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CSCI 315E.01: Computers, Ethics, and Society

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CCSCI 315E.01 Computers, Ethics, and Society Spring 2022

Course Instructor: Dr. Cheyenne Laue

Contact: Cheyenne.laue@mso.umt.edu

Office Hours SS 206: Thursday 8-9

Office Hours MC 412: Wednesday 11 -12

Office Hours Zoom: Tuesday 3-4, By appointment

Course Objectives

This course introduces the basics of ethical reasoning and argumentation as a basis for understanding the ethical dilemmas faced by computer scientists. Students are introduced to the professional code of ethics used by computer scientists, legal issues involved in technology, and the social implications of computers, computing, and other digital technologies.

During this class, you will:

- Understand, identify, and apply different ethical philosophies, frameworks, and methodologies.
- Identify and interpret the codes of professional conduct relating to the disciplines of computer science and software engineering.
- Analyze the local and global impact of computing on individuals, organizations, and society.
- Understand and apply the concepts and principles of moral thinking to problems relating to computing and digital technologies.
- Improve your skills writing argumentative essays and pieces, and in critical thinking, analysis, and presentation.
- Become familiar with a number of noteworthy essays written by influential researchers in the field of cyber ethics.

This class also satisfies the UM upper-division writing requirement. Writing objectives are as follows:

- Identify and pursue more sophisticated questions for academic inquiry
- Find, evaluate, analyze, and synthesize information effectively from diverse sources
- Manage multiple perspectives as appropriate
- Recognize the purposes and needs of discipline-specific audiences and adopt the academic voice necessary for the chosen discipline
- Use multiple drafts, revision, and editing in conducting inquiry and preparing written work
- Follow the conventions of citation, documentation, and formal presentation appropriate to that discipline
- Develop competence in information technology and digital literacy

Course Policies Academic Integrity

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by The University. All students need to be familiar with the Student Conduct Code. [The Code is available for review online.](#) During this course we will discuss ethical issues and topics that may be sensitive in nature for some students. All students are

expected to maintain a respectful attitude towards diverse opinions and perspectives during class discussions and interactions.

Disability Accommodation

Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Please contact us after class or in one of our offices. Please be prepared to provide a letter from your DSS Coordinator. For more information, visit the Disability Services website at <http://www.umt.edu/dss/> or call 406.243.2243 (voice/text)

Changes to Syllabi

The instructor reserves the right to modify syllabi and assignments as needed based on faculty, student, and/or environmental circumstances. If changes are made to the syllabus, amended copies will be dated and made available to the class.

Course Text

There is no required course text. All readings will be provided as links to online sources or as pdfs on the course Moodle Page. Please note that some of these readings may not be free. However, the objective of the instructors is to keep materials costs low. In general readings should be available online for a reasonable price or through the UM Mansfield Library.

Grading and Assessment

Pre-class assignments are due prior to each class meeting time in order to ensure that students have completed assigned course materials and are prepared for class discussions. These assignments require short, informal writing based on readings, videos, and other assigned course content.

Analysis reports provide students with the chance to investigate important course topics more carefully and allow opportunities to improve formal writing skills and formatting techniques. The analysis reports are due every other Sunday of the course and require logical discussion of a topic drawn from course materials that week. Students will be provided with detailed feedback on these papers, which they will use to revise prior to resubmission in the final portfolio.

The **Final Portfolio** asks students to assume the identity of a Chief Ethics Officer at a major technology company and to produce a report on the ethical implications of five of the company's new technologies. Students will revise their Analysis Papers and compile them into report format, including a report introduction and summary as well as appropriate formatting.

Discussion and Attendance assume that students will attend every class and will come prepared to discuss readings, case studies, and ethical theories. Students who do not demonstrate preparation prior to class may have points deducted from their attendance grade.

Assessment Item	Assessment Amount
Discussion and Attendance	20 %
Analysis Reports	35 %
Final Portfolio	20 %
Pre-Class Assignments	25%

Grading Scale
90-100% A
80-89% B

70-79% C
60-69% D
>59% F

Instructor reserves the right to add +/- modifiers as deemed necessary.

Course Topics Schedule and Due Dates

Unit 1 January 18 – 23: Introduction to ethics

Questions: Why study ethics in computer science? What are some of the significant ethical issues involving technology today?

Topics:

Class introductions

Ethics and technology overview

Assignments:

Pre-class Assignment Due: Thursday by 9 am

Unit 2 January 24 - 30: Logic and Argumentation

Questions: Is there an ethical way to argue? How does logic aid ethics? Can machines help humans avoid bias?

