

Environmental Engineering Ethics Seminar
ENV 3930 Class numbers 12953, 26206, 26207, 28710
Class Periods: See course schedule for your section
Location: See course schedule for your section
Academic Term: Spring 2021

Instructor:

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Office Hours: Friday period 8 on Zoom

Undergraduate Teaching Scholar:

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Course Description

Intended for undergraduates majoring in environmental engineering. Lectures and discussion on ethics topics in environmental engineering sciences. (H) 1 credit hour. General Education – Humanities

Course Pre-Requisites / Co-Requisites

None

Course Objectives

In this class we will address the following questions and associated objectives:

- Can ethics be taught?
 - Recognize that there are multiple ways to approach ethical decision making.
 - Recognize that a well-reasoned argument does not necessarily lead to a correct decision.
 - Recognize that correct ethical decisions can be made in the absence of an argument.
 - Recognize that ethical decision making occurs with a social, cultural and historical context
- What is the nature of ethical expertise?
 - Be able to question your own expertise.
 - Know that there are limits to expertise.
 - Be able to identify other ethical perspectives/viewpoints of key stakeholders
- Whose knowledge counts?
 - Understand that listening is important.
 - Understand that there are multiple types of knowledge and expertise.
 - Identify whose knowledge counts and why
 - Identify what knowledge is absent, ignored, or hidden and why
- How do we make a well-reasoned argument?
 - Identify the premises and conclusions of arguments.
 - Restate others' arguments in your own words.
 - Construct your own argument.
 - Construct sample arguments for a variety of stakeholders
- How do we make ethical decisions?
 - Describe at least three different approaches to ethical decision making.
 - Apply the engineering codes of ethics to cases of professional ethics.
 - Construct an argument in support of an ethical decision using different approaches to ethical decision making.
- How do engineering decisions affect society?
 - Recognize the ethical issues present in engineering decisions.
 - Recognize the presence of environmental injustice.
 - Understand the impact of “un-intended consequences”

- Identify what values engineering decisions carry and how they may or may not match the users/society's values

Materials and Supply Fees

None

Professional Component (ABET):

This is a 1 credit course. It provides 1 credit towards general education.

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. Solve problems	
2. Design	
3. Communication	Medium
4. Make judgments	High
5. Teamwork	
6. Conduct experiments	
7. Acquire knowledge	Medium

*Coverage is given as high, medium, or low. An empty box indicates that this outcome is not part of the course.

Required Textbooks and Software

None. Readings will be provided through the Canvas website.

Recommended Materials

None

Course Schedule

- Week 1: Course Overview; What is ethics?
- Week 2: Constructing arguments
- Week 3: Ethical decision making
- Week 4: Codes of ethics
- Week 5: Case study 1 – India air pollution
- Week 6: Case study 2 – Gulf of Mexico Dead Zone
- Week 7: Social justice
- Week 8: Environmental justice
- Week 9: Case study 3 – Fracking waste in Texas
- Week 10: Case study 4 – Flint, MI
- Week 11: Ethnographic listening
- Week 12: Engineering and community knowledge
- Week 13: Case study 5 - Baltimore sewage
- Week 14: Community engagement
- Week 15: What is ethics, revisited

Attendance Policy, Class Expectations, and Make-Up Policy

This class is primarily discussion-based and therefore attendance is expected. Your level of participation in the class discussions will count towards your grade. Absences will be excused consistent with university policies in the Graduate Catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation. Assignments will be accepted late only in accordance with university policies.

Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade
Blog Entries	2 each	25%
Class Participation	25	25%
Paper	100	50%

Grading philosophy: In my grading, a B means that you met expectations, demonstrated understanding of the material, answered the question, etc. An A is reserved for work that goes well above and beyond expectations. In this class that means that essays or comments in class spark new insights or lead discussion in new directions. I do not limit the number of people that can earn A's in the class.

