



Course Outline

Course number	RTL106
Course title	Disruptive Technology
Credit points	3 ECTS
Total hours	24 Contact Hours
Lecture hours	24 Lecture Hours
Course level	Masters
Prerequisites	<<None>>

COURSE RESPONSIBLE

<i>Name</i>	<i>Academic degree</i>	<i>Academic position</i>
Dr Mark R. Leiser	PhD	Visiting Professor

COURSE TEACHERS

<i>Name</i>	<i>Academic degree</i>	<i>Academic position</i>
Dr Mark R. Leiser	PhD	Visiting Professor

COURSE ABSTRACT

This course is about challenges and opportunities posed by digital technologies. The 20th Century brought about three main technological changes: first, computerisation – the drive to put a computer on every person, in every classroom, in every home, and every office. Second, digitisation and the move from things made of atoms to things made of bits; and second, the convergence among digital devices. The 21st Century has brought about a third technological change: datafication, the process of turning data into something of value. Understandably, these digital developments have created challenges, problems, and opportunities. This class addresses all three of these.

Learning Outcomes

- Understand the Core Effects of Digital and AI Technologies on Fundamental Rights: Gain a nuanced understanding of how digital technologies, especially artificial intelligence, generative AI, and Large Language Models, influence fundamental human rights and the implications these effects have on digital transformation.
- Explore the Impact of AI and Novel Technologies on Core Concepts: Delve into how advancements in AI, including generative AI and LLMs, challenge and redefine core concepts such as 'digitisation', 'convergence', and 'datafication' and their relationship with fundamental rights.
- Comprehend the Framework for Fundamental Rights in the Age of AI: This course will help you better understand the international and European legal frameworks for fundamental rights, focusing on how they adapt to address the challenges posed by AI and digital technologies.
- Engage in Contemporary Debates on AI's Role in Society: Participate in and contribute to ongoing debates about how AI and digital technologies reshape identity, sociality, the economy, education, play, and other aspects of human life.
- Recognize the Ubiquity of AI in Everyday Life: Acknowledge and critically assess how AI and digital technologies constantly impact and structure everyday social interactions and behaviours, including the ethical considerations and societal impacts of surveillance, data privacy, and algorithmic decision-making.
- Examine the Ethical and Societal Implications of Generative AI: Understand the ethical dilemmas, societal impacts, and governance challenges posed by generative AI and LLMs, including issues related to bias, misinformation, and the future of work.
- Future-Proofing Against Digital Disruption: Equip students with the knowledge to critically analyse and anticipate future developments in AI and digital technologies, preparing them for the ethical, legal, and social challenges ahead.
- These updated objectives aim to provide a comprehensive overview of the current digital landscape, emphasising the significance of AI and emerging technologies while addressing these advancements' fundamental rights, ethical considerations, and societal impacts.

Knowledge

Students will learn the theory of disruptive innovation, how it differs from sustaining innovation, its capacities, and its current limitations. They will also understand the legal and political debates surrounding rules and theories for regulating the multitude of disruptive technologies at various levels.

Competencies

Students will be able to recognise legal, social, and ethical issues when researching or applying disruptive technology innovations through legal and regulatory analysis. Upon completing the course, students will have a holistic understanding of the nature and impact of disruptive technologies, the legal trends of regulators, and business practices used to navigate the emergence of such technologies.

Skills

Students will develop listening and writing skills, as well as legal research and academic writing. Students will be able to perform critical appraisals of the relevant legal frameworks and arguments on their strengths and weaknesses from a comparative perspective.

Grading Criteria: One Course Paper worth 100%

COURSE PLAN – MAIN SUBJECTS

No.	Main subjects	Planned hours
1	Class Introduction: Meet & Greet	2
2	Introduction to Disruptive Technologies	2
3	Big Data, AI, & the Internet of Things – Where Fundamental Rights and Disruptive Technologies Collide	2
4	The Legal Framework for Big Data and the Internet of Things	2
5	The Legal Framework for Big Data and Algorithmic Processing	2
6	Tutorial: Big Data and Automated Decision Making	2
7	Dark Patterns and Manipulative Design	2
8	The Deceptive Design Acquis	2
9	Tutorial: Dark Patterns and Deceptive Design	2
10	Introduction to Artificial Intelligence	2
11	The EU’s Approach to Regulating AI	2
12	Review Session and Essay Planning	2

	Session subjects and readings	Lecture/seminar
1	Introduction to the phenomenon of disruptive tech and innovation, the emergence of new markets, fundamental rights, balancing DT w/ FR	L
2	Introduction to Disruptive Technologies	L
3-4	Big Data, AI, and the Internet of Things	L
5-6	Legal Frameworks for ADM and IoT	L
7-9	Dark Patterns and Deceptive Design	L
10-11	AI legal issues: AI and data protection; AI Act	L
12	Class Review and Essay Planning	L

