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Національний технічний університет України «КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ імені ІГОРЯ СІКОРСЬКОГО»

Department of Information, Economic and Administrative Law, FSP

Social and legal aspects of artificial intelligence

Curriculum of the academic discipline (Syllabus)

1. Course details

Level of higher education	Second (master's) (educational and scientific)
Field of knowledge	C - social sciences, journalism, information and international relations
Specialisation	C5 Sociology
Educational programme	Social data analytics
Status of discipline	Elective
Form of study	Full-time (day)
Year of study, semester	2nd year, spring semester
Scope of the discipline	5 ECTS credits / 150 hours (lectures – 30 hours, seminars – 30 hours, independent work – 90 hours)
Semester assessment/assessment measures	exam, Modular control work
Class schedule	https://schedule.kpi.ua/
Language of instruction	Ukrainian/English
Information about course director/teachers	Lecturer: Bevz Svitlana Ivanivna Seminar instructors: Svitlana Bevz
Course location	Google Classroom

2. Curriculum

3. Description of the course, its purpose, subject matter and learning outcomes

Objective of the course:

To provide higher education students with a comprehensive understanding of the social, ethical and legal aspects of the application of artificial intelligence technologies in modern society, particularly in the European context, as well as to provide knowledge on the legal regulation, social impact and potential risks associated with the use of AI.

Main objectives of the academic discipline:

- To analyse the social changes and challenges caused by the introduction of AI in various spheres of public life.
- To familiarise students with the main approaches to the legal regulation of artificial intelligence in EU countries, Ukraine and at the international level.
- Developing ethical thinking skills in the context of AI application, taking into account human rights standards.
- Study of examples of judicial practice, legislative initiatives and policies in the field of AI.

- Mastering the conceptual apparatus related to digital rights, privacy, non-discrimination and algorithmic responsibility.

Learning outcomes:

Upon completion of the course, higher education students will deepen/expand the following learning outcomes:

- Diagnose and interpret social problems in Ukrainian society and the global community, their causes and consequences related to the use of AI.
- Correlate the modern system of civilisational values with legal values, principles and ethical standards for the use of AI.
- Resolve ethical dilemmas in accordance with professional ethics and universal human values.
- Determine the limits of AI use in the development and analysis of public policy and management decision-making.
- Be able to develop national/regional policy documents on the development of public administration using systematic analysis and a comprehensive approach, as well as teamwork methods.
- Generate new ideas and use modern technologies in the provision of legal services
- Search for, analyse and evaluate the necessary information in scientific literature, databases and other sources.

4. Prerequisites and post-requisites of the discipline (place in the structural-logical scheme of training under the relevant educational programme)

Prerequisites: a basic understanding of legal norms and principles, particularly in the field of public law and human rights, as well as a general understanding of the functioning of digital technologies in society. It is desirable to have skills in critical analysis of normative acts and legal cases.

Post-requisites: studying the discipline deepens students' knowledge of the legal and social aspects of the application of artificial intelligence, develops skills in analysing regulatory and ethical issues in the field of AI, and can be used when mastering professional disciplines, performing practical tasks, and preparing a master's thesis.

5. Course content

Topic 1. The concept and role of AI in modern society

The concept and purpose of AI. General characteristics and examples of AI use. Advantages and disadvantages of using AI in various spheres of public life. Risks of using AI in society and challenges for legal regulation.

Topic 2. Regulation of AI

Development of legal regulation of AI use in the world. General characteristics of international legal acts aimed at regulating the use of AI. Soft law. Ethical standards. Corporate standards.

Topic 3. Regulation of AI in Ukraine

The history of defining AI as an object of legal regulation. General characteristics of legal acts and public policy acts aimed at regulating AI. White paper on AI regulation.

Topic 4. Information and data in the era of AI

Concepts and types of information and data, their significance for society. General characteristics of personal data protection. Basic provisions of liability for violations of personal data protection legislation.

Topic 5. Human rights and AI

General provisions on human rights and their legal regulation in the context of AI use. Right to privacy. Right to respect for dignity and impartial treatment. Tolerance and non-discrimination. Freedom of expression and access to information. Ensuring access to public services. Right to a fair trial.

Topic 6. EU Regulation on AI

Scope of the regulation. Prohibitions on the use of AI. Types of AI systems according to their risks. Assessment of compliance with the requirements for reliable AI. Compliance with intellectual property rights, copyright and related rights. Control and enforcement system.

