



The Leon Recanati Graduate School of Business Administration

MBA

1231.3932– Digital Technology & Society: The Fourth Industrial Revolution

(Preliminary Syllabus, July, 2023)

requirements: none

Prerequisites/Parallel

- Lecturer: Kenneth Krushel (kkrushel@outlook.com)
 - Class location: 003 Lokey Building (Sunday and Wednesday classes*)
 - Final Exam: TAKE HOME Essay
- ⇒ ***Course dates: July 19, 23, 26, 30, August 2**
- ⇒ **Class meeting time 17:15 – 20:45**
- ⇒ **Class meetings not recorded. In person class attendance is required for all five class sessions (there is no Zoom or online option).**
- ⇒ **Office Hours:** flexible, according to student and instructor schedules. Office hours will be available to students in person or via Zoom.

Contact information for Prof. Kenneth Krushel: kkrushel@outlook.com

Course Units: 1

1 course unit = 4 ECTS units. The ECTS (European Credit Transfer and Accumulation System) is a framework defined by the European Commission to allow for unified recognition of student academic achievements from different countries.

Course description

Digital Technology and Society

We focus on digitalization- or what is aptly described as an economic and industrial revolution-driven by AI related technology. We will study how digitalization influences practically every industry and segment of society, unraveling conventional business and economic logic, contributing to broken (even if previously effective) business models and societal dislocation.

The attention devoted to digital technology and various aspects of artificial intelligence is intense, becoming the topic of the year in capital markets, regulation and fully embedded into mainstream conversation. We are astounded by digital technology’s remarkable capabilities, serious risks, rapid deployment, unprecedented adoption, and unending controversy. It’s difficult not to be overwhelmed with headlines about digital tech. and in recent months, Generative AI. Media coverage imagines how digitalization will alter economies, if not the world.

Our course seeks to avoid being confused by daily reportage. Instead, we will make good and solid sense of “things digital”, asking hard questions, considering not only assessment of abstraction, but practical specifics. We aim to understand how digitalization effects our professional as well as vocational aspirations.

Using a variety of reading resources, video materials, podcasts, and classroom engagement, we will examine industrial revolution dynamics, questioning whether the current Age of AI is part of a historically linear technological revolution, or instead an industrial and economic phenomenon unprecedented in scale and scope.

In an era of relentless digital technology discovery and application, historically effective strategic planning and business development conventions often lead companies astray: what was celebrated operating practice becomes ineffective. Conversely, digitalization drives some companies to achieve extraordinary market dominance and value creation. We will study these dynamics, including, for example, the integration of AI into seemingly everything, the role of government regulation in response to “big tech” influence, data privacy/surveillance, anti-trust, “digital technology ethics”, and geopolitical influences.

Our course of study will not transform you into a technology specialist. Instead, the course aims to construct a working understanding of the possibilities created by digitalization’s influence on tomorrow’s markets, organizations, and society. To borrow from a poet’s wisdom (the luminous Robert Frost) we will not arrive at a definitive “great clarification”, but a “momentary stay against confusion”.

Course Objectives

1) To exhibit well-developed critical and creative thinking. To become fluent in “the language of digitalization”	a) to analyse complex digital technology issues underlying society and its institutions
	b) understand the meaning of such terms as “digitalization” and “AI” as it influences business models, barriers to entry, and value creation.

2) Construct analytic tools when analysing themes challenging conventional analysis	a) developing practical analysis of a wide range of subjects, including: weaponization of social media, ramifications of surveillance capitalism, antitrust, data privacy regulations, synthetic media, and the influence of zero marginal cost and network effects.
	b) understand the arc of technology invention preceding the digital era, and as a tool to anticipate the future of digitalization's socio-economic influence
3) Understand digitalization's challenges for founders, investors, regulators, managers, and consumers	a) understand how digitalization alters business models, economies and distribution of scale, and sustainable competitive barriers to entry
	c) examine real and expanding ethical problems tied to digitalization such as data privacy, data/content ownership, and algorithms driving media engagement

Evaluation and Grading Policy

- 35% Written Exam Due: July 26 Take home exam
- 50% Written exam Due: August 13 Take home exam
- 15% Class attendance, quality of class preparation and participation

- ⇒ **Attendance:** In person class attendance is mandatory. The class is not offered online, and is not recorded. Please arrive to class on time.
- ⇒ ***Because this course is offered as “an intensive”, this course is structured for students who commit to full attendance.***

Grading Policy:

In the 2008/9 academic year the faculty instituted a grading policy for all graduate courses that aims to maintain a certain level of the final course grade. Accordingly, this policy will be applied to this course's final grades. Additional information regarding this policy can be found on the Faculty website. [Score Retention Policy](#)

Course Assignments

Case Study Readings

Case study material is to be ordered by the student, and is available online. The case study to be used (as detailed in the syllabus) **Epic Games: Ninety Eighty-Fortnite**, case number 9-721-395

You are responsible for purchasing the case study, which, once purchased, is available in digital format. Please use this URL:

<https://hbsp.harvard.edu/import/1055872>

Additional resource material and assignments will be distributed in advance of class meetings, as related to particular class meetings.

