

Course Last Updated 3/28/2024



Living the Age of AI: The path to entropy or salvation?

Section I: Course Overview

Course Code: PHL307/CS307

Subject Area(s): Computer Science, Philosophy

Prerequisites: None

Language of Instruction: English

Total Contact Hours: 45

Credits: 3

Course Fees: N/A

Course Description

The course approaches the current and emerging debates, including philosophical arguments around AI, and robotics, analysing the development and implementation of AI technologies from organisational, technical, social, economic and political viewpoints. Class activities and lectures examine the opportunities and impact of AI on everyday life, including education and the workplace. The course combines a foundation in the technical aspects of AI to build a wider understanding of its use and potential abuse with a broader social and philosophical outlook. The course culminates in a holistic exploration of future prospects of AI and whether it offers a path for salvation of humanity or its demise.

Learning Objectives

- Identify key stages of AI evolution make relevant predictions for its future trajectory.
- Define key terms and terminology relating to AI.
- Construct and deconstruct informed arguments about AI and its social and ethical implications.
- Explore the use of AI in different sectors such as education and workspace.

Section II: Instructor & Course Details

Instructor Details

Name: TBC

Contact Information: TBC

Term: TBC

Course Day and Time: TBC

Office Hours: TBC

Grading & Assessment

The instructor assesses students' mastery of course learning objectives by using the forms of assessment below. Each of these assessments is weighted toward the final grade. The Assessment Overview section provides further details for each.

Engagement - 20%

Oral Presentation - 10%

Midterm Exam - 20%

Research Paper - 25%

Debate - 25%

Assessment Overview

This section provides a brief description of each form of assessment listed above. Forms of assessment may be slightly modified in the term syllabus.

Engagement (20%): This course is designed to engage your critical mind. Class participation and engagement will be expected via presentations and class discussion from every member, including preparatory readings and self-led further AI research.

Oral Presentation (10%): Give a presentation of a creative experience utilizing AI which could be an art installation, music or any other form. Provide feedback on terms of quality, both artistic and technical and tell the class whether you think it can replace human-inspired art or as some claim it feels vacant.

Midterm Exam (20%): This exam will consist of multiple choice questions and open answer questions testing your knowledge on the basic terminology in AI, its development and everything you have learned so far in this class.

Research Paper (2500 words, 25%): Select a major area in which AI is used, such as education, industry and the workplace, police work, the media including social media, medicine or any other. Provide a detailed overview of its development both technologically and socially and analyse its impact. Use both primary and secondary sources for your research paper to present a conclusive argument.

Policy Summit (25%): Setting the scene as a think-tank forum for policy making, students are divided to represent different interest groups representing government, industry and business, education, human rights NGOs, consumer rights and artists. You will choose a major issue of controversy involving AI in any sector such as education, industry and the workplace, police work, the media including social media, medicine or any other where there is a potential of an ethical conflict involving human rights and human interest with technological efficiency. Using all the

points of views and arguments you will collectively formulate a policy that is ultimately voted on by the class.

Active Learning

Experiential learning is an essential component of education abroad, and participation in field studies is a required part of coursework. In this course, students explore the city in which they are studying using a variety of methods. This provides the opportunity to gain nuance and perspective on the host context and course content, as well as to collect information and resources for assigned papers, projects, and presentations.

The assigned field component(s) are:

- **Bletchley Park**
- **Science Museum Robots exhibition**

Students are also strongly encouraged to participate in co-curricular program activities.

Readings and Resources

The below readings and resources are representative of what will be assigned as required in this course but may vary slightly in the term syllabus.

All students are given access to the online library of the University of New Haven (UNH), accessible [here](#), and are expected to comply with [UNH Policies](#) regarding library usage.

Wherever possible, required readings are made accessible through the online library or Canvas. Students are responsible for obtaining all required readings.

Each course utilizes Canvas as its LMS. Students are expected to check Canvas regularly for updates and deadlines. Canvas is also the primary platform for contacting your instructor in case of questions or concerns about the course.

Selected Readings

Baidoo-Anu, David, and Leticia Owusu Ansah. Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI* 7, no. 1 (2023): 52-62.

Crawford, J., Cowling, M. and Allen, K.A., 2023. Leadership is needed for ethical ChatGPT: Character, assessment, and learning using artificial intelligence (AI). *Journal of University Teaching & Learning Practice*, 20(3), p.02.

Dignum, V., 2019. *Responsible artificial intelligence: how to develop and use AI in a responsible way* (Vol. 1). Cham: Springer.

Dwivedi, Yogesh K., Laurie Hughes, Elvira Ismagilova, Gert Aarts, Crispin Coombs, Tom Crick, Yanqing Duan et al. Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management* 57. 2021. Pp1019-94.

Fosso Wamba, S., Queiroz, M.M., Guthrie, C. and Braganza, A., 2022. Industry experiences of artificial intelligence (AI): Benefits and challenges in operations and supply chain management. *Production planning & control*, 33(16), pp.1493-1497.

