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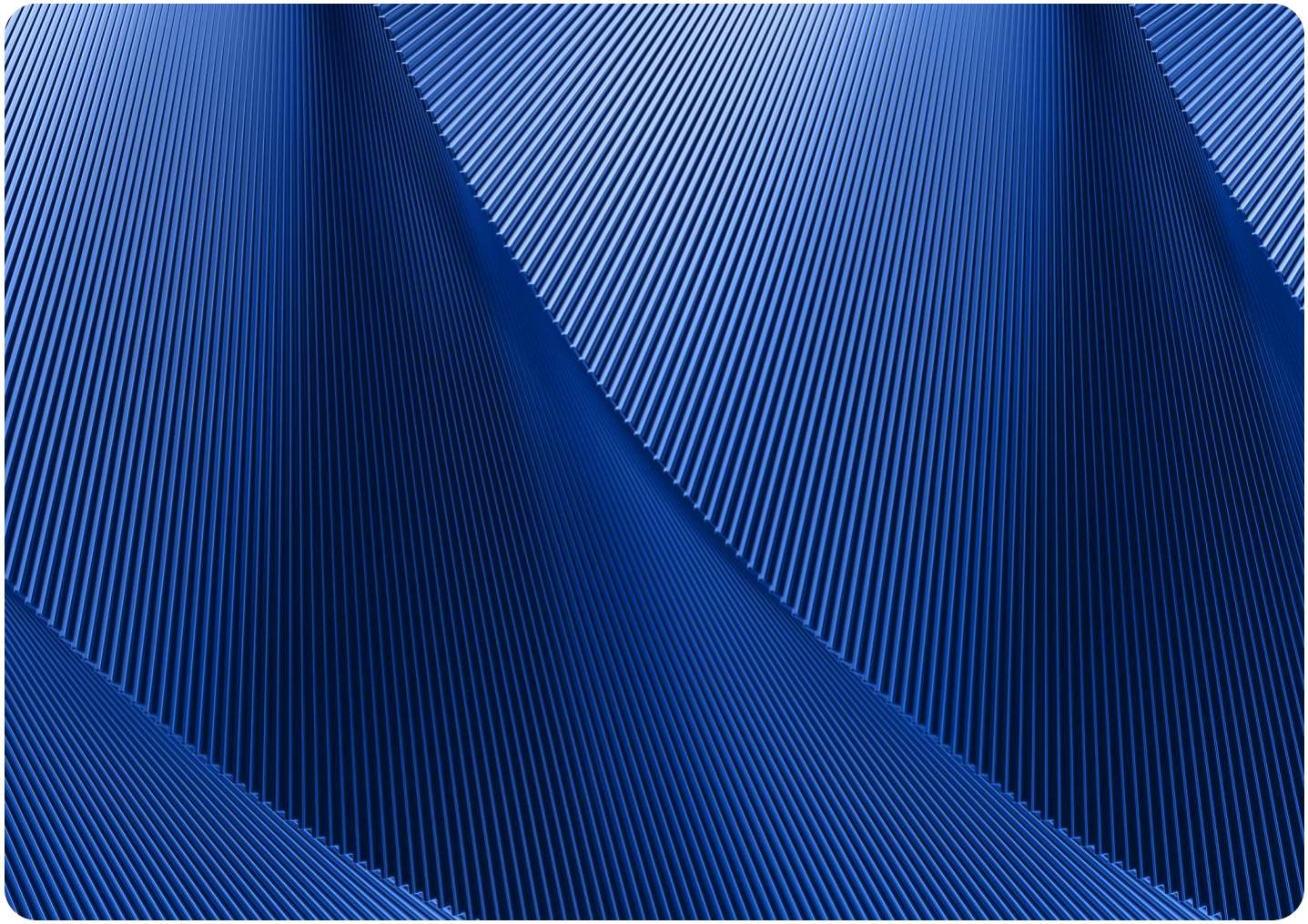
Resource provided by
Miami Dade College

Course Syllabus

Artificial Intelligence and Ethics

This course is intended to help students think more critically. Students are encouraged to rely on data and verifiable sources to interrogate all assigned readings and subject matter in this course and to determine their views for themselves.