Course Schedule and Class Outline

○ **Class 1, Wednesday, July 19: 17:15 – 20:45**

What is an Industrial Revolution? What is digitalization?

- How “invention” and technology have influenced society prior to the “digital era”
 - Historic patterns and predictive arcs of disruptive technology
 - Business structure and value creation models’ response to technology innovation
 - The role of government intervention and regulation: to encourage or calibrate innovation?
- ⇒ [The take-home essay exam, due prior to our class meeting on Wednesday, July 26, will be distributed.](#) The essay exam is primarily based on the [Epic Games: Ninety Eighty-Fortnite case study reading](#).

○ **Class 2, Sunday, July 23: 17:15 – 20:45**

Making sense of Artificial Intelligence? How does it work? Robotics.

- A concise and practical overview of ML and the underpinnings of AI
- Orders of consequence
- Robots and employment

Assignment: Watch the two videos (varying levels of sophistication) and read the three articles, offering varying perspectives. The interview (#6) with Ray Kurzweil is optional, though highly recommended.

The assigned materials offer varying perspectives. As you engage the material take notes regarding: what are you learning about what AI is? What are the varying opinions and biases?

1. **Watch:** “What is Artificial Intelligence?” (three minutes, a basic overview):
<https://scienceexchange.caltech.edu/topics/artificial-intelligence-research/artificial-intelligence-definition>
2. **Watch:** “The Rise of Artificial Intelligence”, a video (9 minutes) found on the page midway through this “Wired” magazine article. <https://www.wired.com/insights/2014/08/ai-systems-will-prove-useful-long-become-self-aware/>
3. **Read: There Is No A.I.**, by Jaron Lanier- <https://www.newyorker.com/science/annals-of-artificial-intelligence/there-is-no-ai>
4. **Read:** Interview with Gary Marcus (transcript)- you have the option of listening to the interview in the podcast, included above the transcript.
<https://www.nytimes.com/2023/01/06/podcasts/transcript-ezra-klein-interviews-gary-marcus.html>
5. **Read:** Marc Andreessen - https://a16z.com/2023/06/06/ai-will-save-the-world/?utm_medium=email&utm_source=newsletter&mkt_tok=MzgyLUpaQi03OTgAAAGMML9iW5VmjsOmRiQ_a_fOtZnBx3HwYOaLj6Qfvx2QGPgU4TGe4Q6mULJ9tmbWi0t6AT2498m9RZWKaf7wnOtSad2KhwZDaCUFN7xE3vbKt3
6. **Optional: for those who are interested in the concept of “singularity”:** An interview with author, inventor and futurist Ray Kurzweil – “Singularity, Superintelligence and Immortality”. The first 43 minutes are of value, particularly the explanation of “exponential”: <https://www.youtube.com/watch?v=ykY69ISpDdo>

○ **Class 3, Wednesday, July 26, 17:15 – 20:45 (Essay #1 due)**
Weaponization of Social Media; EPIC Games and the Metaverse

- Free Speech and Social Media
- The role of government regulation
- TikTok: redefining social media dynamic
- Epic Games: Build Mobs vs building monopolies
- Digital ecosystems and value creation models

- Redefining anti-trust

Read: Epic Games: Ninety Eighty-Fortnite case study. Additional materials to be distributed in advance.

Assignment: in addition to the essay exam which is due today, July 26, please read/listen to these assigned materials. The readings are brief. The podcast is 40 minutes.

