

PHL 334
Engineering Ethics and Technological Practice:
Philosophical Perspectives on Engineering
New Jersey Institute of Technology
Fall 2025

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Office Hours: Monday & Friday 10:00 AM- 12:00 PM EST

Prerequisites/Co-requisites: HUM 102 with a grade of C or higher, and one History and Humanities GER 200 level course with a C or higher.

Course Description: This course presents a philosophical examination of the nature of engineering practice and applied technology. We will consider such questions as: How do the societal functions of engineers and the practical application of technologies relate to fundamental 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?

Required Text: Harris, C. E., et al. (2019). *Engineering Ethics: Concepts and Cases*, 6th ed. Cengage. Additional course materials are in each module.

Student Learning Outcomes (SLOs)

By the end of the course, students will be able to:

1. Identify ethical issues
2. Describe different ethical decision-making approaches
3. Analyze engineering ethics cases
4. Apply different ethical decision-making approaches to engineering ethics cases
5. Recognize the ethical responsibilities of engineers
6. Evaluate the broader societal and environmental impacts of engineering
7. Develop and defend positions about issues in engineering ethics

Assessment Methods

| Component | Description | SLOs Addressed | Percentage of final grade |
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| Formal Discussions | Initial post plus two substantive peer responses. initial posts must cite appropriate resources using APA 7th edition. | 1, 2, 3, 4, 5, 6, 7 | 20% |

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| Reflective Discussions and Individual Reflections | Less formal but academically rigorous engagement with peers and the self. Specific requirements and grading rubrics available on Canvas. | 1-7 | 30% |
| Quizzes/Exams | Multiple-choice, true-false, and select-all-that-apply questions covering module materials and readings. Requires Respondus LockDown Browser. | 1, 5, 6 | 25% |
| Assignments | Scaffolding writing assignments leading to a final essay, thought experiments, and analyses. Specific requirements and grading rubrics available on Canvas. | 1, 2, 3, 4, 5, 7 | 25% |

Grading Scale:

- A: 93-100
- B+: 87-92.9
- B: 83-86.9
- C+: 77-82.9
- C: 73-76.9
- D: 65-72.9
- F: 0-64.9

Course Structure and Time Commitment

- Each module begins on Monday and ends Sunday
- The following week's material will be available by Thursday
- All due dates are in Eastern Standard Time (EST)
- Plan to commit 3-8 hours weekly to this course (equivalent to face-to-face course time plus homework)
- Start each week's work early to allow time for questions and instructor responses

Detailed Course Schedule

Module 1: Introduction to Engineering Ethics

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| Module 1.1 Week 1 9/2 - 9/7 | Introduction | 1.1 Self-assessment and Survey Reflection | Sun Sep 7, 2025 @ 11:59 PM |
| | | 1.1 Self-assessment | Sun Sep 7, 2025 @ 11:59 PM |
| | | Survey | Sun Sep 7, 2025 @ 11:59 PM |
| | | 1.1 Quiz | Sun Sep 7, 2025 @ 11:59 PM |
| | | Academic Engagement Survey | Sun Sep 7, 2025 @ 11:59 PM |
| Module 1.2 Week 2 9/8 - 9/14 | Ethical Approaches to Engineering | 1.2 Formal Discussion (1 Initial Post) | Fri Sep 12, 2025 @ 11:59 PM |
| 1.2 Formal Discussion (2 Response Posts) | | Sun Sep 14, 2025 @ 11:59 PM | |

