

ENGINEERING ETHICS- PHIL 334

SYLLABUS

Section	CRN	Days	Times	Location
008	14802	MR	2:30 PM - 3:50 PM	FMH 321

Instructor: Dr. Gareth A Edel, Department of Humanities and Social Sciences, SCLA, NEW JERSEY INSTITUTE OF TECHNOLOGY
Email: edel@njit.edu/ garethedel@gmail.com My Office Location: Cullimore Hall Rm 317
Preferred Form of Contact/Communication: Email within Canvas, Class chat in Discord.
Non-urgent messages via Office phone, Campus ext.: 5616 /(973) 596-5616.
Urgent text/call: (646) 479-3236 (Please note, Absence or lateness does not constitute an emergency)
Professor Edel will aim to respond to emails on canvas within 24 hours, other communication may take longer.

PROFESSOR'S SPECIFIC COURSE DESCRIPTION: As individuals and members of society, we are called on to make decisions. The study of ethics is traditionally the mechanism to reach better decisions/actions. This course presents a philosophical examination of the nature of engineering practice and applied technology as ethically loaded. This loading, that each decision has ethical ramifications, means that one must make engineering and technical decisions to the best of one's ability. The course considers such questions as: How do the societal functions of engineers and the practical application of technologies relate to basic moral and intellectual values? What moral obligations are implied by the uses and creation of technology? What are the ethical duties of engineers in the practice of their careers?

By introduction to a socially scientific perspective, and traditional philosophical ethics students will be introduced to active ethical thinking in professional settings. The course focuses on the way that professional decision making often fails to meet held ethics and are often not intentional. Thinking of 'business is business' without reference to ethical thinking means engineers and professionals may not be producing the effects and actions that they intend, nor may they be aware of the implications of their decisions and actions. The course is based on the premise that the use of humanities and social scientific observation and perspective allows improved attention and self-determination, which in turn produces better technological innovation and professional outcomes. Rather than leaving ethics to be an afterthought student learn a language and framework of attention towards both formal and informal systems of ethics placed on engineers and other professionals.

Through written work and directed readings students will work to develop ethics as a reflexive and direct mechanism so they will improve their ability at 'decision-making' and directing their actions to the goals and aims they accept by joining a professional field such as engineering. Readings of specific case studies as well as general framework seeks to develop the ability to interpret and find ethical elements and consequences within technologies and their social effects. In the end students should know 'what you are signing up for' in joining a professional body, particularly engineering, and what a profession is. Additionally, the expectation is that students will practice and develop communication, writing and researching skills which will enrich future professional and engineering practice. This is a reading and writing heavy course.

Student Learning Outcomes-- By the end of the course, students will be able to:

- Identify ethical issues
- Describe different ethical decision-making approaches
- Analyze engineering ethics cases
- Apply different ethical decision-making approaches to engineering ethics cases
- Recognize the ethical responsibilities of engineers
- Evaluate the broader societal and environmental impacts of engineering
- Develop and defend positions about issues in engineering ethics
- Develop fluency with basic language of ethical evaluation and perspectives, including the STS perspective that technology is not neutral and that technical decisions are inherently ethical and important.
- Learn to use theory/concepts to allow the expansion of available choices and perspectives.
- Increase ability to recognize, evaluate, and articulate ethical aspects of technical choices and to frame how technical choices should be better made.
- Improve ethical decision-making skills through practice at intentional decisions and through familiarizing oneself with available ethical theories and established case studies.
- Generally develop reading and communication skills in the Humanities and Social Sciences through course work.

DESCRIPTION From the Course Catalogue: PHIL 334. Engineering Ethics and Technological Practice: Philosophical Perspectives on Engineering. 3 credits, 3 contact hours (3;0;0). Prerequisites: [HUM 102](#)[Links to an external site.](#) with a grade of C or higher, and one History and Humanities GER 200 level course with a grade of C or higher. A philosophical examination of the nature of engineering practice and applied technology. Considers such questions as: How do the societal functions of engineers and the practical application of technologies relate to basic moral and intellectual values? What moral obligations are implied by the uses of technology? What are the ethical duties of engineers in the practice of their careers? How are technological practice and engineering related to questions about knowledge and reality? This course satisfies the three credit 300 GER in History and Humanities.

