

SYLLABUS

PHIL 334 - ENGINEERING ETHICS

Section 007 (95230)

Meeting: TR 4:00 PM - 5:20 PM CKB 222

Credits: 3 Mode of Instruction: Face to Face

FACULTY CONTACT INFORMATION

GARETH A. F. EDEL, PhD. University Lecturer, Dept. Of Humanities & Social Sciences

Email: edel@njit.edu

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)

Modes of Communication- Primary mode is **Course canvas Messaging**,.

Additional mode is email: edel@njit.edu as well as the Course **Discord** Channel, an invitation will be sent to all registered students on the first day of semester, course invite link will be updated on the Canvas every few weeks for late adopters, while it is recommended to participate it is officially optional.

Office hours, or appointments take place at my office – Cullimore hall Rm 317 (Knock so I can hear you arriving).

Dr. Edel will aim to reply to emails or canvas messages within 48 hours, usually quicker via Canvas than via email which may take longer. If you have an emergency, a real emergency, not a late homework or question about class that can wait, please feel able to Text or call Personal Phone: (646) 479-3236

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.

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 102Links 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.

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.

OFFICE HOURS:

Regarding Office Hours- I strongly recommend speaking to me in office hours about any trouble as soon as possible; you can ask for assistance or clarification of course material or course concepts and workload. Students are often given too little advising and explanation or orientation in starting their college experience, and faculty are willing to help. Please ask if you have any questions or issues. If I or another faculty member you speak to does not know the answers, we will usually be able to direct you to someone who can help. I want to assist you in doing well and getting the most out of your education and your time on campus.

Dr. Edel will generally be available in Drop-In Hours both in his office for in person and digitally via a Zoom meeting. as well as in person **at Cullimore 317**, during drop in office hours you do not need an appointment to see the professor either in person or online. The Zoom will be paused/muted when students do come to 'in person' meetings if privacy is needed.

Dr. Edel is available to speak about any course, student, material related issues without an appointment at the following

DROP-IN (In Person and Zoom is open, No Appointment needed, just come say hi)

MONDAY: 2:45- 4:15 PM

TUESDAY: 2:00pm – 3:15/30pm

THURSDAY: 2:00pm – 3:15/30pm

OTHER TIMES BY APPOINTMENT (Sometimes In-Person more often Online, Afternoon/evening. Zoom Digital Appointments Available almost any time Fridays, workday hours preferred, and In person appointments are most easily arranged Mornings from 10-11Am or earlier, and Wednesday from 2:30- 5:30 pm during available free hours. - Zoom Appointments are more flexible, and students may schedule an online Meeting up to the day before the meeting, if I'm available we'll meet.

Topic: Professor Edel- OFFICE HOURS

Time: This is a recurring meeting Meet anytime

Join Zoom Meeting <https://us02web.zoom.us/j/85793660316?pwd=MGdabjBDSDJ3Njdsak9GQVdhNWVhQT09>

Meeting ID: 857 9366 0316

Passcode: 876742

One tap mobile +16469313860,,85793660316#,,,,*876742# US

"Please Ask the Instructor"

I'm available to discuss and explain concepts, help strategize time Management or Reading/work strategies,

Assist Research and Writing Development for the Class, answer about or Explain regarding Issues with course work, engage in ethical debate, I'm offering multiple communications Channels:

THERE ARE NO BAD QUESTIONS- YOU ARE STUDENTS- ASK THE QUESTIONS, I WILL HELP!

COURSE POLICIES:

Instructional methods

This course is taught as a seminar, students will be expected to do close reading and writing outside of class, and then come to class for a brief lecture and quizzes, following those the course will be discussion based. Some classes will include small group discussions and student presentation to the whole class.

Communication with Instructor & Feedback

It is your responsibility to communicate with the instructor about absences, lateness and assignment expectations, you should ask for assistance and support when needed. Contact the professor about any issues in office hours, at class times, or send any questions about the course or material to the professor's CANVAS email. You may also email directly at gmail/njit.edu, but for quick replies communication should be via Canvas. Canvas emails will usually be replied to within 48 hours by the professor. The Professor will provide feedback with as much detail as possible Via Canvas on all work submitted, in the case of some assignments only a numerical or letter grade will be provided unless students request more information. You are encouraged to make appointments, send email inquiry, or participate in discussion on Canvas/Discord/Zoom.

Attendance

Per the University Policy, egregious absences (officially 5th without official excuse via Dean of Students office) is grounds to fail a class. 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. - Ideally you won't Miss any classes. Please. **Consistently attending class, missing only 1-2 classes throughout the semester, and making up work you missed is the basic limit before it negatively effects your grade.** Officially, students fail a class after missing 6 class sessions, I am 100% not rigid in applying this, if Students can document Important. explanations for absences and if they rapidly make up for missed class materials in writing via notes, and discussion with student peers. Explanations need to be non-reschedulable, and non-prioritization, for example you may not gain an excused absence if they "needed to focus on an exam for another class" despite the complex pressures students are under, you may not be excused due to prioritizing other predictable obligations.

Course Environment

"This course should be a safe space: in the classroom, in one-on-one discussions with the instructor, and in online spaces for this course. This means no hate speech (slurs or derogatory or demeaning comments) and no bullying. You are expected to treat your classmates respectfully and with kindness, generosity, and empathy. "

Assignment Submission

"All assignments are to be submitted through Canvas unless other arrangements are made with the instructor. Files must be of type .doc, .docx, .pdf, or .txt unless otherwise instructed. Google Docs are NOT acceptable.

Should you encounter technical problems, contact the NJIT helpdesk at 973-596-2900 (or simply extension 2900 from campus locations). In the event that it is impossible to submit through Canvas, you must provide a paper version of the assignment that includes an explanation of why online submission was not possible. Emailed work is not an acceptable substitute."

TEXTS/READINGS

All readings are provided by the professor in pdf/digital format Via the CANVAS page for the class.

PLEASE NOTE: All readings listed are required except where marked specifically as recommended and will be referenced and required for exams

CANVAS LMS

Students have responsibility to find readings, assignments and all course materials via Canvas in the scheduled timing. All homework is 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 Student links to an external site.

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.

READING LOAD

Readings: There will be approximately 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.

ACCOMODATIONS, Disabilities & Diverse Student Needs

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 OAR

"The Office of Accessibility Resources and Services works in partnership with administrators, faculty, and staff to provide reasonable accommodations and support services for students with disabilities who have provided their office with medical documentation to receive services. If you are in need of accommodations due to a disability, please contact the Office of Accessibility Resources and Services to discuss your specific needs. Office of Accessibility Resources and Services | Office of Accessibility Resources and Services (njit.edu)

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.