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| Module 1.3 | | | |
| Week 3 9/15 - 9/21 | Professional Code of Ethics in Engineering | 1.3 Assignment 1.3 Practice Quiz Module 1 Quiz | Sun Sep 21, 2025 @ 11:59 PM Sun Sep 21, 2025 @ 11:59 PM Sun Sep 21, 2025 @ 11:59 PM |
| Module 2: Professional Responsibility | | | |
| Module 2.1 Week 4 9/22 - 9/28 | Responsibility, Accountability and Challenges | 2.1 Formal Discussion (1 Initial Post) 2.1 Formal Discussion (2 Response Posts) | Fri Sep 26, 2025 @ 11:59 PM Sun Sep 28, 2025 @ 11:59 PM |
| Module 2.2 Week 5 9/29 - 10/5 | Engineers in Organizations | 2.2 Individual Reflection | Sun Oct 5, 2025 @ 11:59 PM |
| Module 2.3 Week 6 10/6 - 10/12 | Virtues and Values in Engineering | 2.3 Reflective Survey Module 2 Quiz | Sun Oct 12, 2025 @ 11:59 PM Sun Oct 12, 2025 @ 11:59 PM |
| Module 3: Design Ethics & Cultural Contexts | | | |
| Module 3.1 Week 7 10/13 - 10/19 | Responsibility in Design and Operation | 3.1 Formal Discussion (1 Initial Post) 3.1 Formal Discussion (2 Response Posts) | Fri Oct 17, 2025 @ 11:59 PM Sun Oct 19, 2025 @ 11:59 PM |
| Module 3.2 Week 8 & 9 10/20 - 11/2 | Cultural Diversity in Engineering | 3.2 Individual Reflection Module 3 Quiz 3.2 Stage One of Final Essay Outline | Sun Oct 26, 2025 @ 11:59 PM Sun Nov 2, 2025 @ 11:59 PM Sun Nov 2, 2025 @ 11:59 PM |
| Module 4: Environmental & Animal Ethics | | | |
| Module 4.1 Week 10 11/3 - 11/9 | Engineering and Environmental Ethics | 4.1 Formal Discussion (1 Initial Post) 4.1 Formal Discussion (2 Response Posts) | Fri Nov 7, 2025 @ 11:59 PM Sun Nov 9, 2025 @ 11:59 PM |
| Module 4.2 Week 11 11/10 - 11/16 | Human Engineering and Animal Ethics | 4.2 Individual Reflection Module 4 Quiz | Sun Nov 16, 2025 @ 11:59 PM Sun Nov 16, 2025 @ 11:59 PM |
| Module 5: Future Challenges | | | |

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| Module 5.1 | | | |
| Weeks 12 & 13 | Future Challenges for Engineers | 5.1 Formal Discussion (1 Initial Post) | Fri Nov 21, 2025 @ 11:59 PM |
| 11/17 - 11/30 | | 5.1 Formal Discussion (2 Response Posts) | Sun Nov 23, 2025 @ 11:59 PM |
| Module 5.2 | | | |
| Weeks 14 & 15 | Wrap-up and Review | 5.2 Reflective Discussion (1 Initial Post) | Sat Dec 6, 2025 @ 11:59 PM |
| 12/1 - 12/11 | | 5.2 Reflective Discussion (1 Response Post) | Sun Dec 7, 2025 @ 11:59 PM |
| | | 5.2 Stage Two Final Essay | Sun Dec 7, 2025 @ 11:59 PM |
| | | 5.2 Quiz | Sun Dec 7, 2025 @ 11:59 PM |

Reading Requirements: This course requires a great deal of intellectual and philosophical ground to be covered. The readings form the basis of all other course activities. Students must carefully complete all readings before contributing to discussion forums or engaging in other course activities.

Due Dates: All assignment due dates are clearly indicated in this syllabus, on the Course calendar, and directly attached to each assessment within the course. It is your responsibility to be aware of these deadlines.

General Submission Principles: To maintain a consistent learning environment and assessment standard, rewrites or resubmissions of previously graded work are not permitted in this course. Opportunities for extra credit will not be provided. Focus your efforts on excelling in the established coursework.

Late Submission Policy: Timely submission of all coursework is expected. Late submissions will be subject to the following deductions:

Discussions:

- Initial and response posts submitted after the stated deadline but **within the current module week (by Sunday at 11:59 PM EDT)** will incur a **10-point deduction**.
- Posts submitted **after the module week closes** will be accepted with a **25% deduction from the earned score**.

Assignments and Quizzes:

- Work submitted **1-2 days late** will incur a **10-point deduction**.
- Work submitted **3 or more days late** will incur a **25% deduction from the earned score**.
- **No assignments will be accepted after the final day of class.** This is a strict deadline for all coursework.

Mandatory Submission Comment for Late Work: For any late submission (Discussions, Assignments, or Quizzes), you **must** leave a "submission comment" in the Gradebook to notify me that you have submitted work late. This is necessary due to the way Canvas displays submissions; late work does not always automatically appear in the "Needs Grading" queue. Your comment is essential to ensure your work is noted for grading. If the instructor is not notified of late work via the required "submission comment," the instructor cannot guarantee that the late work will be graded.