READING LOAD

Readings: There will be between 40+ pages of reading some weeks. Students should have completed the readings *prior* to the first meeting of the week and must be prepared to discuss them. **Completion of readings prior to class meeting is fundamental to understanding lecture material, and being able to participate in discussion.** All selections and readings will be made available on the course Canvas as PDF documents, some will also be ordered at the bookstore for students who prefer to buy hard copy.

OFFICE HOURS

- My job is to help you learn and understand and I want to help, please come- Direct communication is often the best way to help.

Students from any section should come to office hours. There is no reason to feel awkward or uncomfortable about asking for support and assistance from professors in understanding and engaging with course materials and assignments. Office hours are your best mechanism of determining course standing and having questions answered in direct and one-on-one format to guarantee your progress. Students often feel 'shy' about taking up faculty time and embarrassed about not getting everything and needing help, it is a good thing to practice working past this, pre-write questions or prepare if it is more comfortable, or simply visit and say "I am confused" the meeting time is to be of use to you. It is informal to the extent that that allows open dialogue, but please maintain the standards of contact and communication you'd use when talking to anyone you aren't friends with.

WHILE APPOINTMENTS AT OTHER TIMES ARE AVAILABLE- THE PRIMARY MODE IS "DROP-IN HOURS" During Which NO appointment is necessary, please come, speak, have questions answered. I'm just going to be sitting there in my office [CULLIMORE 317](#) with zoom open, waiting for Students to join me either in person or online.

Monday: 12:30- 2:20 pm

Wednesday 12:30- 4:00pm

So, Please- come seek answers, assistance, discussion, You can come ask one question, or many, want to know how your writing is, want help with research on your paper? I'll be there.

Topic: Professor Edel- OFFICE HOURS - Time: This is a recurring meeting Meet anytime TO Join Zoom

Meeting: [https://us02web.zoom.us/j/85793660316?pwd=MGdabjBDSdJ3Njdsak9GQVdhNWVhQT09Links to an external site.](https://us02web.zoom.us/j/85793660316?pwd=MGdabjBDSdJ3Njdsak9GQVdhNWVhQT09Links%20to%20an%20external%20site.)

Meeting ID: 857 9366 0316

Passcode: 876742

One tap mobile +19292056099,,85793660316#,,,,*876742# US (New York)

Dial by your location +1 929 205 6099 US (New York)

Meeting ID: 857 9366 0316

Passcode: 876742

Note- The invitation to Office hours will be posted to the Canvas. Students may choose to have cameras on, but Prof. Edel will never require camera view, and students may choose to use "Chat" Text function in Zoom rather than Speaking with voice.

Class- DISCORD 'channel'

Strictly 'optional' this is an alternative, and extremely useful platform to both add to your discussion and participation in class, as well as to receive aid and have question answered. A link is provided on the canvas, and invitations will be sent to all students. If you don't use, or can't use Discord, please discuss an alternative if you wish to have an option for communication among students, or to ask questions outside of open discussion in class.

CANVAS LMS & TEXTS/READINGS

All readings are provided by the professor in pdf/digital format Via the CANVAS page for the class. Students have responsibility to find these readings and to complete them in the scheduled timing. All homework, including specific assignments and weekly response write-ups are due on canvas in the folders provided. Please speak to me about permission to submit late work in office hours, please speak to me about specific circumstances.

If you are aware of a student who does not have access to adequate computing equipment, or high speed internet access, please direct them to the [Office of the Dean of Students](#)[Links to an external site.](#)

PLEASE NOTE: All readings listed are required except where marked specifically as recommended and will be referenced and required for exams. The semester research project will be somewhat self-scheduled, but preliminary deadlines are set. It is strongly recommended that you not let it slide to the end of the semester, the deadlines on the course outline below are required for Both online and in person and work should be submitted in Canvas by Friday of the week listed.