LATE WORK AND DEADLINES

Officially- No Unexcused Late Work will be accepted. Deadlines for all work are available on the Syllabus, important deadlines are listed on the Canvas folders also. When the folders on Canvas Close, the assignment is over unless you have a specific approved excused lateness. DO NOT ASK FOR FORGIVENESS/SEEK PERMISSION BEFORE DEADLINE- Ask for help. It is always better, and usually easier to plan and predict the need for additional time. Track and be aware of potential time conflicts and scheduling- ask for help and time if needed. Allowing late work is entirely by my whim after the deadline and I usually don't accept late work without prior permission. My usual laissez-faire late work policy does not apply any longer. Students ruined it.

DEADLINES LISTED FOR ALL WORK APPLY. AS SOON AS THE FOLDER CLOSES THE DEADLINE HAS PASSED.

Acceptance of late work will be considered based on explanation and student explanation, if you are sick, have a religious or non-work major life event that causes a delay, please inquire about acceptance. But late work based on effort and planning conflicts will not be accepted. Plan Ahead. You can always do work early, you can't do work late.

"Late Policy and Extensions- In an emergency situation or unplanned special circumstances that disrupt your capacity for school work, please attend to the emergency situation as a top priority! When you are ready for school work again, contact the Dean of Students through the links above to schedule an appointment where you can explain your situation. You don't need to share doctors notes or other personal information with me; my policy is the same regardless of the details of your situation. When you contact me, I'll work with you to plan out a way to make up missing assignments and recover your grade. When I hear from the Dean of Students, I will waive any late penalties that might have accrued."

"For any non-emergency events, such as athletic events, academic conferences, job fairs, military service, or busy schedules around midterms and finals, I ask that you contact me at least 2 days in advance of the event to reschedule your assignments. In other words, extensions will not be granted on the day an assignment is due. If you contact me at least 2 days ahead of an event, we can arrange some rescheduling of assignments to accommodate your event."

"Assignments approved by the Dean of Students or arranged in advance of a due date will not receive late penalties. Certain assignments cannot be made up directly, such as the group discussion. In these cases, alternative assignments might be arranged to meet certain assignment requirements. Other assignments have concrete due dates listed on Canvas. Unless otherwise stated, assignments are due at midnight according to the assignment schedule on Canvas. There is a 30 minute grace period for late assignments. Assignments submitted after a deadline will be penalized by 10%. Replies and Lesson Presentations can be submitted with a late penalty until the end of the unit. If you missed a deadline but the unit hasn't ended, you don't need to apologize or ask

permission. After the Unit has concluded, no assignments from that unit will be accepted without permission. The research project will be accepted with a late penalty until the final day of class. See the schedule on Canvas for details."

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." (Stanislawski 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 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.

PLEASE NOTE- RE CITATION AND ATTIBUTION

Attribution is two things, it is ethically giving credit for other people's past contribution, and it is rhetorical/persuasive, making yourself authoritative/credible by using their work. This helps you, you need to attribute things.

Most of you will move into Technical fields, so all three elements of citation and attribution matter. This matters-like really matters, what were really minor student errors made them fire the President of Harvard the better part of twenty years later when someone noticed, see... it matters. Failure to cite sources, or even questions about source of information can cost you a patent, or a contract. Citations Matter.

What are citation- Citation is a formal system of attribution, that is- it is saying "this information" came from "this specific place." The act of giving credit in a specific way. For most people in technical fields you'll use a version of the APA (American Psychological Association) Citation Style. Why the APA, don't ask, the history isn't interesting, but it is the basis by which the journal Nature, The NPSE, and even the IEEE (who pretend theirs is different) will do citation, so using a version of it is good practice in most technical fields.

The citation "style" is a specific set of rules about what and how to do citations, including specific formats of the actual information to include to give credit. If you mess up that format you're cheating/plagiarizing= not citing properly. Citing = you are trustworthy, citing in one of the versions of APA says you are trustworthy as a scientist to many people. I DO NOT CARE WHAT CITATION STYLE YOU USE... But you must use one, and use it correctly... you had a teacher who taught you MLA? Great, use it. Use it right. You know Chicago Style? Use it. Use it right. You think you should use IEEE's special Electrical engineering version because that's your major, Great! Use it. Use it Right!

You can find versions of most of the style guides on The OWL website, that is the writing center of PURDUE Univ. they keep it as a wonderful resource for students. They have pages for almost all the styles you could want. If you don't know how to cite- ASK ME or ASK THE WRITING CENTER, or YOUTUBE... And look at the style guide here: The APA: APA Formatting and Style Guide (7th Edition) - Purdue OWL® - Purdue University

The reason you do citation is because you are required to use citation. But in ethics you should also be saying the style of writing matters and citing (Edel 2012), my own research, is needed because you can plagiarize yourself, you can never be careful enough. Believe it or not the rule is- Any information that isn't "COMMON" knowledge to the whole audience, should be attributed/cited, so that it can be evaluated for reliability. When in doubt CITE IT!

CLASS ETIQUETTE & COMPORTMENT

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 courtesy 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.

"Students are expected to follow NJIT's Code of Student Conduct. Students should be polite, active participants and respect their instructor, classmates, as well as ideas or opinions that differ from their own. While scholarly debates are encouraged, they should not become personal attacks."

Campus policy- Community Standards & Student Conduct | Dean of Students and Campus Life (njit.edu)

Gender Fair & respectful Language

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 breach 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.

Generative AI:

Per the Provost's policy (Below) Faculty must make clear their course policy for AI USE: Here's Mine: To be clear- YOU MAY NOT USE GENERATIVE AI IN SUBSTANTIVE WAYS FOR THIS CLASS> ANY USE to produce material work for submission is considered plagiarism. Your job in my class is to develop the research, writing, and conceptual or analytic skills to construct your own answers in your own words from your own material sources- To rely on AI may be a valuable skill in another context but is absolutely unacceptable in this class. The readings should be read, not summarized by AI, students should synthesize from articles in the published academic record without AI support, and you're sense that writing is cleaner or better with AI is absolutely proof you should practice without it. I have sympathy for the time pressure you're under, but you're job here is to work on these skills while developing the subject area knowledge and skills appropriate to each class you take. DO NOT SUBMIT ANY WORK FROM AI GENERATED SOURCES- I won't catch it every time, but if you submit substantially AI Generated work you will fail the assignment and in some cases submitted for plagiarism. In many cases I am using in-classroom writing to diminish temptation.

From the University- Sample Language for Prohibition: This course expects students to work without artificial intelligence (AI) assistance in order to better develop their skills in this content area. As such, AI usage is not permitted throughout this course under any circumstance.

Explanation/Possible reasoning for this policy:

Focus on developing foundational skills that are not dependent on AI technologies.

Assess skills based on a student's own efforts and understanding.

Prioritize human interaction within a course, promoting human engagement with peers and/or instructors.

Limit the ethical concerns in AI usage regarding the course content or data.

Encourage creativity through a student's own exploration and thinking.