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Course Description

This course acquaints students with ethics as relevant to the design, implementation, and administration of artificial intelligence and emerging technologies. It will explore issues such as the biases of algorithms, autonomous warfare, the risks of surveillance technologies, and the effects of technologies on employment. The class introduces students to the classical ethical frameworks of the field of philosophical ethics, then considers the application of these frameworks in various domains using AI. In the course students will consider matters of individual responsibility with AI but also the need for industry ethical standards and governmental regulation of AI.

Prerequisites:
None

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Course Competencies

Competency 1
The student will demonstrate an understanding of ethics as relevant to AI by:
a) Identifying the major ethical theories in Western philosophical ethics as relevant to AI ethics b) Identifying and articulating values conflicts at issue in ethical and policy arguments about AI such as the conflicts between rights based and risk based evaluative approaches c) Articulating major issues of ethical concern in the development of AI, such as the biases of algorithms, the programing of ethical decision-making capacity into AI devices, the risks to privacy of information of quantum computers, the social ramifications of AI, such as unemployment, and even the eventual moral status of AI systems d) Articulating major issues of ethical concern in the implementation and administration of AI such as concerns about who makes decisions about how AI is implemented, whether AI is used in ways that perpetuate or diminish social inequalities, and who has ownership and of and access to information generated by AI e) Evaluating political and business policy decisions, as well as the decisions of individual actors, regarding the development, administration, and implementation of AI from an ethical perspective f) Constructing ethical arguments relevant to political and/or business policy and individual choice regarding the development, administration, and implementation of AI

Competency 2
The student will demonstrate an understanding of basic ideas of critical thinking and an ability to employ tools of critical thinking in reference to issues in AI and ethics by:
a) Distinguishing an argument and an assertion b) Identifying the major parts of arguments c) Identifying the difference between valid and sound arguments d) Paraphrasing arguments about ethics and AI e) Evaluating arguments about the potentials for AI, for example, regarding singularity and transhumanism f) Assessing arguments about proposed business and public policies relevant to AI from an ethical perspective g) Synthesizing perspectives on AI and ethics h) Constructing arguments on ethical and/or political issues relevant to AI
Competency 3
The student will demonstrate an ability to communicate about issues in AI and ethics by:
a) Summarizing views of major ethical theories in presentations and/or writing assignments b) Summarizing arguments from readings, lectures, and/or videos about ethical issues in the development, implementation and administration of AI in writing assignments and/or class presentations c) Synthesizing readings and/or information from lectures and other media on issues of ethics and AI in writing assignments and/or presentations d) Evaluating arguments about ethical issues in the development, implementation, and administration of AI, as well as issues of individual choices, in writing assignments and/or class presentations e) Constructing arguments on issues in ethics and AI in writing assignments and/or class presentations

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Instructional Resources

Textbook/Resources:

- Mark Coeckelbergh, 2020. *AI Ethics*. Cambridge, Mass: MIT Press (Required)
- The Markkula Center, Supplements to The Framework for Making Ethical Decisions
- Professor Arnold's blog: *A Short Introduction to Ethics* (online, free)

Recommended Reading:

- *Mark Coeckelbergh, 2022. The Political Philosophy of AI, Medford, MA: Polity Press.*
- *Markus D. Dubber et al, eds. 2020. The Oxford Handbook of Ethics of AI. New York: Oxford UP. (on reserve in library)*
- *Matthew Liao, ed. 2020. Ethics of Artificial Intelligence. (on reserve in library)*
- *IEEE, Ethically Aligned Design (free download)*
- *Ethically Aligned Design overview*

Grading Schema

Assignment Type	Percentage of Grade
Attendance	10%
Quizzes	15%
Presentation Supporting Documents	10%
Presentation	20%
Essay and Reflection	15%
Discussions	30%

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Supplemental Information

Presentation Supporting Documents
In two assignments students will provide supporting documents for their presentation. One will include the thesis statement, a reflection on your presentation, and a list of at least four works cited. The other will include an abstract of the major argument of no more than one page and an outline.