Haleem, Abid, Mohd Javaid, Mohd Asim Qadri, Ravi Pratap Singh, and Rajiv Suman. Artificial intelligence (AI) applications for marketing: A literature-based study. *International Journal of Intelligent Networks* 3. 2022. Pp. 119-132.

Kai-Fu Lee, Chen Qiufan (2024) *AI 2041: Ten Visions for Our Future*. WH Allen; 1st edition, 2024. 480p.

Kai-Fu Lee. *AI Superpowers: China, Silicon Valley, and the New World Order*. Harper Business, 2021. 288p.

Kopalle, Praveen K., Manish Gangwar, Andreas Kaplan, Divya Ramachandran, Werner Reinartz, and Aric Rindfleisch. Examining artificial intelligence (AI) technologies in marketing via a global lens: Current trends and future research opportunities. *International Journal of Research in Marketing* 39, no. 2 (2022): 522-540.

Lu, Huimin, Yujie Li, Min Chen, Hyoungseop Kim, and Seiichi Serikawa. Brain intelligence: go beyond artificial intelligence. *Mobile Networks and Applications* 23. 2018. Pp 368-375.

Makridakis, Spyros. The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. *Futures* 90.2017. Pp 46-60.

Marcus, G. and Davis, E., 2019. *Rebooting AI: Building artificial intelligence we can trust*. Vintage.

Mustafa Suleyman, Michael Bhaskar. *The Coming Wave*. Bodley Head, 2023. 352p.

Russell, S. *Human Compatible: AI and the Problem of Control*. Penguin, 2020. 384p.

Ryan, M., 2020. In AI we trust: ethics, artificial intelligence, and reliability. *Science and Engineering Ethics*, 26(5), pp.2749-2767.

Siau, Keng, and Weiyu Wang. Artificial intelligence (AI) ethics: ethics of AI and ethical AI. *Journal of Database Management (JDM)* 31, no. 2 (2020): 74-87.

Stuart Russell, Peter Norvig. *Artificial Intelligence: A Modern Approach, Global Edition*. Pearson, 4th edition, 2021. 1168p.

Tegmark, Max. *Life 3.0: Being Human in the Age of Artificial Intelligence*. Penguin, 2018. 384p.

Toon, N. *How AI Thinks: How we built it, how it can help us, and how we can control it*. Torva, 2024. 320p.

Vaishya, Raju, Mohd Javaid, Ibrahim Haleem Khan, and Abid Haleem. Artificial Intelligence (AI) applications for COVID-19 pandemic. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews* 14, no. 4. 2020. Pp. 337-339.

Vincent-Lancrin, Stéphan, and Reyer Van der Vlies. *Trustworthy artificial intelligence (AI) in education: Promises and challenges*. 2020.

Zirar, A., Ali, S.I. and Islam, N., 2023. Worker and workplace Artificial Intelligence (AI) coexistence: Emerging themes and research agenda. *Technovation*, 124, p.102747.

Course Calendar

Session 1	
Topics	INTRODUCTION
Activity	Overview of AI technologies and their applications Historical milestones in AI development Defining entropy and salvation in the context of AI
Readings and Assignments	Readings: Assignments: Review syllabus

Session 2	
Topics	AI THROUGH TV, FILM AND CULTURE
Activity	Depiction of AI in broadcasting media and literature Film screening
Readings and Assignments	Readings: Crawford, J., Cowling, M. and Allen, K.A., 2023. Leadership is needed for ethical ChatGPT: Character, assessment, and learning using artificial intelligence (AI). Journal of University Teaching & Learning Practice, 20(3), p.02.

Session 3	
Topics	HOW AI WORKS
Activity	How AI works from chatbots to large language models AI Algorithms Algorithmic Bias
Readings and Assignments	Readings: Dignum, V., 2019. Responsible artificial intelligence: how to develop and use AI in a responsible way (Vol. 1). Cham: Springer. Kai-Fu Lee, Chen Qiufan (2024) AI 2041: Ten Visions for Our Future. WH Allen; 1st edition, 2024. 480p.

Session 4	
Topics	TECHNICAL DEVELOPMENT OF AI
Activity	Neural Networks Computer Vision Generative Images/Videos
Readings and Assignments	Readings: Watch the Film Imitation Game Baidoo-Anu, David, and Leticia Owusu Ansah. Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. Journal of AI 7, no. 1 (2023): 52-62. Assignments:

Session 5	
Topics	FIELD STUDY BLETCHLEY PARK

Activity	
Readings and Assignments	Readings: Toon, N. How AI Thinks: How we built it, how it can help us, and how we can control it. Torva, 2024. 320p.