Increase equity in a course, as not all AI tools will be available to all students.

[Provost's Statement: Generative AI: As we continue to navigate the evolving landscape of AI in education, all instructors are now required to include a statement in their course syllabi regarding the use of generative AI tools by students. It is essential that faculty clearly articulate their individual stance on whether and how these tools may be used within their courses. NJIT maintains the position that instructors have the discretion to set their own preferences, including whether generative AI is permitted at all, under what conditions it may be used, and for which specific assignments it is permissible or not. This measure is intended to ensure transparency and consistency in our academic expectations for students, while also empowering faculty to maintain the integrity of their courses in alignment with their educational objectives.]

GRADING

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. Practice and keep track of work, deadlines and the effect of your actions on your grade. You NEED TO KNOW, where to put your work and what is due as outlined on the canvas/syllabus.

This course uses a simple point based grading system to encourage and allow accurate self-assessment. All work is graded in fractional 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 if you understand the syllabus. The biggest difficulty in self-assessment is not the professor's subjective judgment, but your own management of time and effort.

You are strongly recommended to participate more if you are uncertain if you are participating enough in the various group/collaborative elements of the class. Use the quizzes and other elements to revise your expectation of time commitment and effort, if you did a reading and didn't get a decent grade on the quiz, spend more time on readings, go back and review before the exam. Other than the reading quizzes, all semester activities are cumulative. Each offer an opportunity to show you gained the expertise you didn't show on previous work, therefore if you're grades and 'showing learning' improve it is possible (not certain) that your final grade can improve beyond the percentage value of components. The main thing is to demonstrate skill growth, and learning- aimed at mastery of the course content. No one knows everything, do your best to work through the materials. 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.

The goal of this is that you can "decide" or choose what grade to get, work towards that, correct path or respond to changes, if one activity presents a barrier to desired-grade consider extra emphasis on other parts or changing your aim at desired grade. Think you need a high grade? You would need to choose to do extra credit or seek assistance in improving your scores from the professor. The syllabus offers key information on this process. 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 in 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.

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 work builds skills, and improvement in those skills as represented in other future assignments may improve grade even if late or missed work wasn't given direct point value/grade. 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. It is tempting to think about school as about receiving a degree- but the reality is that skills, soft skills like communication and writing are better predictors of high performance in industry after graduation than grades.

Don't do silly little errors, check- put your name on your work, look at your schedule and syllabus for all classes often. Make lists and prioritize 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.

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	20%
(Proposal/Topic -2pts; Initial research Bibliography 4pts; Completed Ethical Evaluation Profile Paper 14pts)	
FIRST/Midterm Examination	10%
Second Exam- Case Study Analysis (Take Home)	10 %
Final Examination	10%
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:

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.

RESPONSES- Each week students have the opportunity to write about whatever material in the readings they consider interesting or important- the grading mechanic is based on two factors “engagement” with the subject matter, and “Demonstration of Reading,” simply that you have completed the reading for the week. The three point rubric, is 1) do you show you read substantially, and 2) did you say something about or show understanding of the material in the reading, linking it to the course or to real world conditions, and 3) Effort and thoughtfulness. There is no Minimum Length, but 250-500 words, or around 2 pages is a useful guide to see if you’ve done enough thinking. There is no maximum length, but it is strongly advised to substantially complete your thinking on paper, and that regularly takes longer than a page. All Reading Responses will be submitted on CANVAS in the appropriate folders. The Responses may refer to prior weeks concepts, but should include a substantive focus on the weekly assigned chapter.

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.

EXTRA CREDIT- The course can allow students to be active in making decisions about the class, when to take quizzes, how to study, and which subjects to focus on. And the professor will work with students to be flexible, if they are proactive. You MUST request an opportunity for extra credit, and negotiate a specific plan and course point value, PRIOR TO DOING IT. The one exception being extra reading responses. Any Student may submit as many, or inadvisably as few, of the responses as they choose. Class Notes may be submitted at the end of the semester for 1-5 points if discussed ahead of time. Extra Credit Maximum 20 Pts over the course of the semester. You are encouraged to turn in extra credit for addition to the grade, or to

balance for difficulties you feel in participation. If you know you won't talk- then write. Two main forms of extra credit are additional weekly reading responses, and weekly presentations on theory, these will be discussed in class. Other forms of extra credit are available via discussion in office hours.

Students may read, take notes, and write responses to the final chapters which are not assigned (on Law, Social Movements) and earn up to 4 points per additional chapter. These may be done out of order, and should not be done at the end of the semester, the material from these chapters will likely enrich understanding but will not be directly present on exams.

SCHEDULE OF WORK & ASSIGNMENTS

WEEK 1

Tue, Sep 2 & Thu, Sep 4 Topic: What is Ethics : INTRODUCTION TO THE COURSE

Reading: Read the Syllabus as we work, no additional Reading until 2nd week

Reading: Assignment: Begin looking at the readings due Tues 9/9

Work Due: Seriously, have read and understood the Syllabus.

WEEK 2

Tue, Sep 9 & Thurs Sep 11th Topic: SOCIAL & CONTEXT PERSPECTIVES & Technological politics

Reading: Mathes & gray "Engineer as Social Radical"

Winner "Do Artifacts have Politics?";

(COMPLETE ALL WEEKLY READINGS FOR THE START OF TUESDAY, 1st class of the week)

Key Concepts/Key Words: Power, Politics, Politics of Technology, context, Authoritarian and Democratic Design, Innate/Inbuilt Politics, long-term thinking, consequences, Unintended consequences, The "Radical" effect of technologically changing the world around you.

Framing Description: These readings focus on the way that technology changes the world in small and large ways, and is aimed at explaining that the affecting/changing that it does is political/radical, and subject to ethical and political evaluation. There is no such thing as neutral technologies.

Response Prompt Questions: How is technology Political? How is the technology shaped by and changing the context it is in? What may be the moral/ethical/political responsibility of designers/engineers in regard to effect?

Assignment:

Come to Lecture On Tuesday

Submitted Response Before Tuesday Class

Participate in Discussion on Thursday

Completed Reading Before Tuesday

Quiz (Unit Reading) In Class On Tuesday

Work Due: Reading Response Submitted on time

WEEK 3

Tue, Sep 16 & Thu, Sep 18 Topic: Traditional Ethical theory

Reading: "Introduction to Ethical Reasoning" by Donaldson & Werhane,

Optionally students may additionally read the provided Selection From Harris. "Introduction to Ethics"

(COMPLETE ALL WEEKLY READINGS FOR THE START OF TUESDAY, 1st class of the week)

Key Concepts/Key Words:

Definition of "Ethics", Ethical Theory, Rules, Prescription, Proscription, Deontology, Duty, Consequentialism, Contractarian, Rights, Kant, Bentham, Reasoning, Action & Effect.

