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| <b>Course Title</b>      | Ethics, Law and New Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |  |                          |  |
| <b>Course Code</b>       | DLNLT509                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |  |                          |  |
| <b>Course Type</b>       | Elective                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |  |                          |  |
| <b>Level</b>             | Master (LLM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        |  |                          |  |
| <b>Year / Semester</b>   | 2 <sup>nd</sup> / Fall                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |  |                          |  |
| <b>Teacher's Name</b>    | Dr Soterios Theocharides/ Dr. Iris-Panagiota Eftymiou                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |  |                          |  |
| <b>ECTS</b>              | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Lectures / week</b> |  | <b>Laboratories/week</b> |  |
| <b>Course Purpose</b>    | <p>The course "Ethics, Law, and New Technologies" primarily aims to provide students with educational and scientific familiarity regarding the ethical and legal challenges arising from the rapid evolution of technologies. Specifically, it seeks the critical understanding and analysis of the impacts of emerging technologies, such as artificial intelligence, biotechnology, big data, and cybersecurity, on the formation of new regulatory and ethical frameworks. Central to the course are critical issues related to personal data protection, transparency in the use of new technologies, cybersecurity, and the broader implications of technological developments on society, the economy, and democracy.</p> <p>Students are expected to achieve an in-depth understanding of contemporary ethical and legal theories, as well as relevant legislative frameworks at European and international levels. They will develop the necessary skills to effectively address the complex demands of professional practice in the constantly evolving field of new technologies. Through an interdisciplinary approach, the course combines theoretical analyses, legislative interpretation, and practical applications to prepare students for effectively and responsibly managing issues arising from technological advancements.</p> <p>Furthermore, the course enhances students' ability to make responsible decisions, actively participate in shaping policy and regulatory frameworks that promote ethically acceptable and socially responsible utilization of technological innovations, and proactively manage the potential impacts of technological developments on the legal system, labor market, and citizens' daily lives.</p> |                        |  |                          |  |
| <b>Learning Outcomes</b> | <p>Upon successful completion of the course, students will be able to:</p> <ul style="list-style-type: none"> <li>• <b>Critically understand and apply</b> fundamental theories of ethics, philosophy of law, and their practical applications to technological innovations (e.g., AI, big data, biotechnology), evaluating impacts on society, human rights, and justice in line with EQF Level 7 knowledge and analytical depth.</li> <li>• <b>Analyse and interpret</b> complex legal and ethical challenges, including European and international frameworks on personal data protection, cybersecurity, bioethics, transparency, and accountability, using real-world</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |  |                          |  |

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|                       | <p>cases and legal documents to contrast diverse regulatory approaches across cultures and systems.</p> <ul style="list-style-type: none"> <li>• <b>Evaluate and compare</b> ethical dilemmas, legal principles, and policy implications of emerging technologies (e.g., algorithms, robotics, encryption), assessing their effects on equality, digital inclusion, workplace environments, social cohesion, sustainability, and democratic processes.</li> <li>• <b>Apply advanced critical thinking and legal-ethical analysis</b> to resolve unpredictable, real-world problems, selecting and justifying appropriate strategies grounded in academic sources, scientific arguments, and principles of transparency and human rights protection.</li> <li>• <b>Develop original, well-substantiated solutions</b>, including policy proposals, risk management methods, crisis strategies, and analytical reports on the societal, economic, and environmental impacts of technology implementation in public administration and private enterprise.</li> <li>• <b>Formulate and defend</b> evidence-based positions and recommendations that promote responsible technology use, refuting flawed arguments, criticizing unethical or illegal practices, and advocating for justice, inclusion, and sustainability.</li> <li>• <b>Collaborate effectively in interdisciplinary teams</b>, leading discussions, organizing presentations, and contributing to the development of regulatory and ethical frameworks through active participation in simulations, forums, and professional dialogue.</li> <li>• <b>Engage responsibly in scientific, public, and policy discourse</b>, providing expert consulting to organizations, encouraging social dialogue, and managing individual and collective professional development in the ethical and legal governance of new technologies.</li> </ul> |                     |     |
| <b>Prerequisites</b>  | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Corequisites</b> | N/A |
| <b>Course Content</b> | <p>Introduction to the Ethical and Legal Dimensions of New Technologies:</p> <p>A. The role of ethics in shaping rules and laws concerning technology.<br/> B. The evolution of technology law from the early 20th century to today.<br/> C. Fundamental principles of ethical philosophy applied to the regulation of new technologies (e.g., utilitarianism, deontology, ethical pragmatism).<br/> D. The connection between legal responsibility concepts.</p> <p>Legal and Ethical Issues in Artificial Intelligence and Automated Decision-Making:</p> <ol style="list-style-type: none"> <li>1. Examination of responsibility for algorithmic decisions (e.g., liability in case of harm caused by autonomous systems).</li> <li>2. Examination of transparency and accountability of automated systems (e.g., how algorithms can explain their decisions).</li> <li>3. Examination of biases in data and fairness of algorithmic systems (e.g., inequalities potentially reproduced through algorithm training).</li> <li>4. Analysis of personal data protection and user privacy concerning artificial intelligence systems.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |     |