Topic 7. Liability in the case of AI application and/or use

Types of violations caused by the use and/or application of AI. Responsible entity. Penalties that may be applied.

Topic 8. AI in justice

Introduction of AI into the justice system: history and present day. Challenges caused by the use of AI by judges. Limits on the use of AI by judges in accordance with the code of judicial ethics. International experience in the use of AI in justice. Judicial practice on AI.

6. Teaching materials and resources

Main literature:

1. Regulation (EU) 2016/679 of the European Parliament and of the Council 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) (Text with EEA relevance). URL: https://eur-lex.europa.eu/eli/reg/2016/679/oj/eng / Official translation into Ukrainian. Source: kmu.gov.ua/storage/app/media/uploaded-files/es-2016679.pdf. URL: https://gdpr-text.com/uk/
2. Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act). URL: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024R1689
3. Viljanen, J., & Della Valle, A. (2022). *Artificial Intelligence and Human Rights: Opportunities and Risks*. European Journal of Law and Technology, 13(1).
4. Andrusyshyn, B. I. (2022). *Legal Challenges of the Digital Society: Artificial Intelligence, Data, Security*. Kyiv: NADU.
5. Gumenyuk, I. O. (2021). *Artificial Intelligence and Law: An Analytical Review of Regulation in Ukraine and the EU*. Kyiv: Yuridichna Dumka.

Additional reading:

1. Crawford, K. (2021). *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. Yale University Press.
2. EPRS – European Parliamentary Research Service. (2022). *Artificial Intelligence Act: EU Legislation in Progress*. https://www.europarl.europa.eu
3. European Commission. (2021). *Proposal for a Regulation laying down harmonised rules on artificial intelligence (Artificial Intelligence Act)*. URL: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0206
4. European Commission. (2022). *Proposal for a Regulation of the European Parliament and of the Council on harmonised rules on fair access to and use of data (Data Act). URL: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022PC0068*
5. European Union Agency for Fundamental Rights. (2020). *Getting the future right – Artificial intelligence and fundamental rights*. https://fra.europa.eu
6. Floridi, L. (2020). *The Ethics of Artificial Intelligence*. Oxford: Oxford University Press.
7. Latonero, M. (2018). *Governing Artificial Intelligence: Upholding Human Rights & Dignity*. Data & Society Research Institute.
8. Matthew U. Scherer (2016) Regulating artificial intelligence systems: risks, challenges, competencies, and strategies. *Harvard Journal of Law & Technology. 2016. Volume 29, Number 2 Spring.* URL: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2609777

9. *Regulation (EU)* 2022/868 *of the European Parliament* and of the *Council* of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act). URL: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R0868
10. Teremetskyi, V. I., & Kovalchuk, O. Ya. (2024). Artificial Intelligence as a Factor in the Digital Transformation of the Justice System. *Forum Prava, 78*(1), 106–115. http://doi.org/10.5281/zenodo.10870779
11. Winfield, A. F., & Jirotka, M. (2018). *Ethical governance is essential to building trust in robotics and artificial intelligence systems*. Philosophical Transactions of the Royal Society A, 376(2133), 20180085.
12. Bekh, V. P. (2018). *Social technologies: shaping legal awareness in the digital age*. Kyiv: Lira-K.
13. White paper on AI regulation in Ukraine: the vision of the Ministry of Digital Transformation — analytical material. URL: https://thedigital.gov.ua/storage/uploads/files/page/community/docs/%D0%A0%D0%B5%D0%B3%D1%83%D0%BB%D1%8E%D0%B2%D0%B0%D0%BD%D0%BD%D1%8F%20%D0%A8%D0%86.pdf
14. Golovko O. Bodnar Y. Ethical and legal issues of using robots with artificial intelligence. Bulletin of NTUU "KPI" Political Science. Sociology. Law. 2022. No. 3 (55). P. 93-97. URL: http://visnyk-psp.kpi.ua/article/view/269563/265042 (0
15. Gritsenko, A. A. (2019). *Ethical aspects of artificial intelligence in the context of European legal tradition*. Scientific Bulletin of Dnipropetrovsk University.
16. Concept of artificial intelligence development in Ukraine: Resolution of the Cabinet of Ministers of Ukraine No. 1556-r of 2 December 2020. URL: https://zakon.rada.gov.ua/laws/show/1556-2020-%D1%80#Text
17. Matviychuk, O. V. (2020). *Digital human rights in the legal systems of Ukraine and Europe*. Kharkiv: Pravo.
18. Skibitska, I. Yu. (2022). *Risks of AI: legal and social dimensions*. Journal of Law and Innovation, 4(1), 45–58.
19. Tymoshenko, Ye. A. Legal support for the application of artificial intelligence in Ukraine. Doctoral dissertation in law. Dnipro National University, Institute of Information, Security and Law of the National Academy of Sciences of Ukraine. 2024. URL: https://ippi.org.ua/sites/default/files/disertaciya_timoshenko_ie_a.pdf
20. Tomashevsky, V. O. (2021). *Legal regulation of personal data protection in the context of digitalisation*. Odessa: Legal Literature.