Framing Description:

There are many different ways to evaluate and understand what is ethical, that is the seeking doing of "right action" so this introduces the basics of the formal study of "doing right." With different theories defining what is right, and how to consider or decide right in different ways.

Response Prompt Questions:

What are the different forms of Ethics/Ethical Thinking the reading describes? What is the relation of the system of ethics/the theory, to the rules, or evidence it considers? How does ethical theory alter the way we make decisions?

Assignment:

Come to Lecture On Tuesday

Submitted Response Before Tuesday Class

Participate in Discussion on Thursday

Completed Reading Before Tuesday

Quiz (Unit Reading) In Class On Tuesday

Work Due: Reading Response Submitted on time

WEEK 4

Tue, Sep 23 & Thu, Sep 25 Topic: Mental Models, Complexity & choice

Reading:

1) Rennix & Robinson, The Trolley Problem,

2)- Millar - "You Should have a say in your robot Car's Code of Ethics",

Key Concepts/Key Words:- The tunnel problem, the Trolley problem, Informed Consent, mental models, preconceptions or learned way of thinking, Models of Choice, sovereign choice, complex choice, linear choice, choice as decision making. Selection between options, limitations of decision making. Proportional Responsibility.

Framing Description: The action we most often see in ethics isn't saving a person's life, it is the basic nature of decision making and choosing, how we choose, how we think about choices or decisions, and what we do in limiting those choices matter. Here are a pair of thought experiments and they are used to show limitations in how we think about choice.

Response Prompt Questions: How does the Trolley Problem bias towards simplified Choice? Should there be any limits to simplified choice? Do the two articles agree, one looks at a specific answer, the other a more general change?

Assignment:

Come to Lecture On Tuesday

Submitted Response Before Tuesday Afternoon

Participate in Discussion on Thursday

Completed Reading Before Tuesday

Quiz (Unit Reading) In Class On Tuesday

Work Due: Reading Response Submitted on time

AND- INITIAL TOPIC FOR SEMESTER PROJECT (NOT PROPOSAL- JUST INITIAL TOPIC)

WEEK 5

Tue, Sep 30 Topic: Alternative Design & The Amish , Accepted Professional Ethics & Counter Culture
& Thu, Oct 2 WELLNESS DAY- NO CLASSES MEET

NOTE- SHORT WEEK- LESS DISCUSSION AVAILABLE- SPEND EXTRA TIME ON READING & RESPONSE

Readings:

Rhiengold- Look Who's talking (Amish and Cell Phones) Wired Magazine

'Alternative Design Scholarship: Working toward Appropriate Design' by Nieuwsma

Key Concepts/Key Words: The Amish, Culture, Ordnung, Accepted Ethics, Alternative Design, Design Attention, Appropriate Design, Agency, Governing Mentality, Technological Decision making, Ecological Design, Critical and Feminist Design, Universal Design, Appropriate Design, Participatory Design, Accessible Design, Empowering Design, Socially responsible Design, Commitments, Duty,

Framing Description: These two readings were often separated in other semesters but link over the question of how you take-on, add or live up to responsibilities in ethical theory, the case example of The Amish, a subculture with strict technological Ethics, and the examples of Engineer/Designer theory used to do

the work better by including commitments to special “attentions” both look at how selecting or accepting an ethic may change ones actions.

Response Prompt Questions: What are the links between Appropriate and Althervative design generally and in the attentions of these theories? What is the point of comparing the Amish way of doing technology to our main/dominant societies ideas? How do these articles and the lecture suggest you should think about ethical commitments?

ASSIGNMENT:

Come to Lecture On Tuesday
Submitted Response Before Tuesday Afternoon
Participate in Discussion on Thursday

Completed Reading Before Tuesday
Quiz (Unit Reading) In Class On Tuesday

Work Due: Reading Response Submitted on time

WEEK 6

Tue, Oct 7 - REVIEW OF FIRST PART OF CLASS (PREP FOR EXAM) & DISCUSSION OF SEMESTER PROJECTS

Thu, Oct 9- EXAM 1 - MIDTERM

Work Due: PROPOSAL FOR SEMESTER PROJECT TOPIC DUE

PART II OF CLASS- CASE STUDIES

WEEK 7

Tue, Oct 14 & Thu, Oct 16

Topic: CASE STUDY: Cost-Benefit Analysis & The ford Pinto Simplified Substitution for Complex Ethics,

Reading:

Selected Chapters of ‘The Ford Pinto Case- A study in applied Ethics’ by Birsch & Fielder,

Key Concepts/Key Words:

Cost benefit analysis, Criminal Intent, cost of Life, Simplified Analysis, shared/Common measure of consequence, Regulation/Safety Rules, Heirarchical/Structural Decision Making.

Framing Description:

The development of the Pinto, a family car, by Ford Motors is a classic example of unethical decision making, but in the end the form of decision making that allowed them to make those choices went on to be normalized and common in our day. We look back to consider how corporate/business decisions and ethical decisions in engineering as a licensed trade may be different ethically. And particularly how the simplified use of Cost-Benefit analysis in place of more robust consequentialism is a problem. The three articles, the expose that showed the problem, an industry response, and an indepth analysis of the thinking in cost benefit offer an example of how ethical thinking is complex.

Response Prompt Questions:

What is the ethical nature of the Pinto and Ford Motors? How does this show a difficulty in doing consequentialist analysis based on outcomes? What is the most important idea for

Assignment:

Come to Lecture On Tuesday
Submitted Response Before Tuesday Afternoon
Participate in Discussion on Thursday

Completed Reading Before Tuesday
Quiz (Unit Reading) In Class On Tuesday

Work Due: Reading Response

Revised or late proposal for semester Research final deadline w/ Bibliography

WEEK 8

Tue, Oct 21 Thu, Oct 23

Topic: CASE STUDY: Computers, & IBM in the Holocaust Politics embedded in Tech- Datafication,

Reading: Selections from Death by Design By Eric Katz, Including 'IBM & the Holocaust' by Edwin Black

Key Concepts/Key Words:

Implicit Bias, Political Milleu, Technology of Authoritarian Rule, Census, Myth of Neutrality, Myth of Progress, Datafication, Digitalization, Computerization, Process efficiency,

Framing Description:

Picking up the idea of simplification from the pinto case, here we look at how computers can shape what is included or left out of attention due to the shaping of data and process. The use of computers by the IBM company in aiding the Nazi extermination programs was a business decision they argue was ethical because it contributed to the rise of computers, how focus on one element in an ethical system can diminish attention to other aspects, and how technology can contribute to harm is deeply troubling in the use of IBM's computers by the Nazi Party leading up to and during WWII. The role of technology in war, is an ongoing issue.

Response Prompt Questions:

How should we think about the conflict between IBM's multiple duties, to progress, to profit, to the world of humanity, to the Government during wartime? How do the various articles show and discuss the link between technologies (in design and use) and their context or Milleu? What Should we take away from the general discussion of computers here as able to erase unpleasant details, and make only our selected 'useful' data appear to be present?