ACCOMODATIONS:

Different students need different things, more time? Extension? Different format of work? Talk to me, come before the problem becomes unmanageable, I do not require but strongly recommend seeking Student support from the campus- they have resources to meet your needs, either Technological or accommodation Please talk to the professor and or contact Students who need an accommodation should be directed to the [Office of Accessibility Resources and Services -Links to an external site.](#) (OARS). **Students in need of accommodations or with disabilities** - I don't strictly require students to conform to official policy, any student who requests extra time on exams, or a reasonable accommodation of their needs to perform or be comfortable in class, I will attempt to assist or meet your needs. To be accommodated seek to express your needs to the professor as early in the process as possible and be open about any limits or preferences that may need to be considered in your performance in class. Officially and Additionally- **Any student requiring accommodations due to one or more disabilities should also make sure to contact the Office of Accessibility Resources and Services** (Kupfrian Hall 201, Email at DSS@NJIT) both for themselves and to support the maintenance of good policies for other students who need support. Students who are ESL or Learning Disabled should inform the professor and will be allowed to negotiate appropriate modification to course expectations.

ASSIGNMENT DESCRIPTIONS AND COURSE WORK

EXAMS- This course requires students to demonstrate their learning in two exams, a midterm/first exam, and an end of semester second or final exam. Both exams are **Cumulative**, that is cover all material up to the point of the exam, including readings, lectures, and in the case of classroom meetings, all contents of class discussion.

QUIZZES- The quizzes for the class will ask simple informational, as well as more complicated conceptual questions to encourage you to complete the readings. Quizzes will be an average of 3-5 questions- provided on Canvas to be completed at the first class of the week, students will need to complete them at that time, approx. 15 min on Monday/Tuesday. Students are expected to complete 7 (of 11 possible quizzes) for full credit. Students may determine how many quizzes from the 11 weeks of available quizzes to complete, but all graded quizzes must be completed at prior to lecture in class.

Participation- Students are part of a discourse or dialogue in the class, and you and your peers are an important part of the learning where it is possible. If you have questions ask them, if you have interpretation or observation mention them. If you disagree with the professor, say so, but explain why. Students may fill in points for participation with extra credit, and partial credit is available for participation in the Online discussion on Discord. In-Class Activities will additionally be a component of participation credit.

RESEARCH PROJECT- Over the course of the semester students will write 15-20 pages, including academic article citations in a literature review of a descriptive case study. You will develop a case study to show the profile of a particular decision within a defined situation, showing both context and reasoning where possible. The goal is to answer "what happened, who did what, and were those decisions and actions ethical according to a specified system of ethics." Students will define a system of ethics to apply in evaluation, and then apply it to the context/case they researched.

Topic- Every student will select one 'subject' interesting to them, it must a) relate to some degree to technical and professional practices, that is some people working with or creating technologies need to have made decisions and done things. Additionally, b) students will need to select a topic about that subject where they can find research materials. The Specific Subject of the project is open to student selection because the key focus of the project is three parts 1) Isolate and define a set of decisions that were carried out, 2) profile who and what is/were involved in making those decisions, and 3) define an ethical argument about what you consider the ethics of the decision and its consequences were. Because all three of these elements may be applied to almost any decision, student interest should direct focus allowing you to have more fun in the process. Please speak to the professor if you need help choosing.

Research- Students will use the NJIT library database and outside resources to find writings that provide factual description of events and participants. Documentation of the case as well as interpretation and evaluation needs to be cited properly. Students may choose any citation format/style but must apply it correctly. Students may use non-academic/peer-reviewed materials also, particularly in the case of recent cases, but must use/include content from a minimum of 8+ academic/Peer-reviewed or editorially reviewed sources (journal articles or books). Students will cite all issues of fact, both details of case, and claims they use to support their ethical evaluation. Students will need to make clear they demonstrate understanding of course materials, and use course terminology.