Useful electronic resources:

https://artificialintelligenceact.eu/

https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai

7. Educational content

8. Methodology for mastering the academic discipline (educational component)

Distribution of hours by topic

1.1 Lectures (15 sessions)

5.1. Lectures

Lecture 1-2. The concept and role of AI in modern society

Subtopics for independent study:

- *Definition of AI in modern scientific approaches*
- *Examples of AI use in law, education, healthcare*
- *Social benefits and risks of AI*
- *Challenges of legal regulation of AI technologies*

Literature: *Floridi (2020); Gumenyuk (2021); Andrusyshyn (2022)*

Lecture 3-4. Regulation of AI in the world
Subtopics for independent study:

- *International legal acts on AI*
- *Principles of "soft law": ethics, self-regulation*
- *Corporate codes and guidelines*
- *Influence of global actors (EU, OECD, UNESCO)*

Literature: *European Commission (2021); Winfield & Jirotka (2018); Crawford (2021)*

Lecture 5-6. AI regulation in Ukraine
Subtopics for independent study:

- *Stages of legal policy formation in Ukraine*
- *Review of regulatory documents: concepts, strategies*
- *Analysis of the White Paper on AI Regulation*
- *Ukrainian context in comparison with the EU*

Literature: *Gumenyuk (2021); Andrusyshyn (2022); Skibytska (2022)*

Lecture 7-8. Information and data in the age of AI
Subtopics for independent study:

- *The concepts of data, big data, and personal data*
- *Principles of personal data processing*
- *Threats to privacy and information security*
- *Liability for violations of data legislation*

Literature: *Tomashevsky (2021); Latonero (2018); European Union Agency for Fundamental Rights (2020)*

Lecture 9-10. Human rights and AI
Subtopics for independent study:

- *Fundamental rights affected by the use of AI*
- *Algorithmic discrimination*
- *Ethical assessment of the impact on dignity and equality*
- *Practices of restriction and guarantees of rights*

Literature: *Viljanen & Della Valle (2022); Matviychuk (2020); Hrytsenko (2019)*

Lecture 11-12. EU AI Regulation
Subtopics for SRC:

- *Structure and scope of the Regulation*
- *Categorisation of AI risks*
- *Conformity assessment and control*
- *Intellectual property in the context of AI*

References: *European Commission (2021); EPRS (2022)*

Lecture 13-14. Responsibility for the use of AI
Subtopics for SRC:

- *Criteria for legal liability*
- *Models of agency in the field of AI*
- *Types of offences in the field of AI application*
- *Conflict resolution and compensation for damages*

Literature: *Andrusyshyn (2022); Gumenyuk (2021); Crawford (2021)*

Lecture 15. The use of AI in the justice system
Subtopics for independent study:

- *The use of AI in judicial analytics and automated decisions*
- *Ethical restrictions for judges*
- *International examples of judicial practice using AI*
- *Risks of violating fair trial*

Literature: *Bekh (2018); Viljanen & Della Valle (2022); European Union Agency for Fundamental Rights (2020)*

1.2 Seminar classes (15 classes)

Seminar 1. The concept of AI: basics and social significance

- What is AI from a technical, philosophical and legal perspective?
- Examples of AI applications in healthcare, education and security
- Advantages and risks of using AI

Task: analyse the impact of chatbots on the educational process

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Seminar 2. Social challenges of AI

