Course title: Critical Approaches to Artificial Intelligence and Network Society
Language of instruction: English
Professor: Ian Alan Paul
Professor's contact and office hours: ianalan.paul@upf.edu
Office Hours: Tuesday/Thursday 12:00-13:00
Course contact hours: 45
Recommended credit: 6 ECTS credits
Course prerequisites: None

Language requirements:
Recommended level in the European Framework B2 (or equivalent: Cambridge Certificate if the teaching language is English, DELE or 3 semesters in the case of Spanish).

Course focus and approach:
This course examines Artificial Intelligence, Networks, and Digital Technologies with a focus on their political, economic, and cultural effects.

Course description:
This course addresses the rise of artificial intelligence and network technologies in a range of global contexts. Adopting an interdisciplinary approach that incorporates the fields of media studies, critical theory, and the philosophy of technology, course materials will examine the technical and conceptual elements of machine learning, digital automation, and online communication in order to develop an understanding of their social impacts. Students will discuss, evaluate, and critique academic texts, case studies, and contemporary artwork in order to develop complex and critical accounts of contemporary technology, attending to histories of cybernetics, internet culture, big data, surveillance, and the algorithm.

Learning objectives:
1. Become familiar with the infrastructures and operations of contemporary digital technologies.
2. Understand the critiques of technologies from a range of academic disciplines.
3. Develop a capacity to analyze the social, cultural, and political dimensions of machine learning and network technologies.
4. Differentiate between distinct histories of technology as well as their socio-political contexts.
5. Articulate the ideological and cultural effects of digital technology in society.

Course workload: We will approach a wide variety of texts (academic articles, book chapters, news coverage) and media objects (films, videos, artworks, websites) in this course, some of which will be screened in class and some of which students will be

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responsible for reading and viewing on their own. Students should be prepared to read roughly 40-50 pages per week.

Teaching methodology:
Course meetings are divided between lectures, discussions, screenings, and workshops. At several stages in the course, students will be tasked with experimenting with contemporary AI technologies as a mode of critical investigation. If available, students will also take part in field trips to exhibitions and/or events related to course materials.

Assessment criteria:
Over the span of the term, students will be expected to complete all course readings and to actively participate in course discussions. At the conclusion of the course, students will submit a term paper or creative project which critically responds to the course materials. The final course grade will be assigned based on qualitative evaluations of student work, and will be broken down along the following lines: 30%: Final Project/Paper, 30% Midterm Exam, 30%: Final Exam, 10%: Discussion Participation.

Academic Integrity:
According to the Disciplinary regime of students at Universitat Pompeu Fabra, adopted by Agreement of the Government meeting of 18th July 2012 (in Spanish), plagiarism and other academic misconducts are forbidden, including the unauthorized use of generative AI tools. In this course, blatant cases of such misconducts in coursework or exams will automatically entail failing, notwithstanding the adoption of additional sanctions by the academic direction of the program.

Likewise, special attention will be paid to the use of generative artificial intelligence tools by students for the completion of the course assignments. Whereas the use of these tools may be part of the teaching methodology as suggested by the course instructors, any use of these resources by students to carry out work without the guide or knowledge of the professors will be considered analogous to plagiarism, with the same consequences in terms of penalization in the evaluation of the course.

BaPIS absence policy:
Attending class is mandatory and will be monitored daily by professors. Missing classes will impact on the student's final grade as follows:

Absences	**Penalization**
Up to two (2) absences	No penalization
Three (3) absences	1 point subtracted from final grade (on a 10-point scale)
Four (4) absences	2 points subtracted from final grade (on a 10-point scale)

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Five (5) absences or more	The student receives an INCOMPLETE ("NO PRESENTADO") for the course

The BaPIS attendance policy does not make a distinction between justified and unjustified absences. All absences—whether due to common short-term illnesses or personal reasons—are counted toward the total amount and cannot be excused. Therefore, students are responsible for managing all their absences.

Only in cases of longer absences—such as hospitalization, prolonged illness, traumatic events, or other exceptional situations—will absences be considered for exceptions with appropriate documentation. The Academic Director will review these cases on an individual basis.

Students must inform the Instructor and the International Programs Office promptly via email if serious circumstances arise.

Attendance Policy and Religious Observances:

In line with the UPF Code of Ethics and the principles of equality and non-discrimination, our attendance policy considers the accommodation of students' needs for religious reasons or specific religious festivities.

Students may self-manage their attendance and miss some sessions without penalty, as outlined in each syllabus. However, if a student anticipates that their religious obligations may significantly affect their participation in a course, and the standard policy does not fully accommodate their situation, they must inform the course professor **at the beginning of the term** to discuss suitable alternatives**. It is the student's responsibility to communicate these needs at the start of the term.** The Academic Director is also available to support both students and professors in finding a workable solution that ensures the student can meet the course objectives.

Classroom norms:

- No food or drink is permitted.
- There will be a ten-minute break during the class.
- Students must come to class fully prepared.

Weekly schedule:

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Week One - From the Digital to the Network (January 12 & 14)

Session One:

Lesson: Introductions, Course Overview

Class Activity: Conceptual Mapping: What is the Digital? What is a Network? What is a Game? What is AI? What is Technology?