READING RESPONSES – Weekly response writing may include your direct response to reading & Lecture, as well as your impression and response to course concepts. Additionally you would attach any product of the in-class activities in this document.

Each week of the class a reading response may be submitted, student must Submit a minimum of 7 weekly reading responses of the possible 13 weeks. *Students who are having difficulty with participation in class are encouraged to do extra response writing as a way to make-up those missing participation points, and may complete up to the full 13.*

Reading responses must be 500-750 words, around two to three pages in length (if double Spaced). SUBMIT AS PDF Document or WORD DOCUMENT NOT AS A LINK TO AN OUTSIDE SITE. Your name must appear along with the topic or week of the class in the file name.

Student response writing may focus on any elements of the reading for the week but point grade is based on a three part heuristic.

(1) show you read completely and carefully. I must be able to see you have substantially completed the readings. The response is to all the readings, synthetic, that is linking all the readings not only responding to one reading. To demonstrate reading them all, in weeks with multiple readings, you should mention them all, even if you focus on one.

(2) Document participation in the class activities, include response to class discussion, thus recording and demonstrating active participation in the course during class meetings.

(3) Demonstrate thought and engagement, this means not only summarizing a simplified version of the readings. You need to a) show you have some understanding of the article & lectures content (note- This may be through detailed interrogation of a concept or explaining your confusion and asking questions if you do not understand.) And b) link it to course content, concepts and discussions from other days, multiple readings from the same or other weeks.

For example talking about one article, or concept as agreeing or disagreement with other week's materials and readings.

You must mention/cite at least one reading by Author's Name correctly. IF YOU ARE USING QUOTES or Paraphrasing, you must properly cited quotations and paraphrasing, that means using author's names from the author. Good responses may link to outside knowledge and materials from outside the course but should still demonstrate engagement and focus on the reading. You should find commonality or disagreement between all readings for a week, and explains why you chose to focus on a particular topic.

Grading

GRADE COMPONENTS

Class Participation	20%
Reading Responses	21% (7 x 3pts each minimum requirement of 13 available)
Quizzes	9% (7x 1.5 pts each, minimum requirement, of 10 available)
Semester Research Project	25%
(Proposal/Topic -2pts; Initial research Bibliography 4pts; Completed Ethical Evaluation Profile Paper 14pts)	
FIRST/Midterm Examination	10%
Final Examination	15%
Extra Credit-	Variable

COURSE PERCENTAGE/LETTER GRADE DISTRIBUTIONS:

A= 100%-90%	B+ 89-86	B= 85%-80%	C+ 79- 76	C=75% -70%	D+/D=69%-55%	F=54% - 0%
A: Superior	B+: Excellent	B: Very good	C+: Good	C: Acceptable	D: Minimum Required	F: Inadequate

Note: pluses and minuses will be given for assignments, Final grades do not contain Minuses and will be rounded to nearest letter grade or Plus per NJIT's bizarre policies.

This course does not use a curve, nor does it do student-student comparison. Student learning and progress to the learning outcomes is to be measured using the following mechanisms:

Percentage Based Grading and Self-Assessment- It is a skill to be able to keep track of how you are doing, you are all supposed to be doing that work, know what is due (it's outlined on the syllabus) and keep track of it. This course uses a simple point based grading system to encourage and allow accurate self-assessment. All work is graded in points out of 100% in the final semester grade. Each piece of work you turn in, and each component of the class has a set value, those values are predictable. The biggest difficulty in self-assessment is the "participation score" of the face-to-face class, to know how you are doing on that one, you can use two methods, comparison to the amount of contribution and participation in class discussions among peers in the class, or asking the professor for evaluation in Office hours, you are strongly recommended to participate more if you are uncertain if you are participating enough. The grades posted on the Canvas gradebook are one tool to maintain your self-evaluation, but the "semester grade" it presents will never be complete without participation and other elements not scored in that grade.