Ethics Topics:

Premises and conclusions, Rules and methods of discourse, Fallacies and biases

Technology Topics:

Human and algorithmic bias

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Analysis Report 1 Due: Sunday by 11:59 pm

Unit 3 January 31 – February 6: The Social Contract and the State of Nature

Questions: Are ethics essential to human society? Is the internet a commons, and how should it be accessed and regulated?

Ethics Topics:

Rousseau: Social Contract

Hobbes: Leviathan

Technology Topics:

Democracy and digital space, social media censorship

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Unit 4 February 7 - 13: Absolutism and Relativism

Questions: How can we identify and understand ethical dilemmas? Are there some universal moral truths or are ethical values time, culture, and situation relative?

Ethics Topics:

Kant: Deontology

Plato, Aristotle: Virtues

Rand: Selfishness

Arendt, Mead: Violence

Technology Topics:

Violence, Digital Violence and LAWS

Assignments: Pre-class Assignments Due: Tuesday and Thursday by 9 am

Analysis Report 2 Due: Sunday by 11:59 pm

Unit 5 February 14 - 20: Rights and Responsibilities

Questions: Who are the stakeholders in an ethical dilemma? What are our rights and responsibilities relative to technology and digital space?

Ethics Topics:

Mill: On Liberty

Kant: Duty

Technology Topics: Digital ownership, sovereignty and monopolization, right to repair

Assignments: Pre-class Assignments Due: Tuesday and Thursday by 9 am

Unit 6 February 21 - 27: Ethical Obligations and Legal Constraints

Questions: Does lawful imply ethical? How closely should personal and professional ethics correspond? How do we quantify harm and assess responsibility when harm is caused? How do ethics and laws conflict and correspond in multi-cultural situations?

Ethics Topics:

IEEE and ACM codes of conduct

Role morality

Cultural relativism

Technology Topics: Google Dragonfly, Facebook Whistleblower

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Analysis Report 3 Due: Sunday by 11:59 pm

Unit 7 February 28 – March 6: Justice and Care

Questions: How do we assess harm and benefit and distribute those equitably? How do personal connections and human emotion interact with ethical decisions?

Ethics Topics:

Aristotle, Plato, Rawls: Justice

Nodding and Gilligan: Care

Technology Topics:

Raw material and labor sourcing for tech, technology and the environment

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Unit 8 March 7 - 13: The Majority and the Least Empowered

Questions: Does ethical decision-making mean minimizing harm for the most stakeholders?

How can we protect the least empowered when we make ethical decisions, or is some harm or suffering necessary?

Ethics Topics:

Principles vs. consequences

Bentham: Utilitarianism/ Principle of Utility

Rawls: Veil of Ignorance

LeGuin: Omelas

Technology Topics: Autonomous Vehicles

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Analysis Report 3 Due: Sunday by 11:59 pm

Unit 9 March 14 - 20: Metaphysics and Morals

Questions: What characteristics are unique to the human experience and can machines help us understand ourselves more deeply? Is there a metaphysical aspect to ethics and do we need this in order to be moral beings? Can machines make ethical decisions?

Ethics Topics:

Kant: Metaphysics

Hume: Human Understanding

Haraway: Cyborg Manifesto

Technology Topics:

Generative / Creative AI, Machine Ethics

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

March 21 - 27: Spring Break

No Classes

Unit 10 March 28 – April 3: Privacy

Questions: Is privacy necessary to human morality? Should privacy be considered an inherent right?

Topics: Data collection/ brokerage, surveillance capitalism

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Analysis Report 4 Due: Sunday by 11:59 pm

Unit 11 April 4 - 10: Dignity

Questions: How can we preserve/ enhance human dignity in the face of data collection and consumer surveillance?

Topics:

Data dignity, privacy protection regulations, right to be forgotten

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Unit 12 April 11 - 17: Security

Questions: How do security and privacy overlap? Do we have to sacrifice one in order to get the other?

Topics:

Vulnerability, disclosure, hacking, cybercrime

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Analysis Report 5 Due: Sunday by 11:59 pm

Unit 13 April 18 - 24: Integrity

Questions: What is the connection between reliability, trust, and honesty in the context of computing technology?

Topics: System failures, deepfakes, blockchain, economies of trust

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Unit 14 April 25 – May 1: Autonomy

Questions: Does technology enhance or hinder human autonomy?

Possible Topics: Social robots, automation and the human workplace, Cicero's Friendship and Old Age

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am

Analysis Report 6 Due: Sunday by 11:59 pm

Unit 15 May 2 - 8: The Future

Questions: What is the future of human technology interaction? Are utopia and dystopia both possible futures?

Possible Topics: Bostrom's Paperclip Apocalypse, Moore's Utopia, Kurzweil's Singularity

Assignments:

Pre-class Assignments Due: Tuesday and Thursday by 9 am
Final Report Due: Sunday by 11:59 pm

May 9 - 13: Finals Week