Technology & Society

Course Abstract

This course is designed as an introductory writing and discussion-focused seminar. Students will explore key ideas about how technology affects individuals, society, and the world. Through readings, discussions, and multimedia reflections, students will develop skills in critical thinking, communication, and responsible digital citizenship. Assignments will emphasize clear expression of ideas, thoughtful reflection, and building connections between course topics and real-world issues. Students will contribute to class discussions, submit structured weekly audio or video reflections, and complete a small number of written assignments. The course will culminate in a final project where students apply what they have learned to a topic of their choice.

Course Learning Goals

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

- **Identify and describe** how technologies influence and are influenced by social, cultural, economic, and political contexts.
- **Summarize and connect ideas** from a variety of interdisciplinary sources to build an understanding of key debates about technology and society.
- **Express ideas clearly** in writing and spoken reflections, developing foundational skills in communication and argumentation.
- **Contribute to class discussions** by asking thoughtful questions, identifying key themes, and engaging respectfully with peers.
- **Relate theoretical concepts to real-world issues**, reflecting on how course ideas apply to contemporary technological challenges.
- **Develop basic research and communication skills** through multimedia reflections, short writing assignments, and a final project.

Assignments

This course emphasizes critical thinking, multimedia reflection, and collaborative discussion. Assignments are designed to build students' communication skills, encourage thoughtful reflection, and foster connections between course material and real-world issues. Over the course of the semester, students will:

- Lead at least one class discussion, preparing guiding questions and helping facilitate dialogue.
- Submit weekly structured audio or video reflections, focusing on key ideas, questions, and connections from the readings.
- Complete 2 short reflective essays (3–5 pages) exploring course themes and applying concepts in writing.
- Produce a final project (written or multimedia), applying course ideas to a topic of the student's choice.

Class Structure

Typical class sessions will balance student-led discussion and instructor-facilitated lecture or dialogue.

- Approximately 30% of class time will be dedicated to student-led discussion. Discussion leaders will frame key ideas, pose questions, and facilitate conversation, with support and moderation from the instructor.
- Approximately 70% of class time will involve instructor lectures, guided dialogue, and collaborative exploration of the week's topics. Lectures will not only introduce and contextualize key concepts and readings but also respond to student questions and ideas raised during discussions.

Unit 1 - Introduction

1.1: What Counts as a Technology?

Lesson Goals:

Students will describe different types of technology and reflect on how social and cultural contexts shape how we define technology.

Readings & Resources:

- "We design technology, technology designs us" by Katleen Gabriëls *[required]*
- "The Nature of Technology: What It Is and How It Evolves" by W. Brian Arthur (Chapter 1) *[optional]*

1.2: The Information Age

Lesson Goals:

Students will describe major developments in the Information Age and explain how computers and the internet have influenced society.

Readings & Resources:

- The Personal Computer Revolution: Crash Course Computer Science *[required]*
- "A Brief History of Computing" by Gerard O'Regan (selections) *[optional]*
- Timeline from the Computer History Museum *[optional]*

1.3: Technology & Society

Lesson Goals:

Students will identify key ways technology has changed society and begin using concepts like mediation and affordance to describe these changes.

Readings & Resources:

- "The Social Construction of Technology: The Development of the Bicycle" by Pinch & Bijker (excerpt) *[required]*
- "Technological Mediation in Design and Use: A Plea for Responsible Technology" by Peter-Paul Verbeek (excerpt) *[optional]*

Unit 2: Big Data & Surveillance Capitalism

2.1: Behavioral Excess & Monetizing Data

Lesson Goals:

Students will explain how technology companies collect and use data and reflect on how this affects privacy and society.

Readings & Resources:

- “Privacy Is Power” by Carissa Veliz (Chapter 2) *[required]*
- “The Age of Surveillance Capitalism” by Shoshana Zuboff (excerpts) *[optional]*

2.2: Engagement, Encroachment, & Prediction

Lesson Goals:

Students will describe how technology companies encourage engagement and use prediction to influence behavior.