Grading of Late Submissions: Assessments submitted late will be graded at the instructor's earliest convenience. Please understand that an immediate turnaround on late grading cannot be guaranteed, and your patience is greatly appreciated.

Academic Integrity

Academic Integrity is the cornerstone of higher education. Cheating is strictly prohibited and devalues your degree. All instances of academic misconduct will be reported to the Dean of Students Office (dos@njit.edu). Potential consequences include a failing grade for the assignment or course, and/or suspension or dismissal from the university.

For more information: <http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>

Turnitin and Plagiarism

- All discussions and assignments will be automatically submitted to Turnitin
- Keep plagiarism similarity scores under 30%
- Similarity scores of 30% or more will be scrutinized for plagiarism
- Write in your own words, appropriately citing paraphrases and quotes using APA style
- Any tampering with TII's ability to detect similarity or AI-generated content will result in grade adjustments and penalties, along with an AIV report, as per university policy.

Use of AI Tools

Generative AI tools such as ChatGPT, Bard, Copilot, GrammarlyGo, Adobe Firefly, and Quillbot are not permitted for any coursework. All work must be independently created by the student. Using AI-generated content will be treated as plagiarism, with the following enforcement:

- Any assignment with a Turnitin AI report indicating 20% or more AI-generated content will be investigated
- Violations may result in grade re-evaluation adjustments on previously submitted and scored assignments and penalties per university policy
- When using Grammarly, only use spelling and basic grammar features

Respondus LockDown Browser

- Required for all quizzes and exams
- Download at: <https://ist.njit.edu/respondus>
- Restricts access to other websites, applications, or communication tools during assessments
- Violations may result in a zero on the assessment and referral to the academic integrity board
- Questions or problems can be submitted via web form by going to: <https://servicedesk.njit.edu> and clicking on the "Report your issue online" link. You may also call the IST Service Desk with any questions at 973-596-2900.

Technology Requirements

- Processor: Intel or AMD 2.0 GHz processor (Intel Dual Core 2 Duo recommended)
- Memory: 2 GB RAM minimum (4 GB recommended)
- Internet: Broadband connection (DSL, cable, or T1)
- Software: Microsoft Office and Adobe Acrobat Reader
- Regular virus scans and Windows updates
- Respondus LockDown Browser (no camera use for monitoring required)

Regular and Substantive Interaction

As your instructor in this online course, I will be actively working in the course at these times each week:

- Grading/Feedback: Mondays/Wednesdays, 9:00-11:00 AM - Grading and providing feedback
- Announcements: M-F, 9:00-10:30 AM - Posting announcements with general feedback on prior module
- Discussion Boards: Thursdays, 9:00-10:30 AM
- Email Response Time: 24-48 hours on weekdays, up to 48 hours on weekends
- Assessment Grading Feedback: Typically, within one week of the due date.

- Office hours: M & F, 10:00am-12:00pm

Attendance

- Is automatically registered by your completion of the Academic Engagement Survey
- Each student is responsible for their attendance and communicating that attendance to the instructor.
- The instructor bears no responsibility for informing students of their progress or missing work.

Disability Accommodations

By Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990, the university strives to ensure equal access to education. If you require academic accommodations due to a disability, please contact the disability support office.

Student Code of Conduct

Students are expected to respond and write professionally and appropriately. Inappropriate or harmful language will not be tolerated and could result in disciplinary measures and a failing grade for the class.

Content Warnings

This course may explore sensitive topics including death, injury, cultural differences, and oppression. If you're a trauma survivor and encounter triggering content, please prioritize your well-being. Options include requesting alternate assignments or speaking with a university therapist. Campus resources include the Student Health Department and Dean of Students Office.

Religious Observances

Students who wish to observe religious holidays during scheduled class meetings should request reasonable consideration by the end of the second week of the course.

Course Evaluation

Students are expected to complete the standard evaluation instrument as part of the ongoing revision of this course and instructional competence.

Non-Discrimination Statement

The University prohibits discrimination and harassment against any member of the University Community because of their race, color, religion, national origin, sex, sexual orientation, gender identity, pregnancy, ancestry, age, disability, genetic information, veteran status, or any other legally-protected class.

Student Health and Well-Being

You may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating, and lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The University is committed to advancing its students' mental health and well-being.

This syllabus is subject to change. Students will be informed of any substantive changes that may occur.