- How is AI changing employment, education and communication?
- Algorithmic inequality and marginalisation

Case study: automated selection of job candidates — discrimination based on age/gender

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Seminar 3. Fundamentals of AI regulation around the world

- International law and soft law: the relationship
- Basic principles of responsible AI (transparency, accountability, control)

Task: compile a list of ethical principles for an AI startup

Seminar 4. Ethical standards and corporate responsibility

- The role of IT companies in self-regulation
- Corporate codes of ethics

Case study: Google and the resignation of AI ethics researchers

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Seminar 5. AI and law in Ukraine: policy analysis

- Strategies, concepts, roadmaps (overview)
- White paper: key provisions

Task: prepare a brief analytical review of the provisions of the White Paper

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Seminar 6. Personal data protection

- What is considered personal data?
- The Law of Ukraine "On Personal Data Protection" vs GDPR

Case study: mobile application collects geodata without user consent

Seminar 7. Privacy issues in the context of digital surveillance

- Big data and behaviour control
- The right to be forgotten

  Task: discussion of the case Google Spain SL, Google Inc. v Agencia Española de Protección de Datos

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Seminar 8. Human rights and AI

- The principle of non-discrimination and AI
- Freedom of expression in the context of content moderation

  Case study: Facebook and content blocking using algorithms

Seminar 9. Tolerance, dignity and machine bias

- Algorithmic bias
- Risks for vulnerable groups

  Task: analysis of examples from the field of criminal justice (COMPAS system)

Workshop 10. EU AI Regulation — overview

- Purpose and scope of the Regulation
- Risk categories and permitted/prohibited practices

  Task: comparison with the approach in Ukraine

Workshop 11. EU Regulation: requirements for high-risk AI systems

- Certification, compliance, documentation
- Role of developers and suppliers

  Case study: facial recognition system in public spaces

Workshop 12. Liability for violations in the application of AI

- Principles of liability: who is at fault — the manufacturer or the user?
- Case law in AI-related cases

  Task: simulate a situation of legal liability for an accident involving an autonomous vehicle

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Seminar 13. AI in justice: challenges and opportunities

- The use of AI in judicial proceedings
- Ethics and independence of judges

  Case study: China's "smart court" system — pros and cons

Seminar 14. Final discussion and exam preparation

- Review of key concepts

- Discussion: can AI be made "fair"?

  Assignment: presentation of your own essay or short project assessing the risks of AI

Seminar 15. Modular control work

9. Independent work by students/postgraduates

According to the curriculum, the total amount of independent work is 90 hours.

Independent work includes:
preparation for classroom sessions – 56 hours;
preparation for the Modular control work– 4 hours;
preparation for the exam – 30 hours.
Total – 90 hours.

This section contains an indicative list of forms of individual student activity aimed at deepening, consolidating and applying the knowledge gained during lectures and seminars.

Forms of independent work:

1. **Studying literature on course topics** (familiarisation with recommended sources, preparation of short abstracts/summaries for each topic).
2. **Searching for and analysing AI-based digital tools** that can be used in the student's professional field.
3. **Preparation of presentations for seminars** (individual tasks for individual presentations).
4. **Analysis of cases of AI application** in public administration, education, law, history or sociology.
5. **Analysis of documents (strategies, regulations, AI codes of ethics)** with written commentary.
6. **Writing essays on ethical, legal or social aspects of AI** (at the student's choice).
7. **Preparation for the exam**: revision of key concepts, independent study of test questions.

Forms of control of independent work:

- oral reports/presentations at seminars;
- written assignments (reflections, analytical notes);
- defence of a mini-project/essay;
- individual consultations with the teacher (if necessary);
- participation in testing/final assessment.

10. Policy and control

11. Academic discipline policy (educational component)

Class attendance

Attendance at lectures and seminars is not compulsory, but is strongly recommended for successful assimilation of the material. Absence from classes does not automatically result in penalty points, but may complicate the final assessment. If a student misses a seminar, they must study the material independently and, if necessary, undergo additional assessment by the teacher.

Academic integrity

All forms of academic dishonesty (plagiarism, cheating, falsification of results, unauthorised assistance to others during assessment, etc.) are unacceptable. If violations of integrity are detected, the results of the relevant work will be cancelled, and the student will be given the opportunity to redo the assignment or take another alternative assessment at the instructor's discretion.