Blog entries: Reading about engineering ethics is different from reading other subjects. Many of the readings are challenging, and you will have to work to understand them. Often, this will require *hard work*. One of the best ways to begin to understand the readings is to write about them. The blog assignments will give you specific questions to answer, but you should also try to restate the author's claims and arguments in your own words. Again, you may find this difficult. Keep working at it, and please do come see me during my office hours when (not if) you experience difficulty. Blog posts will be graded on a 0-2 point scale. You may skip no more than two blog posts in the semester.

Class participation: Another good way to begin to understand the readings is to discuss them, both inside and outside of class. I have chosen readings that are likely to provoke thought and discussion. For this reason, I *expect* regular attendance in class (applicable to in-person students only) and participation in the online discussions. I also *expect* everyone to show respect for the opinions of others. I *encourage* you, however, to find respectful ways to disagree. The point of the class is not to reach a consensus, but rather to provoke thinking. I *encourage* you to participate actively in discussion. It is in your own interest if I know your name. You are required to post responses to blog posts in 13 out of the 15 weeks of the semester. These discussion posts will be graded on a 0-5 point scale.

Paper: Application of ethics is not about individual principles, it is about looking holistically at a situation from multiple perspectives. The paper will give you an opportunity to examine a single case using all of the perspectives discussed to that point in the class. Good writing takes practice, and this assignment is designed to give you multiple opportunities to receive feedback and improve your writing. The specific deliverables for the paper are:

- Outline of the arguments for your paper: 10% of paper grade, full credit for completing
- Initial draft: 10% of paper grade, full credit for completing
- Meeting to discuss feedback on draft: 10% of paper grade, full credit for completing
- Final version: 70% of paper grade based on rubric that will be provided

Depending on the quality of the initial draft you may be asked to write a second draft before the final version.

Grading Policy

Percent	Grade	Grade Points
93.0 - 100.0	A	4.00
90.0 - 92.9	A-	3.67
87.0 - 89.9	B+	3.33
84.0 - 86.9	B	3.00
81.0 - 83.9	B-	2.67
78.0 - 80.9	C+	2.33
75.0 - 77.9	C	2.00
72.0 - 74.9	C-	1.67
69.0 - 71.9	D+	1.33
66.0 - 68.9	D	1.00
63.0 - 65.9	D-	0.67
0 - 62.9	E	0.00

More information on UF grading policy may be found at:
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Expectations for Honesty

Cheating is a very serious offense and will not be tolerated. All instances of cheating, no matter how minor it may seem to you, will be reported to the Dean of Students Office and prosecuted. The penalty for any instance of cheating is a grade of E for the semester. Actions that are considered cheating include, but are not limited to:

- Copying of homework solutions from another source or another student. Students are encouraged to work together to solve the homework, and thus it is expected that in some cases the homework solutions of two students will be the same. However, blatant copying can be identified and will be considered cheating.
- Copying from another student during an exam, or using disallowed resources (including programming information into a calculator) during an exam. Calculators will be spot-checked during exams.
- Plagiarism on written reports. Plagiarism is the practice of copying the text or ideas from other sources and presenting it as your own. A good explanation of plagiarism is available at <https://tomprof.stanford.edu/posting/1178>.
- Attempting to change answers or marked grades on homework assignments or exams after they have been graded and returned.
- Any other action which is an attempt to modify your grade for an assignment in a way that does not actually reflect your work or abilities.

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Diversity Statement

The Herbert Wertheim College of Engineering (HWCOE) values a diverse and inclusive community. It is integral to success in every area of our college. Therefore, the College is committed to non-discrimination with respect to all areas of human differences, including but not limited to national and ethnic origin, race, age, sex, sexual orientation, gender identity and expression, beliefs and opinions, religion and faiths, culture, socio-economic background, level of physical or mental ability, and veteran's status. This commitment applies in all areas—to students, faculty, and staff and intends to reflect the College's belief that educational and employment decisions and access to University activities should be based on an individual's abilities and qualifications.

The HWCOE values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. We aspire to educate students to become future leaders capable of creating diverse and inclusive work cultures wherever their careers may take them.

Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu/evals>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that

facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

Campus Resources:

Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.