Assignment: Come to Lecture On Tuesday

Completed Reading Before Tuesday

Submitted Response Before Tuesday Afternoon

Quiz (Unit Reading) In Class On Tuesday

Participate in Discussion on Thursday

Work Due: Reading Response

WEEK 9

Tue, Oct 28 Thu, Oct 30

Topic: CASE STUDY: The Internet & Social Tech. Complexity of politics & regulation at scale

Reading:

Assignment: Selection from 'Code 2.0' by Lawrence Lessig,
Introduction Chapter From Sherry Turkle's "Alone together"

Key Concepts/Key Words:

"the dot", Regulation, Intimacy vs Control, Social robotics, social technology, norms, architecture, economic, law & formal Regulation, complex technological systems, perceived definition and social construction.

Framing Description:

Following the introduction of computers last week we look now at the result of the expansion of computing, the growth of information systems and the internet, and the way that assumptions and the placement of these "neutral" and "powerful" systems into parts of our lives may change our lives. The question of the "internet" and how "social technologies" are ethical is complicated by the huge number of different uses and experiences people have. Despite that diversity there are forms of regulation and effect in broad patterns we may observe and evaluate. In particular, as we move from a single computer to a global scale, how do we wrap-our-heads around that larger scale?

Response Prompt Questions:

What do we take away from Lessig's concern about he failure to perceive the internet accurately and the mistakes in regulation of the internet? How do we respond to the difficult choice of how to use social

technologies that Turkle suggests we must resolve? How do we look at the expanding power of computing in networked systems as ethical and changeable?

ASSIGNMENTS:

Come to Lecture On Tuesday Completed Reading Before Tuesday
Submitted Response Before Tuesday Afternoon Quiz (Unit Reading) In Class On Tuesday
Participate in Discussion on Thursday

Work Due: Reading Response

EXPANDED BIBLIOGRAPHY/INITIAL ANNOTATIONS DUE

WEEK 10

Tue, Nov 4 Thu, Nov 6

Topic: CASE STUDY: Algorithms as cemented choices. How Ethics are embedded in tech-

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;

#4 Sidell, "Can computers be racist?"

#5 **Primary-** Kraemer, Overdahl, & Peterson, "Is there an ethics to algorithms"

Key Concepts/Key Words:

The innate politics of algorithms, repeated effect, threshold setting, automation and employment, large scale implications, embedded culture, implicit bias, Structural racism, Accountability vs Responsibility,

Framing Description:

This week we look back from the large scale systems of many computers to an element built into those computers, and other technologies, Algorithms which are in-built decisions, produce outcomes where we often don't see decisions being made. How do we account for and consider the complex effects of these elements.

Response Prompt Questions:

Algorithms piled up in complex ways are recognized as "artificial intelligence" how do the readings discuss or predict the long term impact of expanded use of digital or artificial- algorithmic decision making? Can an algorithm, due to negative effects on a group, be considered 'biased' or even Racist? Algorithms are ethical, how do Kraemer Et Al suggest we understand that ethical nature?

Assignment:

Come to Lecture On Tuesday Completed Reading Before Tuesday
Submitted Response Before Tuesday Afternoon Quiz (Unit Reading) In Class On Tuesday
Participate in Discussion on Thursday

Work Due: Reading Response

FINAL DEADLINE ANNOTATIONS, Initial SOURCES AND EXPLANATION OF RESEARCH

WEEK 11

Tue, Nov 11 *& Thu, Nov 13

Topic: CASE STUDY: Medical Techs Conflict between engineering and medical Ethics.

Reading:

#1 Excerpt from The Danger Within Us by Jeanne Lenzer;

2 Groeger, "How does the FDA monitor your medical implants"

3 – Fox, "Black children receive less pain meds"

4 – Rosenthal, "Paying till it hurts, a case study in high costs"

5 – "The Lesson of Epipens, why drug prices spike again and again"

Key Concepts/Key Words:

Medical Ethics, Nonmaleficence, beneficence, Informed Consent, Medical-Authority, Implicit Bias; Medicine vs Engineering, Exigency, Demand vs Urgency, time-scale,

Framing Description:

One of the key realities of design in engineering is that the obligation of the profession isn't in a rush, to do safe and excellent design may take long research, and the nature of engineering therefore doesn't stem from an innate urgency. Design a better thing this year, or next year it will still be useful. BUT in medicine, every minute is a sick person getting sicker, every day could be another death, the nature of Urgency, or exigency, the situational demand to act is different, therefore the ethical systems are different. This week we consider how the two different systems, different exigency, change how ethics works, and we'll talk about how Biomedical engineering and medical product design gets complicated as a result.

Response Prompt Questions:

How should engineers handle demands when there isn't real exigency, should it change the ethical evaluation of the actions of companies demand for speed? How can Biomedical Engineering and medical product design improve their ethics? What is the nature of Regulation and structural decision making around the issues this week as relayed in the articles?

Assignment:

Come to Lecture On Tuesday	Completed Reading Before Tuesday
Submitted Response Before Tuesday Afternoon	Quiz (Unit Reading) In Class On Tuesday
Participate in Discussion on Thursday	

Work Due: Reading Response

WEEK 12

Tue, Nov 18 Thu Nov 20

Topic: What is "Liability": Not Ethics, American Law and Engineering Decision making.

Reading:

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

Key Concepts/Key Words:

Negligence, elements of Liability, Legal Responsibility, Tests of liability, Predictability, Statute of Repose, Statute of Limitations, Cause of harm, Causal link.

Framing Description:

Liability isn't ethics, it isn't even friendly with ethics, it's main use is to justify and permit bad ethical acts, but your boss will think it is more important than ethics in many cases so we talk about it. Liability is the system in American/Western law that says when someone is responsible to 'fix' or remedy harm, usually with money, and therefore it offers a formal and visible system of accountability if not responsibility- with the goal of decreasing harms, limiting bad actions, and fixing or repairing the harms that have already occurred. It doesn't do any of that well- In part because it doesn't actually ask what right action is, it assumes harm is wrong, and that harms can be fixed with money, just like in the Pinto case.

Response Prompt Questions:

Please don't think of Liability as Ethics, right? You see the difference? What is the difference between traditional and Strict liability and why does it matter? How do you see the core issue in one of the secondary articles?

Assignment:

Come to Lecture On Tuesday	Completed Reading Before Tuesday
Submitted Response Before Tuesday Afternoon	Quiz (Unit Reading) In Class On Tuesday
Participate in Discussion on Thursday	

Work Due: Reading Response

END OF WEEK (FRIDAY NOV 21st) DRAFT CONCEPT OUTLINE OF BASIC PAPER DUE & ADDITIONAL BIBLIOGRAPHY (Works to be Cited) with Notes.

