Computing & AI Ethics 🤖

PHIL 1150-71 | Spring 2026

Course Information

Instructor: Brendan Shea, Ph.D.
Email: Brendan.Shea@rctc.edu
Phone: 507-722-1146
Office: M2403Q
Office Hours: TBA

Class Format: Online
Class Zoom Link: See D2L.

Prerequisites: None (However, this is a college-level class, so you should be comfortable with reading college-level texts and writing responses to these. See below for more details.)

Course Description 📖

In a world increasingly reliant on technology, the ethical implications of computing and artificial intelligence (AI) are more relevant than ever. This course seeks to bridge the gap between technology and ethical inquiry, providing students with the tools to critically evaluate and address ethical dilemmas in various domains of computing, AI, and data science. The course covers a wide range of topics, from fundamental ethical theories to futuristic considerations in AI ethics. Topics include the history of computing, AI and machine learning basics, data privacy, algorithmic bias and fairness, surveillance, security, employment in the age of AI, bioethics in computing, ethics in video games and virtual reality, AI ethics in science fiction, and future policy and design considerations.

Course Content and Learning Outcomes 🎯

Major Content Areas

1. Basic ethical theories and principles
2. The Trolley Problem and other ethical dilemmas
3. History and Evolution of Computing
4. The Basics of AI and Machine Learning
    a. How AI works
    b. Ethical challenges specific to AI
5. Ethics and Data Privacy
6. Algorithmic Bias and Fairness
    a. Racial, gender and other sorts of bias

   b. How to make algorithms fairer

7. Surveillance and Security

   a. Government surveillance vs. individual privacy

   b. Ethical hacking

8. Automation and Job Loss

9. Bioethics and Computing

10. Ethics in Video Games and Virtual Reality

    a. The impact of virtual worlds

    b. Representation of race and gender gaming

11. AI Ethics in Science Fiction

    a. Exploring ethical issues through fictional examples

    b. Case studies (e.g., Asimov's Laws)

12. The Future of Computing and AI Ethics a. Policy and regulations b. Ethical AI Design

Learning Outcomes (General)

The student will be able to:

1. Identify and critically evaluate major ethical theories and principles, and apply them to a range of ethical dilemmas, such as the Trolley Problem.
2. Understand the history and evolution of computing from its earliest forms to present-day technologies, recognizing ethical considerations at each stage.
3. Explain the basics of how AI and machine learning work, and identify the ethical challenges specific to AI, including potential bias and fairness issues.
4. Discuss the concept of data privacy and be able to assess ethical considerations surrounding the collection and usage of personal data.
5. Identify discuss instances of bias in algorithms and propose methods for making algorithms fairer and more equitable.
6. Explain the implications of government surveillance versus individual privacy and be able to engage in debates about ethical hacking and cybersecurity.
7. Analyze the impact of AI and automation on employment and the gig economy, identifying both opportunities and ethical considerations.
8. Evaluate the ethical implications of using computing technologies in healthcare and bioinformatics, including issues around medical data and informed consent.

9. Recognize the ethical implications of video games and virtual reality, including issues related to representation, violence, and impact on behavior.

Learning Outcomes (Minnesota Transfer Curriculum)

Goal 6 - The Humanities (Arts, Literature, and Philosophy)

The student will be able to:

1. Understand those works as expressions of individual and human values within a historical and social context.
2. Respond critically to works in the arts and humanities.
3. Articulate an informed personal reaction to works in the arts and humanities.

Goal 9 - Ethical and Civic Responsibility

The student will be able to:

1. Examine, articulate, and apply their own ethical views.
2. Understand and apply core concepts (e.g. politics, rights and obligations, justice, liberty) to specific issues.
3. Analyze and reflect on the ethical dimensions of legal, social, and scientific issues.

RCTC Core Outcomes

This course contributes to meeting the following RCTC Core Learning Outcome(s):

- **Critical Thinking,** Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.

Required and Recommended Course Materials

- All material (videos, reading, etc.) will be made available free online.
- This course will require that you have reliable, regular internet access.

Grading and Course Policies

Grading Scale

- **A:** 90.0 and above
- **B:** 80.0-89.9
- **C:** 70.0-79.9
- **D:** 60.0-69.9
- **F:** Below 60.0

Grade Breakdown

Your final grade is a weighted average of the following:

Lectures, Readings, and Quizzes on Perusall (30% total). You'll receive credit for engaging with lectures and case studies on www.perusall.com. Grading is based on a combination of (1) time spent actively working on the assignment, (2) number and quality of comments, and (3) score on the final quiz.

Midterm and Final Exams (50% total). These are the exams for the course. You'll have two hours to complete each. You'll need a computer with a **webcam** to take these.

Presentation (20% total). Near the end of the semester, you'll be designing and delvering your own 20-minute "lesson" on a topic related to AI and Computing Ethics.

Plagiarism and Academic Integrity ⚖️

Your work should be your own---please don't use your classmates, friends, parents, internet sites, etc., to help you write your papers or answer test questions. And when you do use outside sources, make sure to give appropriate citation and acknowledgment for any words, ideas, or arguments. If the preponderance of the evidence suggests cheating has occurred (that is, if the evidence indicates that this is *more likely than not*), you may receive a failing grade for the assignment (at minimum) or class as a whole.

Policy on Generative AI 🤖

I encourage you to use generative AI (ChatGPT, Gemini, Bing, Claude, etc.) to help you understand class content when needed (and mastering these tools will be important to almost any career path), and to work on your own projects (I've used it in my own projects, including for this course!). However, the use of generative AI is **ABSOLUTELY FORBIDDEN** when it comes to answering questions on exams.