Key to this is that you can "decide" or choose what grade to get, work towards that, correct path or respond to changes, for example students who have discomfort or difficulty speaking in class/groups may realize they will not gain full points for participation, they should decide if the loss of points there presents a barrier to action desired- getting a high grade? If you want an A and won't be able to talk in class, you would need to choose to do extra credit. The syllabus offers key information on this process, for example showing that extra reading responses can be done to balance for points lost on participation, students who are self-aware and evaluate likely outcomes may choose to do extra reading responses to balance a known issue with participation. BUT, if you are using the extra reading responses to fill in for participation – and then have problems on the midterm, different additional

extra credit may be necessary to achieve the A you wanted. Alternatively some students may choose to aim for a B, if a student wishes to only receive a B, they may decide where their efforts are best directed, what actions to take according to that decision.

This process is ongoing and you should be reconsidering and reevaluating your performance as the semester progresses.

Regarding “subjective” grading: the content of any argument is based on three things: the factual/textual material used in support, the logic of the connections, and the substance of the connection between the answer and the question it refers to. In grading you are dependent on my ability to see and understand these three elements, and you should remember in considering your answers and the grade they receive that this is not arbitrary but responsive to the content of the answers you provide.

Note: These days policy at NJIT- students cannot Have Incompletes unless the Dean of Student’s office has provided explanation. We are being pressured not to do change of grades for students after the semester ends, this means all work has to be in on time before the end of Exam week.

COURSE POLICIES

PROFESSOR’S NOTE- How To Do well in this Class:

The purpose of assignments is to aide in learning and evaluation, even if work deadlines is past you may wish to do it- your writing and reading is an integral part of learning.

The course is not arbitrary, the pedagogy (structure and way of teaching and supporting learning) of university courses, is based on how people learn.

Please do the work. When you submit work, not just for my class, but in general. You **MUST** always include key identifying information on email subject and document titles. So ideally- your name, the class, the assignment title and or date, as well as any other detail information such as type (extra credit, late response paper, etc).

When a professor hasn’t requested otherwise, submissions should be in Word or PDF Document format, they should not be submitted or sent as a link to an editable Google doc or drive document, which may prevent the work from being read. The exception is when a cooperative document for multiple people is used on google docs or another platform in which case you should also provide draft/stage versions in stable formats like PDF.

If you intend to submit/send Important work by email- the student or whoever is sending work, is responsible for ‘follow up’, that is you should ask in person or by email if a document was received/credited. The more important work, email, or other correspondence is to **YOU** the more you should accept responsibility for checking and confirming receipt and action based on the message.

Students who want to know standing in class, who need support, who need clarification, assistance with understanding, have access to three things, first is other students in the class, secondly the syllabus, you should know and understand the syllabi in each of your classes, and third, you should come to office hours, talk to your professors, and seek answers to your questions.

Students in college are learning many things, but I want you to understand something, nothing you learn in a math/technical class will be as important to your professional/career/life after college as working on good study & reading skills, communication skills and habits, planning & time management, scheduling and work organizing for projects.

Attendance Policy- Ideally you won’t miss any classes. Please. **Consistently attending class is an expectation of all classes** - missing only 1-2 classes throughout the semester, and making up any work you missed is the basic limit before it may negatively effect your grade. Officially, students automatically fail a class after missing ‘a substantial portion of course days’ often considered 6 class sessions without Dean’s excusal. I am 100% not rigid in applying this, if you need to miss class, the important thing is making up all the learning. **THE EXCEPTION IS THE TWO EXAMS. THESE EXAMS ARE NON-RESCHEDULABLE WITHOUT A LETTER FROM THE DEANS OFFICE.** Explanations need to be non-reschedulable, and non-prioritization based. **Despite the complex pressures students are under, you will not be excused due to prioritizing other predictable obligations.** Some flexibility based on circumstances, presence for Lecture and discussion is included in exams.

