Aerospace Engineering, University of Florida; Ph.D. Philosophy, Syracuse University.

² For more info about the value of philosophy see:

<https://www.apaonline.org/page/undergraduates>,

<https://sites.google.com/site/whystudyphilosophy/>

<https://www.philosophy.rutgers.edu/68-undergraduate/why-study-philosophy/443-why-study-philosophy14>

<http://www.bbc.com/capital/story/20190401-why-worthless-humanities-degrees-may-set-you-up-for-life>

3. Course Requirements

Grade Distribution:

Participation: 40%
Short Papers: 32%
Reading Quizzes: 25%
Course Evals: 3%

Grade Scale:

A+: 97-100	A: 94-96	A-: 90-93
B+: 87-89	B: 83-86	B-: 80-82
C+: 77-79	C: 73-76	C-: 70-72
D+: 66-69	D: 60-65	F: 0-59

Participation: Participation is 40% of your grade. Details:

- To participate, you must make posts on the online discussion board on BbLearn. To get all 40%, you must make 40 substantive posts, worth 1pt each. To count as substantive, a post must at least be the length of a short paragraph – about 5-6 sentences, not including sentences like “Hi. Great point.” and “I agree.”
- Each week of the term will have a dedicated discussion forum, with assigned topics listed in the forum description. The topics will typically be discussion questions from the textbook. Posts on other topics won’t get credit.
- You must do at least two posts per week. A week means Monday through Sunday. The first post must be made by Wednesday 11:59pm and the second by Sunday 11:59pm. You can do up to six posts a week for credit. If you only do two, at least one must be a reply to someone else. If you do four or more, at least two must be a reply to someone else. **All of your posts can be replies if you want.**
- I’ll keep a running total of how many posts you’ve done over the term, which I’ll update at the start of every week. If you want to know how many posts I have you down for, you can email me to ask. You should also keep a running total yourself.

Short Papers: You’ll write four short papers worth 8 pts each. See the end of the syllabus for the due dates. For topics and directions, see the handout on BbLearn.

- Grading. Papers are graded Satisfactory (8pts) or Unsatisfactory (4 or 0pts, depending on quality). They’re graded on the basis of reasonable effort. If you directly address the paper topic, show that you read and understood the relevant reading, and write intelligibly (e.g., grammatically), you’ll likely get full credit.
- Turning papers in. Papers must be submitted in the paper submissions section on BbLearn. I won’t accept late papers without a valid excuse (see below).
- I don’t have time to look at drafts of papers, but you can always email me with specific questions about the assigned reading or about your ideas for your paper.

Reading Quizzes: There will be a reading quiz each week which must be completed by Sunday, 11:59pm. Quizzes will be posted in the Quizzes section on BbLearn. Each quiz will consist of two to four T/F questions about the required readings for the week. Every correct answer is worth 1pt. Quizzes are open book. There’s no time limit and you can stop and restart if you choose. But you can’t change your answers after submitting them.

Late policy: If you miss a deadline because of extenuating circumstances, you must contact me beforehand or as soon as possible afterwards. If you wait too long to contact me and don’t have a good reason for the delay, I won’t accept an excuse. Things like religious observances, illnesses, and family emergencies are excusable. Forgetfulness and ignorance of the class requirements aren’t. What counts as a valid excuse is up to me. Ask if you’re unsure.

Course Evaluations: You must do a course evaluation for the class. It's worth 3pts. To get the credit, you must do the evaluation and email me an image of *the confirmation message* that you get upon submission (don't email me the evaluation). If you can't get an image, just email me to say you did it. If everyone does an evaluation and confirms on time, everyone will get 1pt of extra credit. See the end of the syllabus for the due date.

4. Additional Policies

Academic Integrity: If you plagiarize or cheat, expect the following. First time: I'll give you a 0 on the assignment and report you to the Office of Student Conduct. Second time: I'll fail you for the course and report you again. I'll do these things no matter what the consequences for you are, e.g., expulsion, scholarship loss, failure to graduate, etc. It's your responsibility to know what counts as plagiarism. See this link for info: <https://tinyurl.com/y4kggtqq>.

Accommodations: Students with disabilities requesting accommodations and services at Drexel must present a current accommodation verification letter (AVL) to faculty before accommodations can be made. AVLs are issued by the Office of Disability Services (ODS). For more information, contact ODS at www.drexel.edu/ods, 3201 Arch St., Street, Suite 210, Philadelphia, PA 19104, 215.895.1401 (V), or 215.895.2299 (TTY).

Drop/Withdrawal Policy: The add/drop deadline is 11:59pm Sunday, Week 1. The withdrawal deadline is 5pm Friday, Week 7. Here are links to Drexel's policies. Add/drop policy: <https://drexel.edu/provost/policies/course-add-drop/>
Withdrawal policy: <https://drexel.edu/drexelcentral/registration/courses/course-withdraw/>

5. Reading and Assignment Schedule

M&S = Martin and Schinzinger Textbook

Wk 1 (April 6-12) Introduction Moral Reasoning Codes of Ethics	M&S Ch1, Ethics and Professionalism M&S Ch 2, Moral Reasoning and Codes of Ethics Ladd, The Quest for a Code of Professional Ethics Quiz 1 answers due 11:59pm Sunday
Wk 2 (April 13-19) Ethical Theories	M&S Ch 3, Moral Frameworks (skip “Self-Realization Ethics,” 64-8) Rachels, Utilitarianism Short Paper 1 due 11:59pm Sunday Quiz 2 answers due 11:59pm Sunday
Wk 3 (April 20-26) Safety, Whistleblowing	M&S Ch 4, Engineering as Social Experimentation De George, Ethical Responsibilities of Engineers: The Pinto Case Quiz 3 answers due 11:59pm Sunday
Wk 4 (April 27-May 3) Safety	M&S Ch 5, Commitment to Safety Short Paper 2 due 11:59pm Sunday Quiz 4 answers due 11:59pm Sunday
Wk 5 (May 4-10) Discrimination Intellectual Property Loyalty	M&S Ch 6, Workplace Responsibilities and Rights Duska, Whistle-Blowing and Employee Loyalty Quiz 5 answers due 11:59pm Sunday
Wk 6 (May 11-17) Honesty	M&S Ch 7, Truth and Truthfulness Short Paper 3 due 11:59pm Sunday Quiz 6 answers due 11:59pm Sunday Withdrawal deadline: end of business Friday
Wk 7 (May 18-24) Computer Ethics	M&S Ch 8, Computer Ethics Moor, Are There Decisions Computers Should Never Make? <i>optional: Kirkpatrick, The Ethical Quandary of Self-Driving Cars</i> <i>optional: Creighton, Can Morality Be Programmed?</i> Quiz 7 answers due 11:59pm Sunday
Wk 8 (May 25-31) International Issues Weapons Work	M&S Ch 10, Global Justice <i>optional: Shane and Wakabayashi, The Business of War</i> Short Paper 4 due 11:59pm Sunday Quiz 8 answers due 11:59pm Sunday
Wk 9 (June 1-7) The Environment, Animal Rights	M&S Ch 9, Environmental Ethics Norcross, Puppies, Pigs and People Quiz 9 answers due 11:59pm Sunday Course eval confirmations due 11:59pm Sunday