Recognition of informal education results

The results of non-formal or informal learning (online courses, certification programmes, research projects) may be credited if their content and scope correspond to the course subject matter. The decision on crediting is made by the lecturer based on the evidence provided by the student (certificates, reports, etc.) and a possible interview with the student.

Communication and respect

All participants in the educational process are required to adhere to the principles of respect, tolerance, and academic culture during classes, discussions, and online communication. Unethical behaviour or hate speech are grounds for disciplinary action.

12. Types of control and the learning outcomes assessment rating system (LOAS)

Assessment system

Student knowledge is assessed on a 100-point scale, which consists of:

Total number of points — 100

- ***Exam — 50 points***
- ***Continuous assessment:***
  - *Seminar classes (14) — 28 points (2 points for each)*
  - *Modular control work (MCW) — 12 points*
  - *Preparation and defence of a mini-project/essay — 10 points*

The MCW is assessed according to the following criteria:
"excellent" — 11-12 points — the student demonstrates a deep knowledge of the material, presents it logically and consistently, gives reasoned conclusions, freely operates with specific data, and answers questions easily and convincingly;
"good" – 9-10 points – complete answer with minor inaccuracies, the student answers most of the questions asked;
"Satisfactory" – 7-8 points – incomplete answer, significant errors present;
"unsatisfactory" – less than 7 points – no answer or incorrect answer.

The exam is assessed according to the following criteria:

- *40-50 points – the student answers almost all exam questions, demonstrates in-depth knowledge of the material, presents it logically and consistently, gives reasoned conclusions, freely uses specific data, expresses their own position on controversial issues, demonstrates signs of theoretical thinking and sociological imagination;*
- *30-39 points – the student answers most of the exam questions, demonstrates a good level of knowledge of the material;*
- *20-29 points – the student answers about half of the exam questions, demonstrates rather superficial knowledge;*
- *0-19 points – the student answers only some of the exam questions, does not have their own position, and makes significant inaccuracies.*

Requirements for successful completion of the course

To pass the course, the student must score at least 60 points in the final assessment, taking into account all types of control. If the student scores less than 60 points, they have the right to retake the exam.

Table of correspondence between rating points and grades on the university scale:

Number of points	*Grade*
100-95	Excellent
94	Very good
84	Good
74-65	Satisfactory
64-60	Sufficient
Less than 60	Unsatisfactory
Admission requirements not met	Not admitted

13. Additional information on the discipline (educational component)

List of exam questions

1. Define artificial intelligence.
2. Main areas of application of AI in modern society.
3. Advantages and risks of using AI.
4. The impact of AI on social processes and labour relations.
5. The main principles of legal regulation of AI.
6. Soft law: essence and significance in the field of AI.
7. Corporate policies on the use of AI.
8. International documents on the ethical use of AI.
9. The role of the private sector in regulating AI.
10. The state and prospects of legal regulation of AI in Ukraine.
11. What is the White Paper on AI Regulation in Ukraine?
12. Key provisions of the Law of Ukraine "On Personal Data Protection".
13. General requirements for the processing of personal data.
14. Corporate policies on personal data protection.
15. Definition of big data and its legal aspects.
16. Privacy issues in the context of mass digital surveillance.
17. Algorithmic discrimination: examples and legal risks.
18. How can the use of AI violate the right to privacy?
19. The impact of AI on freedom of expression.
20. Digital human rights: essence and content.
21. Risk categories in the EU AI Regulation.
22. Prohibited practices in the use of AI under the EU Regulation.
23. Requirements for high-risk AI systems in EU legislation.
24. AI certification and compliance testing.
25. Copyright compliance in the context of AI.
26. Legal liability for actions related to the use of AI.
27. Responsible parties in the field of AI.
28. Case law on violations in the application of AI.
29. The role of AI in the judicial system: advantages and limitations.
30. Codes of judicial ethics and the use of AI.
31. Examples of international experience in the application of AI in justice.
32. Prospects for the development of legal regulation of AI in the EU and Ukraine.

Work programme for the academic discipline (syllabus):

Compiled by Doctor of Law, Professor Svitlana Bevz

Approved by the Department of Information, Economic and Administrative Law (Minutes No. 17 of 21 June 2025)

Approved by the Methodological Commission of the Faculty (Minutes No. 4 of 24 June 2025)