COURSE LITERATURE

No.	<i>Author, title, publisher</i>
1	Eileen Donahoe, “Digital Disruption and Human Rights”, Part One and Part Two.
2	Enrique Piracés, “The Future of Human Rights Technology”, Available here.
3	Rubenstein, ‘Big Data: The End of Privacy or a New Beginning’ (2013) 3(2) International Data Privacy Law 74.
4	Julie E. Cohen, “Between Truth and Power: The Legal Constructions of Informational Capitalism”, Available here.
5	Zuboff: <i>The Age of Surveillance Capitalism</i> (Profile Books Ltd., 2019)
6	Hildebrandt: ‘The Dawn of a Critical Transparency Right for the Profiling Era’ in Digital Enlightenment Yearbook 2012 (IOS Press) 41.
7	Degeling & Berendt: ‘What is wrong about Robocops as consultants? A technology centric critique of predictive policing’ (2017) AI & Society (Online First).
8	Miller: ‘When Algorithms Discriminate’ New York Times: https://www.nytimes.com/2015/07/10/upshot/when-algorithms-discriminate.html
9	Goodman: ‘A Step Towards Accountable Algorithms?: Algorithmic Discrimination and the European Union General Data Protection’: http://www.mlandthelaw.org/papers/goodman1.pdf
10	AI Now. 2019 Report, Available: https://ainowinstitute.org/AI_Now_2019_Report.pdf
11	Dignum V. Responsible Artificial Intelligence. How to Develop and Use AI in a Responsible Way(Springer, 2019)
12	<u>Fjeld, Jessica and Achten, Nele and Hilligoss, Hannah and Nagy, Adam and Srikumar, Madhulika, Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-Based Approaches to Principles for AI (2020). Berkman Klein Center Research Publication No. 2020-1. Available: https://ssrn.com/abstract=3518482</u>

13	Moltzau A. National and International AI Strategies Around the World Towards 2020. (2019). Available: https://medium.com/@alexmoltzau/national-and-international-ai-strategies-around-the-world-towards-2020-692b22b3c303
14	Kaminski, Margot E. and Malgieri, Gianclaudio, Algorithmic Impact Assessments under the GDPR: Producing Multi-layered Explanations (2019). U of Colorado Law Legal Studies Research PaperNo. 19-28. Available: https://ssrn.com/abstract=3456224
15	Schermer: 'The limits of privacy in automated profiling and data mining', (2011) 27 Computer Law & Security Review 45.
16	Leese: The new profiling: Algorithms, black boxes, and the failure of anti-discriminatory safeguards in the European Union, (2014) 45 Security Dialogue 494
17	Leiser & Caruana: 'Dark Patterns': Light to be found in the EU's Consumer Protection Regime? EUJCM Vol. 10 (2021) Issue 6
18	Leiser, M.R. "Dark patterns": The case for regulatory pluralism between the European Union's consumer and data protection regimes', the EU Data Protection Handbook (2022), forthcoming
19	Leiser & Wen-Ting Yang: Illuminating manipulative design: from 'dark patterns' to information asymmetry and the repression of free choice under the Unfair Commercial Practices Directive, MLR, forthcoming (2022).
19	S Wachter, B Mittelstadt and L Floridi "Why a right to an explanation of automated decisions making does not exist in the GDPR",
20	Veale and Borgesius, 'Demystifying the Draft EU Artificial Intelligence Act'
21	Mark Coeckelbergh, 'Artificial Intelligence: Some ethical issues and regulatory challenges'

Legal acts

1	European Parliament and Council Regulation (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119.
2	European Union. Charter of Fundamental Rights of the European Union. Luxembourg: Office for Official Publications of the European Communities. OJ C 364 (2000).
3	

Policy documents

1	European Commission. Report on the safety and liability implications of Artificial Intelligence, the Internet of Things and robotics. (2020). Available: https://ec.europa.eu/info/sites/info/files/report_safety-liability-artificial-intelligence-feb2020_en.pdf
2	European Commission. White Paper. On Artificial Intelligence - A European approach to excellence and trust. (2020). Available: https://ec.europa.eu/info/sites/info/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf
3	European Commission. Liability for Artificial Intelligence and other emerging digital technologies.(2019). Available: https://op.europa.eu/en/publication-detail/-/publication/1c5e30be-1197-11ea-8c1f-01aa75ed71a1/language-en/format-PDF
4	European Parliament. European Parliament resolution of 12 February 2019 on a comprehensive European industrial policy on artificial intelligence and robotics. (2019). Available: http://www.europarl.europa.eu/doceo/document/TA-8-2019-0081_EN.html
5	AI HLEG. Ethics Guidelines for Trustworthy AI. (2019). Available: https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai
6	AI HLEG. A definition of AI: Main capabilities and scientific disciplines. (2019). Available: https://ec.europa.eu/digital-single-market/en/news/definition-artificial-intelligence-main-capabilities-and-scientific-disciplines

7	<p><u>AI HLEG. Policy and Investment recommendations for Trustworthy AI. (2019). Available: https://ec.europa.eu/digital-single-market/en/news/policy-and-investment-recommendations-trustworthy-artificial-intelligence</u></p>
8	<p><u>Council of Europe. Guidelines on Artificial Intelligence and Data Protection. (2019). Available: https://rm.coe.int/guidelines-on-artificial-intelligence-and-data-protection/168091f9d8</u></p>
9	<p><u>Council of Europe. Guidelines on the protection of individuals with regard to the processing of personal data in a world of big data. (2019). Available: https://rm.coe.int/t-pd-2017-1-big-data-guidelines-en/16806f06d0</u></p>
10	<p><u>Council of Europe. Report on Artificial Intelligence Artificial Intelligence and Data Protection: Challenges and Possible Remedies. (2018) Available: https://rm.coe.int/report-on-artificial-intelligence-artificial-intelligence-and-data-pro/16808e6012</u></p>
11	<p><u>EDPB. Guidelines 3/2019 on processing of personal data through video devices. (2020) Available: https://edpb.europa.eu/sites/edpb/files/files/file1/edpb_guidelines_201903_video_devices_en.pdf</u></p>
12	<p><u>EDPS. Opinion 3/2018. EDPS Opinion on online manipulation and personal data. (2018) Available: https://edps.europa.eu/sites/edp/files/publication/18-03-19_online_manipulation_en.pdf</u></p>
13	<p><u>ICO. Guidance on the AI auditing framework. Draft guidance for consultation. 2020. Available: https://ico.org.uk/about-the-ico/ico-and-stakeholder-consultations/ico-consultation-on-the-draft-ai-auditing-framework-guidance-for-organisations/</u></p>