Theoretical Approaches to Ethics and Law in New Technologies: Analysis of various theories related to ethics and law, including: A. Kantian Ethics (Immanuel Kant) – Principles of deontology and ethical duty in technology use. B. Utilitarianism (Jeremy Bentham, John Stuart Mill) – Weighing positive and negative impacts of technological innovations. C. Social Contract Theory (Jean-Jacques Rousseau, John Rawls) – The role of states and international organizations in regulating new technologies. D. Legal Positivism (H.L.A. Hart, Joseph Raz) – Analysis of how law adapts to technological changes. E. Meta-ethics and Artificial Intelligence – Contemporary debates on automated decision-making ethics and the ethical responsibility of algorithms.

Ethical and Legal Regulation of Personal Data and Privacy in the Digital Environment: Through the study of essential legal frameworks and ethical principles, students will analyze: A. The legal and ethical dimensions of the right to privacy (privacy by design, consent-based data collection). B. The European Union's General Data Protection Regulation (GDPR) and its significance in shaping data protection policies. C. Management of personal data by multinational technology corporations (Facebook, Google, Amazon, TikTok) and ethical dilemmas arising from these practices. D. Government surveillance and data use for security purposes (e.g., facial recognition systems, mass surveillance). E. Differences among data protection legal frameworks in the US, Europe, and Asia, and their impacts on international technology regulation.

Internet, Social Media, and Legal and Ethical Challenges: Analysis of key internet and social media functions regarding:

1. The internet as a space for expression and communication – Legal regulations on freedom of speech and ethical dilemmas related to censorship and content control.
2. The internet as a tool for monitoring and data management – Roles of governments and major technology companies in collecting and analyzing user data.
3. Social media as sources of information and misinformation – The impact of algorithms on news dissemination, the spread of false information, and content regulation efforts.

Legal and Ethical Dimensions of Cybersecurity and Cybercrime: Students will analyze fundamental cybersecurity principles and primary threats faced by individuals, businesses, and governments. Special attention will be given to: A. Ethical and legal dilemmas concerning data protection and monitoring online activities. B. Main forms of cybercrime, such as data theft, online fraud, ransomware, hacking, and illegal content distribution. C. International cybersecurity legislation, referencing the GDPR, the US Computer Fraud and Abuse Act (CFAA), and international cooperation efforts to combat cyber threats. D. The concept of ethical hacking – The distinction between ethical (white hat) and malicious (black hat) hacking and ethical issues arising from the use of hacking techniques to detect system vulnerabilities.