Attendance 📆

Students in face-to-face classes should attend class regularly, while online students are expected to participate in class discussions and activities. If you miss more than 1/3 of the total class sessions (and/or class assignments), you may receive a failing grade of FW. This may endanger your ability to receive financial aid. You are responsible for withdrawing from the class if you decide not to continue. I am willing to make exceptions if circumstances require, but you must let me know about these promptly.

Using Perusall 📝

Perusall is a digital platform that we're using to enhance your learning. It allows you to collaboratively annotate readings and engage with your classmates and me. The goal is to make reading more interactive and to deepen your understanding of the material.

You'll access Perusall through links provided in our D2L-Brightspace course. Once you click on these links, you'll be directed to the readings assigned for our class.

For each reading, you'll need to post annotations. These can be questions, comments, replies to comments of others, or reflections. Make sure to read others' annotations, too, and respond when you can. This is part of your active participation.

Policy on Late Work ⏰

Please read the following *before* emailing me to request an extension on an assignment.

If you miss a quiz or activity due to a brief sickness, work conflict, class trip, computer malfunction, wedding, auto problem, court date, funeral, sporting event, etc., you do NOT need to email me (though it's okay if you want to give me a heads up). Here are my policies for making up missed or late work:

Perusall reading assignments can be submitted up to two days late for reduced credit. Credit declines "linearly" (basically, if you submit it one minute late, you get 99.9% of the credit; if you submit it 1.5 days late, you'll get almost no credit).

Exams cannot be taken late without explicit permission from me, and should be for a good reason; late exams (if allowed) will receive reduced credit.

I will make exceptions to these policies if you can demonstrate a genuine need. Please talk to me if anything comes up that is preventing you from succeeding in class.

Getting in Touch with Me 📧

The best way to get ahold of me is by email, which I will aim to respond to within ONE working day (for simple questions) or TWO working days (for more complex ones). I don't generally check email on the weekends or holidays. If you don't hear from me by then, please try emailing me again. To help me provide you with quick, effective feedback, here's a general template for what I expect in an email.

Course Calendar 🗓️

The course schedule will be posted on D2L. Here is an overview of the topics we'll be covering week-by-week:

- Week 1 - Syllabus
- Week 2 - Lecture 1: Intro and History
- Week 3 - Lecture 2: Technology and Virtues
- Week 4 - Lecture 3: Free Speech Online
- Week 5 - Lecture 4: Owning Ideas
- Week 6 - Lecture 5: Digital Cash
- Week 7 - Lecture 6: Surveillance
- Week 8 - Exam 1
- Week 9 - Lecture 7 - What is AI?
- Week 10 - Lecture 8 - AI and the Future of Work and Art
- Week 11 - Lecture 9 - Enviromental and Social Impact of AI
- Week 12 - Lecture 10 - AI and the End of the World
- Week 13 - Lecture 11 - Robot Rights and the Moral Status of AI
- Week 14 - Lecture 12 - Games and Ethics
- Week 15 - Exam 2
- Week 16 - Work on Project

RCTC Common Policies ⚖️

This course will be taught in accordance with the following policies, which apply to ALL RCTC courses. If you have any questions about these, please let me know!

Academic Integrity Statement The primary academic mission of

Rochester Community and Technical College (RCTC) is to provide quality learning opportunities for students. Acts of academic dishonesty undermine the educational process and the learning experience for the student and our college community. It is the responsibility of the student to complete their academic requirements with integrity and not engage in acts of cheating, plagiarism, or collusion. The College expects that students are submitting work and materials that reflects their individual learning and efforts within their course, program, and college academic requirements.

It is expected that RCTC students will understand and adhere to the concept of academic integrity and to the standards of conduct outlined within this policy. Students who are found to have engaged in an act of academic dishonesty may face academic sanctions through the Academic Integrity Procedure and non-academic misconduct sanctions through the Code of Student Conduct.

Americans with Disabilities Act Rochester Community and Technical

College is committed to ensuring its programs, services and activities are accessible to individuals with disabilities, through its compliance with state and federal laws, and System Policy. Appropriate accommodations are provided to those qualified students with disabilities. If you believe you qualify for an academic accommodation, please contact the Director of Disability Support Services, Travis Kromminga at 507-280-2968 or through the Minnesota relay TTY 1-800-627-3529. The office can also be reached via e-mail at travis.kromminga@rctc.edu.

Military Friendly Statement Rochester Community and Technical

College (RCTC) is a military friendly campus, pledging to do all we can to help military veterans transition into college to complete their educational goals. RCTC is proud to serve and honor our veterans and military service members and their families. Through the Veterans Resource Center, RCTC offers student veterans an on-campus point of contact with other veterans, and program information to assist them in making a successful transition into college. For assistance, students are encouraged to contact the Veterans Assistant Coordinator, Mark Larsen, at 507-779-9375 or e-mail at mark.larsen@state.mn.us, or Othelmo da Silva, RCTC's VA certifying official at 507-285-7566 or email at VeteranServices@rctc.edu.

Title IX Statement Title IX of the Education Amendments of 1972

states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance." Today, Title IX ensures that sex-based discrimination, including that related to pregnancy/parenting, sexual orientation, and gender identity, is responded to promptly and effectively with a fair, transparent, and reliable process.

Anyone who believes there has been an act of discrimination, harassment, or violence on the basis of sex against any person or group in a college-sponsored program or activity may file a complaint through the reporting form to the Title IX Coordinator, Dr. Teresa Brown. The coordinator may also be reached via email at titleix@rctc.edu or phone at 507-285-7217.

Pregnant and parenting students may reach out to the Title IX Coordinator to learn of their rights and available support. They may use the contact information above or submit a request via this form.