Readings & Resources:

- “Weapons of Math Destruction” by Cathy O’Neil (Chapter 1) *[required]*
- “Stand Out of Our Light” by James Williams (Chapters 2 & 3) *[optional]*

2.3: Attention Hacking, Nudges, & Gamification

Lesson Goals:

Students will identify attention-hacking strategies and gamification in social media and reflect on how these influence behavior.

Readings & Resources:

- “How Twitter Gamifies Communication” (C. Thi Nguyen) *[required]*
- “Stand Out of Our Light” by James Williams (Chapter 4) *[optional]*

Unit 3: Media Literacy & Disinformation

3.1: Why Media Literacy Matters

Lesson Goals:

Students will explain why media literacy is important and practice evaluating information sources.

Readings & Resources:

- "You Think You Want Media Literacy… Do You?" by Danah Boyd *[required]*
- "What Makes Media Literacy So Complicated?" by Renee Hobbs *[optional]*
- "How to choose your news" by Damon Brown *[optional]*

3.2: Epistemic Bubbles & Echo Chambers

Lesson Goals:

Students will describe how social media and algorithms shape the information people encounter.

Readings & Resources:

- "Escape the Echo Chamber" by C. Thi Nguyen *[required]*
- "The Real Bias Built In at Facebook" by Zeynep Tufekci *[optional]*

3.3: Disinformation & Misinformation

Lesson Goals:

Students will define misinformation and disinformation and describe how they impact politics and trust.

Readings & Resources:

- "Information Wars: How We Lost the Global Battle Against Disinformation and What We Can Do About It" by Richard Stengel (Introduction + Chapter 1) *[required]*
- "The Reality Game: How the Next Wave of Technology Will Break the Truth" by Samuel Woolley (Introduction + Chapter 2) *[optional]*

Unit 4: Artificial Intelligence & Big Data Bias

4.1: What is AI? (A History)

Lesson Goals:

Students will describe how the idea of artificial intelligence has changed over time and identify key milestones in AI development.

Readings:

- “Artificial Intelligence: A Very Short Introduction” by Margaret A. Boden (Chapter 1) *[required]*
- “Artificial Intelligence: A Guide for Thinking Humans” by Melanie Mitchell (Chapter 1) *[optional]*

4.2: Biases in Big Data

Lesson Goals:

Students will explain how bias can enter data and algorithms and reflect on how this affects AI decision-making.

Readings & Resources:

- “Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy” by Cathy O’Neil (Chapter 5) *[required]*
- “How I’m fighting bias in algorithms” by Joy Buolamwini *[optional]*

4.3: Artificial Intelligence & Accountability

Lesson Goals:

Students will describe ethical concerns about AI accountability and begin discussing who should be responsible for AI’s effects.

Readings & Resources:

- “Human Compatible: Artificial Intelligence and the Problem of Control” by Stuart Russell (Introduction + Chapter 1) *[required]*
- “Moral Responsibility and Artificial Intelligence: A Case Study of Autonomous Vehicles” by Sven Nyholm *[optional]*

Unit 5: Global Perspectives on Technology & The Digital Divide

5.1: Technology and Global Inequities

Lesson Goals:

Students will describe how technology affects global inequalities, including labor and resource use.

Readings & Resources:

- “Your Computer is On Fire” by Mar Hicks (Introduction) *[required]*
- “Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass” by Mary L. Gray & Siddharth Suri (Introduction) *[optional]*

5.2: Technology & Sustainability

Lesson Goals:

Students will describe how technology can both harm and help the environment and examine case studies of technology and sustainability.

Readings & Resources:

- “The Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence” by Kate Crawford (Chapter 3) *[required]*
- “The “Electrify Everything” Movement’s Consumption Problem” by Amy Westervelt *[optional]*

5.3: Technosolutionism?

Lesson Goals:

Students will reflect on the idea of technosolutionism and discuss when technology can and cannot solve complex problems.

Readings & Resources:

- “Why Technology Hasn’t Fixed the Climate Crisis” by Jill Lepore *[required]*
- “Techno-Optimism: An Analysis, An Evaluation, and a Modest Defense” by John Danaher *[optional]*