Presentation
Students will offer a presentation (5-7 minutes) an approved topic of AI Ethics. This will be a slide deck (PowerPoint, Keynote, Google Slides, Prezi, etc.) presented in front of the class. The presentation will be accompanied by a summarizing written document (Word, Pages, Google Sheets, etc.), and a works cited list. The presentation will introduce an issue in AI ethics and take a stance on that issue. It should incorporate one of the articles from the course.
In addition, the cited paper/book for the presentation must be uploaded as a part of the supporting materials to the course if you heavily rely on a text during your presentation. This is to ensure that it isn't generated by AI or plagiarized. The uploaded document is required for a passing grade on the assignment.

AI Ethics Paper
Students will write an essay on a topic of AI ethics using generative AI as well as a reflection on the paper. The essay is 900-1200 words and must be in MLA style. A reflection of 300-500 words accompanies it.

AI Ethics Discussion Board Contributions
Students will engage in four discussion board interactions. Each contribution is a minimum of 200 words, plus one meaningful comment on a fellow student submission.

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Course Outline

Week starting on / Module	Module Topic	Assignments
Week 1	**Part I: Intermixing Theory and Practice** Course Introduction	**Read**: Syllabus **Watch**: Living in the Age of AI
Week 2	Ethics and Critical Thinking: What's AI got to do with it? Moral Reasoning in application to AI	**Read**: Coeckelbergh, Chapter 1, pp. 1-10 **Learn terms**: valid, invalid, soundness, deduction, induction, premises, conclusion, argument, claim **Watch:** Moral Reasoning **Complete**: In-class written argument workshop **Complete**: Quiz 1
Week 3	Normative Theory: Utilitarianism	**Read:** Markkula Center, "A Framework for Ethical Decision Making" **Watch**: Markkula Center, "A Framework for Ethical Decision Making" **Read:** Markkula Center, "Calculating Consequences: The Utilitarian Approach" **Supplementary reading:** Classical Utilitarianism (1): Bentham Classical Utilitarianism (2): Mill **Watch:** "Self-driving cars and the trolley problem" **Watch:** "How AI Can Make Healthcare Better" **Watch:** "Democratizing Healthcare (Ted Talk)" **Complete:** Quiz 2
Week 4	Deontological Ethics	**Read**: Markkula Center, "The Rights Lens" **Supplementary Reading:** "Kant, the categorical imperative"

	Discourse Ethics and the Integration of Global Ethical Perspectives	**Watch:** "On Deep Fakes" **Watch:** "AI, Honesty, Disinformation" **Supplementary Reading:** "Self-driving car dilemmas reveal that moral choices are not universal" **Watch:** "Moral Machines: How culture changes values" for a consideration of the question of cultural differences in ethical judgment of the trolley problem. **Complete:** Quiz 3
Week 5	Ethical Theory: Virtue Ethics	**Read:** Markkula Center, "Ethics and Virtue" **Supplementary reading:** "Aristotle's Ethics" **Watch**: "AI and Eldercare" **Complete**: Quiz 4
Week 6	AI / What's the Hype and What's Beyond the Hype Super AI: The Transhuman & Questions of Moral Agency Beyond the Hype: On Questions of Design	**Read**: Coekelbergh, Chapters 2-3, pp. 11-46 **Watch**: On Sense and Nonsense (And Background Understanding) **Watch**: Interview with Yuval Noah Harari **Supplementary video**: "What is Singularity?" **Read**: Coekelbergh, Chapters 4-5, pp. 47-81 **Supplementary Reading:** Sam Altman on "Moore's Law for Everything" **Watch:** Moore's Law **Watch**: More on Moore's Law **Supplementary video:** Joanna Bryson, "There is no AI Ethics. The Human Origins of Machine Prejudice" **Supplementary Material:** AI Incident Database **Complete:** Quiz 5
Week 7	**Part II: Applied Ethics** Data Issues:	**Read:** Coeckelbergh, Chapter 6, "Don't Forget the Data [Mining]," pp. 83-94