NOTE----- PROFESSOR WILL BE AWAY AT A CONFERENCE ON Nov 20, STUDENTS WILL BE ASKED TO MEET AS USUAL TO WORKSHOP THE BIBLIOGRAPHY AND PROJECT- FURTHER DETAILS WILL BE PROVIDED – BUT NO DISCUSSION

WEEK 13

Tue, Nov 25 (TECHNICALLY THURSDAY CLASSES MEET) (Note Wed Nov 26 Friday Classes Meet)

Thu, Nov 27- THANKSGIVING – NO CLASSES-

SHORT WEEK MEANS COME PREPARED EXTRA ATTENTION TO READINGS & RESPONSE

Topic: RESEARCH PROJECT DISCUSSION & WORKSHOP (NO NEW READINGS THIS WEEK)

Work Due: Bring your Work up to date on Project Ready for in class workshopping

WEEK 14

Tue, Dec 2 STUDENT RESEARCH PRESENTATIONS

Thu, Dec 4 STUDENT RESEARCH PRESENTATIONS

Work Due: STUDENTS Should be meeting with Professor and finalizing their paper.

******Mon Dec 8th: EXAM- 2 (CASE STUDY ANALYSIS) TAKE HOME DISTRIBUTED THURSDAY 12/4 AFTER CLASS STUDENTS WILL NEED TO SUBMIT THE COMPLETED EXAM Before CLASS Tuesday Dec 9th.**

FINAL WEEK OF CLASSES- WEEK 15

Tue, Dec 9 Topic: END OF SEMESTER WRAP UP & REVIEW SESSION IN CLASS Q& A

FINAL PROJECT- COMPLETED PAPER AND SUPPLEMENTAL DOCUMENTATION ARE DUE SUBMITTED 12/11 before end of semester Unless otherwise granted permission, extension Until 12/13 available.

FINAL EXAM- * IN-CLASS PROCTORED PORTION OF EXAM WILL BE IN THE ASSIGNED PERIOD OF EXAM WEEK- DATE TO BE ANNOUNCED BY REGISTRAR'S OFFICE.**

CALENDER DATES

Sept	1	Labor Day. University Closed
Sept	2	First Day of Classes
Sept	8	Last Day to Add/Drop a Class
Sept	8	Last Day for 100% Refund, Full or Partial Withdrawal
Sept	9	W Grades Posted for Course Withdrawals
Sept	15	Last Day for 90% Refund, Full or Partial Withdrawal - No Refund for Partial Withdrawal after this date
Sept	29	Last Day for 50% Refund, Full Withdrawal
Oct	2	Wellness Day (Classes don't meet)
Oct	20	Last Day for 25% Refund, Full Withdrawal
Nov	10	Last Day to Withdraw from Classes
Nov	25	(Tuesd) Thursday Classes Meet
Nov	26	(Weds) Friday Classes Meet
Nov	27	Thanksgiving Recess Begins. No Classes
Nov	30	Thanksgiving Recess Ends
Dec	11	Last Day of Classes
Dec	12	Reading Day
Dec	13	Saturday Classes Meet
Dec	14	Final Exams Begin
Dec	20	Final Exams End
Dec	22	Final Grades Due

September 2025

1	Labor Day	United States
5	Mawlid: (Prophet's Birthday)	Muslim
22-24	Rosh hashanah	Jewish
27	Ganesh Chaturthi	Hindu
22	Mabon (autumn equinox)	Pagan
22	Navaratri (begins)	Hindu

October 2025

1	National Day	China
1-2	Yom Kippur	Jewish
2	Navaratri (ends)	Hindu
2	Dussehra	Hindu
6-13	Sukkot	
14-15	Shemini Atzeret / Simchat Torah	Jewish
6	Mid-Autumn Festival	lunar
20-21	Diwali	Hindu
22	Birth of Báb	Bahá'í
26	National Day	Austria
28	Ochi Day	Greece
31	Halloween	United States

November 2025

1	All Saints' Day (Hallowmas, All Hallows')	Christian
1	Samhain	Pagan
2	All Souls' Day	Christian
2	Daylight saving time ends	United States
11	Veterans Day	United States
15	Christmas Fast (begins)	Christian
17	Polytechneio	Greece
26-27	Ascension of Abdu'l-Bahá	Bahá'í
27	Thanksgiving	United States

December 2025

3-24	Advent (begins)	Christian
8	Bodhi Day	Buddhist
12	Our Lady of Guadalupe (feast day)	Christian -
14-22	Chanukah	Jewish
16-24	Las Posadas (begins)	Christian Mexico

(TLDR- Be Reflexive, Preread, Framing, Intentional Skimming, Change habits)

This class is based around the idea that reflexive process, trying to think about better ways to do things, makes better outcomes more likely.

So, you can get the end result you wish more of the time if you've paused and thought about and tried to do things correctly, and what is correct isn't always exactly the same. Sometimes you have to skim, sometimes you can't skim. Skimming is reading parts and not all of a reading, and it can be a useful strategy, but it isn't always appropriate. While we want to balance the amount of effort, with the available time, and the requirement, there may be a basic demand that we do all the reading, and if we don't we're sacrificing something we have an obligation to do. That may be the right choice in a context or circumstance, but if you do it, you accept the consequences.

I'm actually dyslexic. And when I was in graduate school that meant that there were times I needed to spend an excessive amount of time working through a reading. And there were times I chose not to spend the time to do a close reading, but in those cases I accepted I might not do well in the class. The challenge isn't always doing everything correctly, the real issue is accepting the consequences that you produce by not doing everything correctly. Some of my classmates thought it was crazy that I'd work towards a B, not towards an A, but I worked hard to know my limits and do the best I could within the limitations. You don't always have to get an A, and you don't always have to do every piece of work. The nature of decisions is complicated.

So the first thing about reading, is:

Be Reflexive about Process, Develop Tactics: You are still learning different ways to read, and now you when you do it, be conscientious and choose how you want to read. Keep going back over how you're reading, try to find mechanisms that work for you. And sometimes the mechanism will need to change as consequence of circumstances/context.

The second thing about reading is:

You should be working on **Active Learning:** reading isn't listening to a story or passing your eyes over words; it is engaging with the words and ideas.

Not every time you read something is meant to be close reading. Skim something, then go back and close read parts? Fine. Skim and then call that good enough because you understand it. Fine. Did you really understand it? Not actually? Then go back and close read parts now.

Lei Et al. : "Students must learn to adjust their speed and style of reading to their reading objectives and the type of materials to be read... Some reading materials can be scanned, skimmed through, and read lightly, while others must [be] read closely and critically" (pg 40). Lei, S. A., Rhinehart, P. J., Howard, H. A., & Cho, J. K. (2010) Strategies for improving reading comprehension among college students. *Reading Improvement*, 47 (1), 30-42.