Class sessions Format & Lateness Policy- Class sessions will be a mix of lecture, discussion, and in-class group and individual writing activities, on a daily basis in class students will get new material in the class meetings. Attendance and arriving on time are fundamental to successful participation in a seminar class. **Reoccurring tardiness/lateness more than 5 Min after class is scheduled to start will affect participation grades.** Students should be on time for class, the school provides a transitional 10 min between time slots, and if students schedules make arriving on-time “difficult” they have a responsibility to manage their time, and to make arrangements with another student to assist in covering any material missed in class.

Behavior- As Professionals in training, and as adults, all students are expected to exhibit respectful conduct in the classroom. Students should participate in discussion, with an effort to produce an open conversation for other students, and to focus comments on course materials. Students may choose to be more formal or less formal to the professor, I will be forgiving about interactions with me, but Students must show utmost curtesy for their peers in the classroom, do not interrupt or interrogate others even if you disagree about interpretations, instead transform your concern or disagreement into an open question for the group, and direct it to the professor. Courtesy, civility, and respect at all times are necessary for open learning in a discussion based classroom. Students

who act inappropriately will be warned, and further infractions will effect your participation grade or the student will be asked to leave the room.

ACADEMIC INTEGRITY, Honesty, and Plagiarism:

“Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found: <http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>Links to an external site..

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu”

In the words of Professor David Hess: “Student-teacher relationships are built on trust. Students must trust that teachers have made appropriate decisions about the structure and content of a course, and teachers must trust that the assignments students turn in are their own.” Additionally students are trusted to do readings, and to work to the fullness of their ability, in turn the teacher assumes the effort to explain and work with students to develop their understanding and skills. I take seriously my responsibility in this trust and require students to do so also. Along with Institute Policy, I do not tolerate any form of plagiarism: the copying of work not written by you (including cutting and pasting of e-texts). Any use of outside material must be cited in full. Any student caught plagiarizing will **fail this course and be reported to the Dean of Students**. Note that the requirement for citation of material applies equally to paraphrasing and sourcing ideas as well as to readings assigned in the class and outside readings. You should already be aware that the relationships between students and professors--as well as those between students and their classmates are built on trust. You, as students, trust that teachers have made appropriate decisions about the structure and content of the courses, and teachers must trust that the students do their own work and make efforts to complete assigned materials.

“Acts, which violate this trust, undermine the educational process.” (Stanislewsky 2013). Suspected cheating or plagiarism will result in the incidents reporting to the Dean of Student Affairs and a temporary or permanent failing grade for this course. For example, quotation of information or inclusion of quotations of text, must be recognizably connected to a citation to the original source, even unintentional errors are plagiarism. All direct or paraphrased quotations, citations of data or content from any source must be cited. Even close paraphrases require direct citation of the original source.

All forms of academic dishonesty are violations of the trust we share with one another and the respect we should give our professors, colleagues, and ourselves. Students should be actively working to develop clear and proper citation and attribution habits as parts of all coursework, it is a basic professional and ethical skill in our information centered world today. **Students who are unfamiliar with citation and attribution practices may seek help from the professor in office hours or from the writing center and should do so as early as possible in the process. No specific citation style is required, simply that you attempt to use any one style properly (APA, MLA, Chicago, etc... any are acceptable).**

Note: Plagiarism by error should be extremely unlikely because none of the essay assignments will be research papers requiring a plethora of outside sources. You are capable of keeping track of material for the the main paper that requires a total of 7 sources over three stages outside of assigned course readings and students are expected to be able to keep track of material and information from the course readings and these outside sources.