Readings: N/A

Session Two:

Lesson: From Discipline to Control Part I

Class Activity: Watch and Discuss "New Extractivism," Vladan Joler, 2022

Readings: Postscript on the Societies of Control, Gilles Deleuze, 1992

Week Two - Networks and Protocols (January 19 & 21)

Session One:

Lesson: From Discipline to Control Part II

Class Activity: Calculating Empires

Readings: The Age of Surveillance Capitalism (CONCLUSION: A Coup from Above), Shoshana Zuboff, 2019

Session Two:

Lesson: Networks

Class Activity: Watch & Discuss "Workers Leaving the Googleplex," Andrew Norman Wilson, 2011

Readings: Protocol: How Control Exists After Decentralization (Introduction), Alexander R. Galloway, 2004

Week Three - Big Data and Surveillance (January 26 & 28)

Session One:

Lesson: Data and Surveillance

Class Activity: Watch "How to Not Be Seen," Hito Steyerl, 2013

Readings: Invisible Images, Trevor Paglen, 2016

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Session Two:

Watch: “Citizen Four,” Laura Poitras, 2014

Readings: Laura Poitras’ NSA Reporting

Week Four - Gaming Cultures and Politics (February 2, 4, & 6)

Session One:

Lesson: Gaming and Society

Class Activity: Watch and Discuss “How to Disappear,” Total Refusal, 2020

Readings: Gamer Theory (Agony Chapter), McKenzie Wark, 2007

Session Two:

Lesson: Subversion of Gaming

Class Activity: Explore the work of Joseph DeLappe

Explore the Works of Cory Arcangel

Readings: Gamer Theory (Allegory Chapter), McKenzie Wark, 2007

Session Three:

Lesson: The Long Life of Data

Class Activity: Explore Trevor Paglen's "The Last Pictures" and Morehshin Allahyari's "Material Speculation: ISIS" (project website)

Readings: Century-Scale Storage, Maxwell Neely-Cohen, 2024

Week Five - Digital Simulation (February 9 & 11)

Session One:

Lesson: Simulation and War Games

Class Activity: Watch & Discuss “War at a Distance,” Harun Farocki, 2003

Readings: “Gameplay Mode (From the Military-Industrial to the Military-Entertainment Complex),” Patrick Crogan, 2011

Session Two:

MIdterm Exam

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Week Six - The Rise of AI (February 16, 18, & 20)

Session One:

Lesson: AI and Machine Learning

Class Activity: Watch / Discuss: “Trevor Paglen – Debates in AI – RISD ”

Readings: Anatomy of an AI System, Kate Crawford & Vladan Joler, 2018

Session Two:

Lesson: Generative AI

Class Activity: Prompt Injection Tests

Readings: ChatGPT Is a Blurry JPEG of the Web, Ted Chiang, 2023

Watch at Home: But what is a neural network? | Chapter 1, Deep learning

Session Three:

Lesson: AGI

Activity: AI Science Fiction and Thought Experiments

Readings: The TESCREAL Bundle, Timnit Gebru and Émile P. Torres

Week Seven - Machine Learning Experiments (February 23 & 25)

Session One:

Discuss Final Projects

Lesson: Training Data

“xhairymutantx,” Holly Herndon, 2023

Readings: Excavating AI: The Politics of Images in Machine Learning Training Sets, Kate Crawford and Trevor Paglen

Session Two:

Lesson: AI and Culture

Class Activity: Roland Meyer's Test Prompts

Watch "Grosse Fatigue," Camille Henrot, 2013

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Readings: "The New Value of the Archive: AI Image Generation and the Visual Economy of 'Style'," Roland Meyer, 2023

Week Eight - AI Economies (March 2, 4, & 6)

Session One:

Lesson: AI Agencies

Class Activity: Individual Discussions on Final Projects

Readings: The Automation of General Intelligence, Matteo Pasquinelli, 2023

Session Two:

Lesson: Digital Luddism

Class Activity: Watch: "Machines in Flames," The Destructionist International, 2022

Readings: "Breaking Things at Work (High-Tech Luddism)" Gavin Mueller, 2021

Session Three:

Lesson: Data and Information Power

Class Activity: Watch "Grosse Fatigue," Camille Henrot, 2013

Readings: Infocracy, Byung-Chul Han, 2022

Week Nine - Subverting Digital Technologies (March 9 & 11)

Session One:

Lesson: Worlds of Data

Class Activity: Exploring the work of James Bridle

Readings: The Exploited Labor Behind Artificial Intelligence, By Adrienne Williams, Milagros Miceli and Timnit Gebru, 2022

Session Two:

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Lesson: AI Creativity

Class Activity: Watch: How artists are using and confronting machine learning, MOMA, 2023

"Holly+," Holly Herndon, 2023

Readings: "The New Gods in the Machine: Holly Herndon's Vehicularity," Travis Jeppesen, AfterAll, 2016

"Holly Herndon: A Life Across Bits and Atoms," Lina Džuverović, AfterAll, 2016

Week Ten - The Costs of AI (March 16 & 18)

Session One:

Lesson: Digital Externalities

Activity: Watch: "The Weight of the Cloud," Kirk Gordon

"AI Is Already Wreaking Havoc on Global Power Systems"

Readings: A Visit to the NSA's Data Center in Utah, Ingrid Burrington, 2015

Session Two:

Final Exam

DUE DATE: SUBMIT FINAL PAPERS/PROJECTS

Last revision: March 2025

Required readings:

Course reading pack prepared by professor

Recommended bibliography:

Galloway, Alexander R. Protocol: How Control Exists after Decentralization. Cambridge: MIT Press, 2006.
N Katherine Hayles. How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics. Chicago: University Of Chicago Press, 1999.
Pasquinelli, Matteo. The Eye of the Master: A Social History of Artificial Intelligence. London: Verso, 2023.
Castells, Manuel. Communication Power. Oxford: Oxford University Press, 2013.

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Chun, Wendy Hui Kyong. Discriminating Data: Correlation, Neighborhoods, and the New Politics of Recognition. Cambridge: MIT Press, 2021.

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