Session 6	
Topics	AI IN LITERATURE, ART AND MUSIC
Activity	How technology has changed the film industry The Hollywood strikes AI Takes Over TikTok Audio deepfakes
Readings and Assignments	Readings: Fosso Wamba, S., Queiroz, M.M., Guthrie, C. and Braganza, A., 2022. Industry experiences of artificial intelligence (AI): Benefits and challenges in operations and supply chain management. Production planning & control, 33(16), pp.1493-1497. Kai-Fu Lee. AI Superpowers: China, Silicon Valley, and the New World Order. Harper Business, 2021. 288p. Marcus, G. and Davis, E., 2019. Rebooting AI: Building artificial intelligence we can trust. Vintage. Assignments: Research Paper Check-in

Session 7	
Topics	CREATIVE LIMITS
Activity	guest lecture
Readings and Assignments	Readings: Ryan, M., 2020. In AI we trust: ethics, artificial intelligence, and reliability. Science and Engineering Ethics, 26(5), pp.2749-2767. Dwivedi, Yogesh K., Laurie Hughes, Elvira Ismagilova, Gert Aarts, Crispin Coombs, Tom Crick, Yanqing Duan et al. Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. International Journal of Information Management 57. 2021. Pp1019-94.

Session 8	
Topics	Midterm Exam

Session 9	
Topics	AI IN EDUCATION
Activity	What Are the Functions of AI in Education AI's Influence on Education Concerns Surrounding AI in Education Academic Integrity
Readings and Assignments	Readings: Makridakis, Spyros. The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. Futures 90.2017. Pp 46-60.

	<p>Mustafa Suleyman, Michael Bhaskar. The Coming Wave. Bodley Head, 2023. 352p.</p> <p>Russell, S. Human Compatible: AI and the Problem of Control. Penguin, 2020. 384p.</p>
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Session 10	
Topics	AI AND THE LABOUR MARKET
Activity	Artificial intelligence and jobs – risks and opportunities Jobs at risk of automation Regulation for AI workplace
Readings and Assignments	<p>Readings: Stuart Russell, Peter Norvig. Artificial Intelligence: A Modern Approach, Global Edition. Pearson, 4th edition, 2021. 1168p.</p> <p>Tegmark, Max. Life 3.0: Being Human in the Age of Artificial Intelligence. Penguin, 2018. 384p.</p> <p>Assignments: Research Paper Due</p>

Session 11	
Topics	AI AND BUSINESS
Activity	How AI Is Used in Business Applications of AI in Business Cybersecurity
Readings and Assignments	<p>Readings: Vincent-Lancrin, Stéphan, and Reyer Van der Vlies. Trustworthy artificial intelligence (AI) in education: Promises and challenges. 2020.</p> <p>Haleem, Abid, Mohd Javaid, Mohd Asim Qadri, Ravi Pratap Singh, and Rajiv Suman. Artificial intelligence (AI) applications for marketing: A literature-based study. International Journal of Intelligent Networks 3. 2022. Pp. 119-132.</p> <p>Assignments: Prepare oral presentations</p>

Session 12	
Topics	Oral Presentations

Session 13	
Topics	FIELD STUDY SCIENCE MUSEUM
Activity	Robots exhibition
Readings and Assignments	<p>Readings: Kopalle, Praveen K., Manish Gangwar, Andreas Kaplan, Divya Ramachandran, Werner Reinartz, and Aric Rindfleisch. Examining artificial intelligence (AI) technologies in marketing via a global lens: Current trends and future research opportunities. International Journal of Research in Marketing 39, no. 2 (2022): 522-540.</p>

	Vaishya, Raju, Mohd Javaid, Ibrahim Haleem Khan, and Abid Haleem. Artificial Intelligence (AI) applications for COVID-19 pandemic. <i>Diabetes & Metabolic Syndrome: Clinical Research & Reviews</i> 14, no. 4. 2020. Pp. 337-339.
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Session 14	
Topics	FUTURE OF AI
Activity	How Artificial Intelligence Will Change the World Risks and Dangers of AI Prospects for humankind
Readings and Assignments	<p>Readings: Lu, Huimin, Yujie Li, Min Chen, Hyoungseop Kim, and Seiichi Serikawa. Brain intelligence: go beyond artificial intelligence. <i>Mobile Networks and Applications</i> 23. 2018. Pp 368-375. Siau, Keng, and Weiyu Wang. Artificial intelligence (AI) ethics: ethics of AI and ethical AI. <i>Journal of Database Management (JDM)</i> 31, no. 2 (2020): 74-87.</p> <p>Zirar, A., Ali, S.I. and Islam, N., 2023. Worker and workplace Artificial Intelligence (AI) coexistence: Emerging themes and research agenda. <i>Technovation</i>, 124, p.102747.</p> <p>Assignments: Prepare for Policy Summit</p>

Session 15	
Topics	POLICY SUMMIT

Section III: Academic Policies and Standards

Academic Policies

Students are expected to review and understand all CEA CAPA student policies, including our [Academic Policies](#) and [Engagement Policy](#). CEA CAPA reserves the right to change, update, revise, or amend existing policies and/or procedures at any time. Additional requirements that may be associated with a specific course or program are addressed in the term syllabus.

Student Learning & Development Objectives

CEA CAPA has identified [Student Learning and Development Objectives \(SLDOs\)](#) for all programs in all locations: content in context, navigating differences, power and equity, critical thinking and intellectual curiosity, career and professional development, and sustainability and migration.

These are meta-level learning objectives that transcend coursework and are infused across all elements of program delivery, beyond specifics of course offerings, addressing student learning holistically and framing it a larger learning context.