1. What is Social Media Addiction: <https://www.addictioncenter.com/drugs/social-media-addiction/>
2. Benefits of social media (do you agree?): <https://www.makeuseof.com/why-social-media-good-for-you/>
3. <https://www.euronews.com/next/2022/11/02/eus-digital-markets-act-comes-into-force-what-is-it-and-what-does-it-mean-for-big-tech>
4. <https://www.latimes.com/business/story/2023-04-24/apple-app-store-policies-upheld-antitrust-challenge-epic-games>
5. A brief explanation, by Matt Ball: what is the metaverse: <https://www.thedrum.com/news/2022/08/04/author-matthew-ball-says-the-nature-the-metaverse-will-depend-who-pioneers-it>



Essay Exam due prior to class, submitted via email:



kkrushel@outlook.com

○ **Class 4, Sunday, July 30, 17:15-20:45**

Generative AI and Synthetic Media

- What is Generative AI? What is the underlying business model?
- Applications and examples.
- Synthetic Media: ethical and copyright complexities

Read: Two articles about Generative AI. The first article explains ChatGPT's origins and ensuing development. The second article details text to image exploitation.

The first article explains what ChatGPT cannot do. At the end of this first article are several links to other related articles. Please read them all. They are brief.

1. <https://www.axios.com/2023/01/24/chatgpt-errors-ai-limitations>

2. <https://www.technologyreview.com/2023/02/08/1068068/chatgpt-is-everywhere-heres-where-it-came-from/>
3. <https://www.technologyreview.com/2023/03/25/1070275/chatgpt-revolutionize-economy-decide-what-looks-like/>
4. <https://www.technologyreview.com/2022/12/12/1064751/the-viral-ai-avatar-app-lensa-undressed-me-without-my-consent/>
5. Copyright and Generative AI: <https://www.reuters.com/technology/eu-lawmakers-committee-reaches-deal-artificial-intelligence-act-2023-04-27/>

(The following three articles are *not* required reading – only if you are interested)

- A. For those of you interested in art, and the influence of AI: <https://www.latimes.com/projects/artificial-intelligence-generated-art-ownership-bias-dall-e-midjourney/>
- B. For those of you interested in how Stable Diffusion actually works: https://stablediffusionlitigation.com/?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axioslogin&stream=top
- C. GAI has an Intellectual Property Problem: <https://hbr.org/2023/04/generative-ai-has-an-intellectual-property-problem>

○ **Class 5, Wednesday, August 2, 17:15 – 20:45**

Digitalization and Society: Surveillance Capitalism, AI's Future

- An economic logic as an inevitable consequence of digitalization
- Is there equal opportunity surveillance?
- Ethics and AI
- Who owns the rails? The Digital future: crystal ball

1. **Watch:** Shoshana Zuboff - <https://www.youtube.com/watch?v=5AvtUrHxg8A>
2. **Watch:** Jaron Lanier, Data Dignity: <https://www.youtube.com/watch?v=Np5ri-KktNs>
3. **Read:** How Europe could address cybersecurity: <https://cepa.org/article/how-europe-could-clean-up-its-cybersurveillance->

4. **Read:** Nita Farahany <https://www.theguardian.com/science/2023/mar/04/prof-nita-farahany-we-need-a-new-human-right-to-cognitive-liberty>
5. **Read:** NY Times police surveillance <https://www.nytimes.com/2023/03/30/technology/police-surveillance-tech-dubai.html>
6. **Listen to podcast:** <https://www.theguardian.com/news/audio/2023/may/09/godfather-ai-geoffrey-hinton-humanity-crossroads-podcast>

⇒ **FINAL EXAM: take-home essay distributed. Due Sunday, August 13**

Evaluation of the Course by Student

Following completion of the course students will participate in a teaching survey to evaluate the instructor and the course, to provide feedback for the benefit of the students, teachers and the university.

Course Site (Moodle)

Course material will be available on the online course site.

This course management location will be the primary tool to communicate messages and material to students. It is important to frequently check the course site for updated information on our course of study including additional reading, assignments, and exams.

Office Hours

If you have questions about our course of study, or wish to discuss ideas regarding digitalization, we can meet at ESCP or via a Zoom meeting. Email me at kkrushel@outlook.com to schedule a time. *I encourage you to reach out.*

Academic Integrity

- Exercise integrity in all aspects of one's academic work including, but not limited to, the preparation and completion of essay exams and all other course requirements, by not engaging in any method or means that provides an unfair advantage. The value of this course is fully related to the quality of your engagement.

We will discuss the ethics of using Generative AI, a provocative and multifaceted subject. Generative AI and various forms of text generation (for example GPT) are not acceptable substitutes for your writing assignments unless a particular assignment instructs you to use GAI tools.

- Acknowledge the work and efforts of others when and where resource material has contributed to your submitted assignments. Ideas, data, direct quotations (which should

be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others are expected to be clearly attributed. Basic footnote formatting is acceptable.