I am now required to include the following statement:

Gender Fair & respectful Language: Students in this course are expected to use gender fair and respectful language in their writing, and in the classroom. While we all make mistakes and need to take time to learn respectful and appropriate habits of dialogue, students must make an effort, and in particular must be careful when writing when revision and review of the material allows one to be held to a higher standard. Please remember, every time you use a masculine-oriented word to refer to people in general, the implicit effect, even if unintended, is to whisper: *women don’t count*. **Please note that if the professor or a student makes you uncomfortable with their language you can speak to the professor or if more comfortable for you ask the Chairperson of the Department of Humanities to speak to the professor for you.** Concern should be towards respectful language in general, not only regarding gender, and students should try to avoid unintentionally ethnocentric, racist or biased language of other types. Intentional use of biased language, and or forms of communication that breech community norms may effect grades, both of classroom participation and of written work. Note- **Students who have Pronoun or Name preferences should inform the professor** and should expect that their identity and preference will be respected and used.

EXAM MAKE UP POLICY: With the move to the online exams and the flexibility of self-scheduling I consider there to be no reason for students to be unable to take them during the allowed time may have that even if they don’t have have OAR certification. Students who have conflicts should see the professor but will have to document a high degree of effort to meet the original dates in order to be considered. The exception is those students with Dean of student’s office approved excuses.

"When a student invokes extenuating circumstances for any reason (late withdrawal from a course, request for a make-up exam, request for an Incomplete grade) the student should be sent to the Dean of Students Office. The Dean of Students will be making the determination of whether extenuating circumstances exist or not and will be notifying the instructor accordingly. Instructors should never request or accept medical or other documents from students; such documents need to be submitted by the student to the Dean of Students. Except for cases determined by law, an instructor **is not required** to accommodate student requests even when extenuating circumstances are certified by the Dean of Students; however, all efforts should be made to ensure a student-friendly environment."

COURSE OUTLINE/ASSIGNMENTS

[ALL READINGS WILL BE AVAILABLE ON THE COURSE Canvas] READINGS SHOULD BE COMPLETED and Recorded lectures listened to Before the first day of the week for which they are assigned..

WEEK 1

January 18 (Thursday) **-Going over the syllabus and welcome to the class**

Note- Introduction & Discussion of Syllabus; What we study in Ethics: Reflexivity and Intentional Decision Making

WEEK 2

January 22 (Monday) Lecture QUIZ IN CLASS

How Ethics are built into technology, How technological choices matter as ethical choices.

Required Readings Due: 1) Mathes & gray "Engineer as Social Radical", and 2) Winner "Do Artifacts have Politics?";

January 25 (Thursday) Discussion Section

WEEK 3

January 29 (Monday) QUIZ IN CLASS

Formal ethics as a way of thinking & Cultivating Ideas of Ethics as Professional Practice.

Required Reading Due: "Introduction to Ethical Reasoning" by Donaldson & Werhane, and "Introduction to Engineering Ethics; Optionally students may additionally read the provided Selection" From Harris.

February 1 (Thursday) Discussion Section

WEEK 4

February 5 (Monday) READING DUE QUIZ IN CLASS

Rules & Codes of ethics

Required Readings Due: 1) Rhiengold- Look Who's talking (Amish and Cell Phones) Wired Magazine

Required Assignment: Look up your Codes of ethics, for prospective future careers, bring a copy to class.

February 8 (Thursday) Discussion Section

WEEK 5

February 12 (Monday) READING DUE QUIZ IN CLASS

Practices of design and ethics in engineering applied commitments

Required Reading: 'Alternative Design Scholarship: Working toward Appropriate Design' by Nieuwma

February 15 (Thursday) Discussion Section

WEEK 6

February 19 (Monday) READING DUE QUIZ IN CLASS

CHOICE- Mental Models, Options, Failure of trolley problem, need greater 'complexity' of thinking

Required Readings Due: 3 article Set- 1) Rennix & Robinson, The Trolley Problem, 2)- Millar - "You Should have a say in your robot Car's Code of Ethics", and 3) TBA. Discussion- Building ethics into things depends on our understanding and the tools or models of ethics we are used to change our understanding.