Of course the most obvious difference between modes or ways of reading is how much of the depth and detail of the reading you're trying to capture or take-in. We are trying not to have wasted efforts or produce unintended outcomes, but also we are trying to learn as much as we can, and in particular to learn what it is we need to learn. What the purpose of the reading, as an activity is, helps us decide how to read it.

You may not have to read all the articles with equal care, because you are willing to sacrifice some of the information, by your choice. In general, you should try to read all assigned material, but the reality is we all work within a context of limitations and decisions. That means we do have to make careful decisions.

Okay, first the bad news:

The reality is, part of the issue with long readings taking a while to read is that you're not used to long readings. I assigned Long readings, that contain a lot of information. There isn't anything to fix that besides practice. The practice won't make them shorter, but it will help you feel less frustration.

Additionally, everyone's reading speed and comprehension will be greater with more familiar content. The reality is that if you're "spending time" trying to understand the work it should be slower, so you will take longer to read material which is new to you.

You will have to spend time and effort to read and to understand the new material.

Cognitive scientists who study reading have shown that people reading familiar things tend to actually be skimming, they are finding the signals that the material is what they *EXPECT* and that counts as the main part of their reading. Even when pleasure reading, people rely on familiar clues, frames and tropes, so that they don't spend time really reading the details of the text they are running their eyes over.

This unintentional habit of skimming is even more pronounced on screen than on hard-copy/paper tends to mean that long form reading and new material/unfamiliar forms of reading, are an even bigger challenge on screen. Because we're so used to going fast online/on-screen, truly reading everything, or deep/close reading on screen as opposed to reading hard-copy on paper is especially likely to be a challenge, or result in not comprehending/absorbing the material.

Despite the limitations of reading that on-screen reading can increase, we're generally not able to decide to do our school reading all on-paper in hard-copy. The amount of paper, the inconvenience of the printing, the cost of the books, and so many other factors shape the situation to make it more likely, and possibly still desirable to read online, on-screen. Because we all have a limited amount of time to do the readings the convenience of distributing and reading online may balance out for the problems, if we can

take a moment to deal with them. In some cases the skimming may be acceptable. In other cases, we need to force ourselves to slow down, work against habit, and build new reading habits that respond to the limitations of how our brains and screens work. So we have two big issues here in a class like this, 1) you're reading very unfamiliar material in most cases, and it isn't good to apply your expected ways to read, and your prior experience/knowledge, which would speed it up- because applying those ideas means you won't understand the new thing properly.

Also 2) You're in a situation where speed and convenience make reading on screen necessary, so you're going to have a harder time reading longer things, and you're going to understand and absorb less because we select the form of media that is online.

You cannot avoid these two problems, but you can minimize the harm of these aspects. The best ways to respond to the problems: Do the right kind of reading, and use techniques that work for you to get the most out of your reading. So what I urge you to do is make a careful decision with each assignment - what sort of reading is it, how much time you have, and how to read it.

PRE-READING/FRAMING

Before you start reading, consider how to read it, what the reading/text is, and why you're reading it. For example the syllabus implies, and the first lecture explains that the first two units of the Ethics class are the core 'theory' that you'll be using to read all the rest of the cases and with which you'll consider all the other ideas of the class. So that suggests you want to spend extra time on those to make sure you get the main ideas, and understand what theory they ask you to think about.

Similarly, core definitions and vocabulary, which will both appear in other readings, and is the subject of the class, often cannot be skimmed or skipped without missing something important, so you're asking what kind of reading to do, based on what kind of text/reading is the thing you were assigned? There isn't really one specific set of categories for that. Instead what you'll do is ask a series of questions, including:

- Is the article structured so that it is easy to read, or will it be difficult?
- Is the article something I'm familiar with or totally new to me?
- Is this article providing basic and fundamental information that is new?
 - Or is the text providing example/expansion/clarification of something I've already seen?
- Does the article have a lot of new words/vocabulary to slow me down?
- Does the context demand I know the details or get the general idea?
- Do I have time for a close reading, or is it not possible?

These questions don't tell you what the reading is about, and they don't capture what the reading is going to teach you - they help you decide how to read the text/article/book. And you may want to add or change those questions. You may know that your attention or habit or situation requires you to pay attention to other things. These are part of what is sometimes called "**Pre-Reading**" consideration, or "**Framing**" that is you know how to look at something. Framing is a broad concept, but metaphorically consider that you see different things through different windows, shaped differently, even if they aim at the same part of the world. You're only going to get what your frame allows.

When you're considering Framing, you're not wasting effort because you're able to make better choices about how to read, and you'll be able to get more out of your reading. If you don't know why or what the reading is, you won't know how to read it. So figure that out first:

Frame the reading:

Why are you reading? What are you trying to get from the reading? How should this particular reading be considered? Consider the situation and purpose. Think about the class or context as a whole. Ask why you'll look at it, what it is for. Look stuff up, decide on a reading Process & strategy if and how to Take Notes.

For any class, I recommend: the first Step is to look at the syllabus, listen to the lecture, check the review sheet before you do the reading.

That leverages the most material to allow that you'll a) be a bit more familiar with the contents, knowing what to expect, and b) you'll know why you're reading it to make better choices. This is sometimes called "**Pre Reading**" and it is the part of reading that happens before you begin the main reading.

Note: You could look up other techniques- such as 'SQ3R Method' an active reading strategy, the name is the five steps: Survey, Question, Read, Recall (or Recite), and Review.

After you've worked on framing you'll consider the article/text/reading itself. look at the kind of writing, and read differently depending on what style the author wrote in.

Is the language very difficult, in which case you'll need to take more time? Is the language very quick and easy, casual or colloquial, which will tend to make you go faster, and you'll miss the point but get past it quickly? How do they seem to organize it? Is it organized?

INTENTIONAL SKIMMING

Skimming works best with structured writing- Some authors are structured, they say in the intro what's to come, they introduce the topics in the sections, they use thesis sentences, and other mechanisms to make the order of ideas and the overall topic clear. With structured writers you can get the 'idea' without reading between the structural elements. For example, in some very structured pieces, you can get the broad ideas and see the connections by reading just the first and last lines of paragraphs that

designate the theses and overall form of the information. You'll need to then go back and read between the structural parts to understand the details but you can skim across a lot and then go back and read parts.

This is the core of "Intentional skimming": focus on Intro and conclusion; Titles, subtitles, headings, Chapter/section summaries, First and last sentences of sections and paragraphs, as well as any Bold/italicized words, and get a sense of what's there. Then skim specific sections again to fill in what you missed. Finally, you've gotten your sense of the shape of things, and you can select a few parts to read more closely.

CLOSE/DEEP READING

The close reading pathway is the opposite of skimming in intention, but not entirely different in goal, you want to understand the reading/text/article. But you've *Decided* to understand it you'll go through the whole thing. This is particularly important where a) the ideas are not separated out in a structured way, and therefore to see the whole, or get the idea, you need all the parts, as well as b) it is important where the material is of such importance or so new and confusing that you're going to need to deal with all parts.