	Data Mining (Creating/Curating) Privacy (Individual Control) The Social Dilemma	IEEE, Ethically Aligned Design, pp. 111-115 **Watch:** On China's Social Credit System: **Supplementary Reading:** China's WeChat and Social Credit System **Read**: Coeckelberg, Chapter 7, "Privacy and Other User Suspects," pp. 97-108 **Complete:** Discussion Board 1
Week 8	The Attention Economy/Surveillance Capitalism (Focal Point "Privacy") **Class Discussion** of Privacy / The Social Dilemma / Individual Responsibility	**Read:** Interview with Shoshona Zubuff on Surveillance Capitalism **Watch:** PBS, "Surveillance and Democracy" **Supplementary video**: On Surveillance Capitalism **Complete**: Quiz 6 **Complete**: Discussion Board 2
Week 9	Transparency, Responsibility, Bias: Designing AI for Transparency Algorithms and Bias	**Read**: Coeckelbergh, Chapter 8, "A-Responsible Machines and Unexplainable Decisions," pp. 109-123 **Watch**: "Explainable AI" **Read**: Coeckelbergh, Chapter 9, "Bias and the Meaning of Life," pp. 125-144 **Watch**: "Is AI Radically Biased?" **Due**: Presentation Supplementary Document (2)
Week 10	The Radicality of Generative AI: From Ethical Development to Ethical Use Policy Issues **Class discussion** on organizational ethics	**Read**: Washington Post, "Chatbots and Liability" **Watch**: Forbes, "Generative AI Is About To Reset Everything, And, Yes It Will Change Your Life" **Watch:** Generative AI: Limits and Concerns **Watch**: PBS, "Advances in AI Raise New Ethics Concerns" **Read**: Forbes, "How to Develop an Effective AI Policy" **Read:** Coeckelbergh, Chapter 10, "Policy Proposals," pp. 145-165

		Complete: Discussion Board 3
Week 11	The Future of Work / Policy Issues: AI and the Future of Work / AI in Administration The GDPR to the White House Blueprint for an AI Bill of Rights **Class discussion** on the limits of individual responsibility and the need for government intervention	**Read**: Darrell West, "Will Robots and AI Take Your Job?" IEEE, Ethically Aligned Design, pp. 151-162 **Watch**: "On the US attempts for a basic income" **Watch**: "World Economic Forum Report" **Read**: Coeckelbergh, Chapter 11, "Challenges for Policymakers," pp. 167-181 **Read**: The White House, "Blueprint for an AI Bill of Rights" **Watch**: "An overview of the Whitehouse AI Bill of Rights" **Watch**: DW News, "AI Regulation" **Complete**: Discussion Board 4
Week 12	From Surveillance to Autonomous Weapons: Facial Recognition Software From Robocop to Autonomous Warfare	**Read:** Carnegie Endowment for International Peace, "An Overview of the Global Expansion of AI Surveillance" **Read:** ACLU, Read at least one article from here. **Read:** Michael Horowitz, "The Ethics and Morality of Autonomous Warfare" **Watch:** "The Future of AI, Ethics, and Defense". **Due**: AI Ethics Essay and Reflection
Week 13	AI, the Environment Smart Cities	**Read:** Coeckelbergh, Chapter 12, "It's the Environment, Stupid!" pp. 183-202 **Watch**: UNESCO, "Artificial Intelligence and Climate Change" **Watch**: "Four Ways AI Can Tackle Climate Change" **Watch**: "Cobalt Mining" (from 1:30) **Watch**: "AI's Hidden Climate Costs" (Water)

		Read: "How to Stop Smart Cities from Becoming Surveillance Cities" **Watch**: Smart Cities
Week 14	AI and Human Relationships	**Read**: "Will Robots Make Good Friends?" **Read**: "Can You Fall in Love with a Robot?" **Watch**: "On Robot Love"