February 22 (Thursday) Discussion Section

Required Assignment: **FIRST DEADLINE OF PROJECT- Submission of Proposal/Topic & Initial Research- Midnight 2/24**

WEEK 7**MIDTERM EXAM WEEK**

First Class of week- Review of framework and concepts from first part of class, Second Class of the week- **"EXAM"**

February 26 (Monday) REVIEW

March 1 (Thursday) IN CLASS EXAM

PART II- CASE STUDIES

WEEK 8

March 5 (Monday) READING DUE

QUIZ IN CLASS

Case Study- The Ford Pinto "Madness" Business Technology and "Cost Benefit Analysis"

Required Readings: Selected Chapters of 'The Ford Pinto Case- A study in applied Ethics' by Birsch & Fielder,

March 8 (Thursday) Discussion Section

WEEK 9

NO CLASSES (Spring Break)

WEEK 10

March 19 (Monday) READING DUE:

QUIZ IN CLASS

Case: Tech enable large effects, "non-neutral" Computers & decisions- Great harm

Required Reading: Selections from Death by Design By Eric Katz, Intro and 'IBM and the Holocaust' by Edwin Black

March 22 (Thursday) Discussion Section

Required Assignment: SECOND DEADLINE OF PROJECT- Submission of REVISED Proposal/Topic & Bibliography 2/27

WEEK 11

March 26 (Monday) READING DUE:

QUIZ IN CLASS

Case: The Internet and Large Scale Transformation Past Datafication

Required Readings Due: 1) Selection from 'Code 2.0' by Lawrence Lessig, and 2) Intro. Chapter From Sherry Turkle.

March 29 (Thursday) Discussion Section

Note- April 1st is last day for No Penalty Course Withdrawl

WEEK 12

April 2 (Monday) READING DUE:

QUIZ IN CLASS

Case: Algorithms and Automation of Software, making the choices invisible in code. Nov 13- 17h

Required Reading: #1 From Emerging Technology, "AI can be made legally accountable for its decisions"

MIT Tech; #2 Knight, Will, "Is technology about to decimate white collar work?" Business Insider; #3 Kraemer,

Overald, & Peterson, "Is there an ethics to algorithms" #4 Sidell, "Can computers be racist?"

April 5 (Thursday) Discussion Section

WEEK 13

April 9 (Monday) READING DUE:

QUIZ IN CLASS

Case: Medical technology & Ethics of Urgency & time

Required Readings Due: Reading #1 Excerpt from The Danger Within Us by Jeanne Lenzer; Reading # 2 Groeger, "How does the FDA monitor your medical implants" Reading # 3 – Fox, "Black children receive less pain meds" Reading #4 – Rosenthal, "Paying till it hurts, a case study in high costs" Reading #5 – "The Lesson of Epipens, why drug prices spike again and again"

April 12 (Thursday) Discussion Section

Required Assignment: THIRD DEADLINE OF PROJECT- SUBMISSION OF ANNOTATED BIBLIOGRAPHY with initial OUTLINE & Current Draft work Due 4/10

WEEK 14

April 15 (Monday) READING DUE: QUIZ IN CLASS

Liability as Substitute for Ethics in the Law.

Required Readings Due: Reading # 1 Moll, "Product liability law: What engineers need to know"; Reading # 2- Willats, "Death by reckless design: Need stricter criminal statutes engineering related homicides"; Reading #3 – Vardaro & Waggoner, "Statutes of Repose: The design professional's defense to perpetual liability"

April 18(Thursday) Discussion Section

WEEK 15

April 15 (Monday) *IN CLASS PROJECT/PAPER WORKSHOP*

Required Assignment: FOURTH PRELIMINARY DEADLINE OF PROJECT-Students must turn in a detailed explanation of their case and an brief outline of their ethical argument in preparation for student presentations

April 18 (Thursday) IN CLASS SEMESTER REVIEW

WEEK 16

April 22 (Monday) STUDENT PRESENTATIONS

April 25 (Thursday) COMPLETE PRESENTATIONS & FINAL IN CLASS REVIEW FOR EXAM

WEEK 17

Final Class Day

April 29th (Monday) LAST CLASS MEETING- IN CLASS EXAMINATION