Synthetic Reading/Learning vs Passive Reading/Learning,

Okay, when you take a look at the whole piece of reading all the information, you're doing one of two things. either you are seeing it as a series of pieces of information, that is often what you're doing in passive reading, you're seeing, maybe even trying to remember a number of different things, but you maybe don't see the connections between those things. Sometimes that's useful. But research shows, without serious effort to memorize, you're likely to forget a lot of what you're reading in the process of passive learning.

Without the effort to *Work* to memorize something, you're actually much more likely to absorb, understand and remember material by synthesis.

You've often been doing some of the things that help produce synthetic learning without realizing it. Particularly, many of you are in the habit of taking notes, and the reality is, most of the time you never go back and look at those notes, except to (maybe) review for an exam, and they don't help a ton with the exam, except for making it so you don't need to look at the book/articles themselves again.

In reality any note-taking you do is most useful because it forces you to do Synthetic thinking, that is thinking about the reading/text, and what it is saying, and how to make the pieces fit together into something meaningful. To take notes (or to highlight properly), you're thinking about the reading. Building your synthetic understanding, and you're asking questions of the work:

- Deciding which parts are important?
- Thinking about how to organize the ideas, how the ideas are organized in the article/text?
- Wondering what would be on the exam/used later in the class?
- Prioritizing some parts over other? Basic theory or example? Issue one or Issue two?
- How many topics are they? Or do the topics form a part of larger topics?
- Do you need to connect this to other readings?

Are there key words or vocabulary, are there ideas that don't have specific words for them?

When you take those notes, you may do it in different ways, but what you're working through is how to think about, how to make sense of the reading itself. Be intentional and reflexive about that. You're not "Just Taking Notes" you're doing part of the synthetic and active reading process.

Another time we could talk about note taking, and how to link that with research and active reading, but whatever version you choose, taking notes (Schematic list or Outlining, Concept mapping, Summary or Annotation) the main point is to work through the ideas, thus your teachers have so often told you to do it.

OKAY, so that's all for today's explanation, I'll end with a few reminders/tips:

- If you're losing focus and can't understand or remember what you're seeing on the page, stop and come back to the reading later. You're not reading if you look at words, you're reading when you are able to understand those words. Read in small batches, while taking notes, if that works better for you.
- If you're having trouble reading and processing/focusing, please consider reading aloud, not in public where you'll bug someone, but out loud, and sometimes it helps make your brain process the words.
- There are ways to get pdfs to read to you, there are ways to translate languages (never great) but if you're having trouble, it is better to experiment with ways to read differently. Don't "Bang your head against the wall." Try something different, take a break, come back to it. Readings aren't a punishment.
- Take notes as you go, as a way to process what you're reading, not as a way to memorize, write what's important, don't write everything.
- Distinguish structured and unstructured writing by authors, and make a note that examples and explanations often follow or precede the thing they are meant to clarify- but they aren't the goal.
- Look for the topic/article/book on google if you need material for your framing/pre-reading.
- Consider what you're trying to get out of the reading, when you get that, when you have enough, you're probably done. If you're not getting that you may need to try a different tactic/technique.

THE ANNOTATION TEMPLATE I USE

Located here, so you can think about how to ask these questions and consider the way it suggests you look at readings. (Based on the version originally from Dr. Kim Fortune, PhD)

Annotation

Introduction:

When you are doing research you need to keep the information you gather organized, you'll read multiple sources and when you find one that seems useful you should take notes and keep track of the content so that you can refer back to it. Annotations are a formal set of notes on a text (book or article) that you use to keep track of the key details. You don't write an annotation for all the things you read – just for ones that you think will be useful. Part of the decision in writing the annotation is about putting work in ahead of time to make writing easier later, you need to decide how many quotes to type in, and how many key quotes to only write the citation for. I find it useful to type more quotes out as I read so that writing the outline and early drafts is easier later. Typing out the complete quote is particularly important if you won't continue to have access to the book.

Annotations start by asking yourself a series of questions, then writing down notes to answer those questions. The questions are useful to think about when you read regardless of whether you end up writing an annotation.

Format of the Annotation:

1) Complete Citation (Author, Date, Title, publisher, web-URL, etc. as needed so that you or someone could go back and find the text again.

2) Who wrote the article/book? Why is the source credible? What makes them trustworthy, where is the text (book or article) published, for what purpose? How was the information in it checked, such as peer-review for scientific and academic work?

3) Main Notes on key Arguments/Content:

A) What is the main argument of the text?

-Summarize in your words what the main idea of the book or article is. Don't just describe a - general subject, but what it is trying to say. If the author wrote a summary consider copying in the quotation or at least noting the page.

B) What research methods are behind this text and how is this text organized? Ways that the main argument is supported.

-How is the main argument supported? What methods and evidence are used? Where does the author get their information?

C) What quotes capture the arguments and ideas in the text?

-Note page number and write something about what makes the quote useful, or copy the quote.

D) Describe the main literatures that the text draws on and contributes to, and the particular contribution made by the text? All texts are part of conversations that are ongoing, such as newspaper articles, academic journal articles, and books. They don't stand alone. Be aware of how this text connects to – agree with- contrast other texts.

E) Explain why this book is of particular interest to you, and relevant to your research.

F)How does this text relate to other course materials in this class/ or related readings you've done?

G) Additional/Secondary Notes: Other quotations, notes, vocabulary and definitions that might be useful.

EXTRA- Notes on other sources-

Texts often mention other books or authors, at the end of the annotation keep track of other citations, and references that you should look for as part of your research.

ADDITIONAL READING LINKS:

Taken From: https://ctl.wustl.edu/learningcenter/wp-content/uploads/sites/2/2021/07/Reading-Strategies_TLC_2020.pdf

Further Reading:

<https://learningcenter.unc.edu/tips-and-tools/>

<http://gsi.berkeley.edu/gsi-guide-contents/critical-reading-intro/social-science/>

<http://lsc.cornell.edu/notes.html>.

<http://uaap.mit.edu/tutoring-support/study-tips/tooling-and-studying/tooling-and-studying-effectivereading-and-note-taking>.

<https://www.cornellcollege.edu/academic-support-and-advising/study-tips/reading-textbooks.shtml>

<https://student.unsw.edu.au/notemaking-written-text>

http://success.oregonstate.edu/sites/success.oregonstate.edu/files/LearningCorner/Tools/preview_read_rec_all.pdf

http://willamette.edu/offices/lcenter/resources/study_strategies/reading2remember.html

https://www.ucc.vt.edu/academic_support/online_study_skills_workshops/SQ3R_improving_reading_comprehension.html

<https://ctl.wustl.edu/learningcenter/resources/note-taking-strategies/>