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|                             | <p>Artificial Intelligence in Legal Practice and Its Ethical Implications: A. Legal research through AI – Analysis of tools like ROSS Intelligence and LexisNexis for collecting and analyzing legal data. B. Automated legal contracts and smart contracts – The role of blockchain in automating legal processes and their legal implications. C. Algorithmic decision-making in the justice system – Case studies of AI systems in judicial decisions (e.g., the COMPAS algorithmic system for predicting criminality). D. Ethical dilemmas and legal accountability of AI systems – Determining legal responsibility when an automated system makes incorrect or biased decisions.</p> <p>Automated Decision-Making and Artificial Intelligence in Governance – Transparency, Accountability, and Ethical Implications: A. Transparency and accountability in automated decision-making – Ensuring algorithmic decisions are fair and understandable to citizens. B. Data biases and discrimination risks – Analysis of how data used for AI system training can lead to unequal treatment of citizens (e.g., using AI for candidate selection in public jobs). C. The use of artificial intelligence in policing and crime prevention – Analysis of cases like predictive policing and the ethical and legal challenges raised. D. Automated decisions in public administration – Using AI systems to evaluate applications for benefits, scholarships, tax arrangements, and the risks arising from the lack of human oversight.</p> <p>Ethical and Legal Challenges in Big Data Use – Analysis, Management, and Responsibility: A. What are Big Data, and how are they used – Analysis of data collection sources (e.g., social networks, smart devices, governmental databases). B. Legal regulations concerning Big Data – GDPR, US regulations (CCPA), international data protection agreements. C. Ethical challenges in Big Data use – Algorithmic biases, excessive surveillance, transparency in data collection and use. D. Big Data and decision-making – How data influence governmental policies, medical decisions, and business strategy</p> |
| <b>Teaching Methodology</b> | Lectures – Self-study activities – Self-assessment exercises – Interactive activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Bibliography</b>         | <p><b>Required Reading:</b></p> <ul style="list-style-type: none"> <li>• Floridi, L. (2013). <i>The Ethics of Information</i>. Oxford University Press.</li> <li>• Brey, P. (2012). "Ethical Aspects of Information Security and Privacy." <i>Science and Engineering Ethics</i>, 18(2), 147-159.</li> <li>• General Data Protection Regulation (GDPR) – Introduction to the regulation's core principles. [Available at: <a href="https://gdpr-info.eu/">https://gdpr-info.eu/</a>]</li> </ul> <p>✦ <b>Further Reading:</b></p> <ul style="list-style-type: none"> <li>• Bostrom, N., &amp; Yudkowsky, E. (2014). "The Ethics of Artificial Intelligence." <i>Cambridge Handbook of Artificial Intelligence</i>.</li> <li>• Moor, J. H. (2005). "Why We Need Better Ethics for Emerging Technologies." <i>Ethics and Information Technology</i>, 7(3), 111-119.</li> <li>• European Commission (2021). Artificial Intelligence Act – Proposal for Regulation. [Available at: <a href="https://eur-lex.europa.eu/">https://eur-lex.europa.eu/</a>]</li> <li>• Jobin, A., Ienca, M., &amp; Vayena, E. (2019). "The Global Landscape of</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|                   | <p>AI Ethics Guidelines." <i>Nature Machine Intelligence</i>, 1, 389-399.</p> <ul style="list-style-type: none"> <li>• Russell, S., &amp; Norvig, P. (2020). <i>Artificial Intelligence: A Modern Approach</i>. Pearson.</li> </ul> <p>📌 <b>Further Reading:</b></p> <ul style="list-style-type: none"> <li>• Floridi, L., &amp; Cowls, J. (2019). "A Unified Framework of Five Principles for AI in Society." <i>Harvard Data Science Review</i>.</li> <li>• Tasioulas, J. (2021). "First Steps Towards an Ethics of AI." <i>Journal of Applied Philosophy</i>, 38(1), 88-103.</li> <li>• Rawls, J. (1971). <i>A Theory of Justice</i>. Harvard University Press.</li> <li>• Kant, I. (1785). <i>Groundwork of the Metaphysics of Morals</i>. Cambridge University Press.</li> <li>• Bentham, J. (1789). <i>An Introduction to the Principles of Morals and Legislation</i>. Oxford University Press.</li> </ul> <p>📌 <b>Further Reading:</b></p> <ul style="list-style-type: none"> <li>• Brey, P. (2017). "The Ethics of Technology: A Critical Review." <i>Handbook of the Philosophy of Technology and Engineering Sciences</i>.</li> <li>• MacAskill, W., &amp; Ord, T. (2020). "The Case for Longtermism." <i>Journal of Ethics and Emerging Technologies</i>.</li> </ul> |
| <b>Assessment</b> | <ul style="list-style-type: none"> <li>• <b>Weekly Educational Activities (15%)</b></li> <li>• <b>Assignment 1 (15%)</b></li> <li>• <b>Assignment 2 (20%)</b></li> <li>• <b>Final Exam (50%)</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Language</b>   | Greek/English                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |