Detailed Course Syllabus

Academic Year	2025./26.	**Semester**	winter
Study Program	University Undergraduate Studies of History, Psychology, Sociology, Communication Science, Nursing, Medicine, Law, Engineering	**Specialization / Major in**	**Year of Study**	University Undergraduate Studies of History, Psychology, Sociology, Communication Science, Nursing, Medicine, Law, Engineering, 1 to 3 Year of Study

I. BASIC COURSE INFORMATION

Name	AI Ethics in Healthcare		
Abbreviation	**RAČIZB3**	**Code**	**280786**
Status		**ECTS**	4
Prerequisites			

Total Course Workload

Teaching Mode	**Total Hours**	**Teaching Mode**	**Total Hours**
Lectures	30	Seminars	15
Class Time and Place	CUC according to published timetable		

II. TEACHING STAFF

Course Holder

Name and Surname	Anto Čartolovni		
Academic Degree	Doctor of Science	**Professional Title**	Associate Professor
Contact E-mail	anto.cartolovni@unicath,hr	**Telephone**	
Office Hours	According to published timetable	Office	

Course Collaborator

Name and Surname	Luka Poslon		
Academic Degree	MA	**Professional Title**	Research Assistant
Contact E-mail	luka.poslon@unicath.hr	**Telephone**	
Office Hours	According to published timetable	Office	

Course Collaborator			
Name and Surname			
Academic Degree		**Professional Title**	
Contact	**E-mail**	**Telephone**	
Office Hours	According to published timetable	Office	

III. DETAILED COURSE INFORMATION

Teaching Language	English
Course Description	This course explores the ethical implications of integrating Artificial Intelligence (AI) into healthcare systems. With the rapid adoption of AI technologies in diagnostics, treatment planning, patient care, and medical research, it is crucial to understand the complex ethical challenges and dilemmas that arise. Topics covered will include explainability, transparency, trust, informed consent, overreliance, algorithmic bias, data security, patient privacy, and the potential for AI to exacerbate health disparities. Students will engage in case studies, discussions, and research to critically evaluate the role of AI in shaping healthcare practices and policies.
Expected Educational Outcomes	Upon completing the AI Ethics in Healthcare course, students will be able to: - Critically evaluate ethical challenges: Analyze and assess the ethical implications of AI technologies in healthcare, including issues of privacy, consent, bias, and accountability. - Apply ethical frameworks: Use core ethical principles such as autonomy, justice, beneficence, and non-maleficence to evaluate real-world case studies involving AI in healthcare. - Identify and address importance of recognizing bias in AI: Understand solutions for mitigating algorithmic bias and ensuring fairness in AI applications, particularly in underserved or marginalized communities. - Understand legal and regulatory issues: Gain insight into the legal and regulatory landscapes surrounding AI in healthcare, including data protection laws, liability concerns, and industry standards. - Promote patient-centered AI solutions: Advocate for AI technologies that prioritize patient welfare, safety, and informed consent, ensuring human oversight in AI-driven healthcare decisions. - Understand importance of ethical AI practices: Understand strategies for the ethical design, implementation, and evaluation of AI systems, fostering transparency, equity, and trust in healthcare settings. - Engage in informed policy discussions: Contribute to conversations and policymaking regarding the responsible integration of AI into healthcare, balancing innovation with ethical considerations and social impact.

Textbooks and Materials	
Required	1. William J. Rapaport, Philosophy of Computer Science: An Introduction to the Issues and the Literature, Wiley-Blackwell, 2023 2. S. Matthew Liao, Ethics of Artificial Intelligence, Oxford Academic, New York, 2020 3. Paula Boddington, AI Ethics: A Textbook. Springer Nature Singapore, 2023. 4. Giovanni Rubeis, Ethics of Medical AI. Springer Verlag, 2024

	5. Scott Graham, The Doctor and the Algorithm: Promise, Peril, and the Future of Health AI, Pluto Journals, 2022
Supplementary	1. Eric Topol, Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again, Basic Books, 2019 2. Griet Verhenneman, AI and Healthcare Data. In N. A. Smuha (Ed.), The Cambridge Handbook of the Law, Ethics and Policy of Artificial Intelligence (pp. 306–321), Cambridge: Cambridge University Press, 2025

Examination and Grading

To Be Passed	Yes	**Exclusively Continuous Assessment**	No	**Included in Average Grade**	Yes
Prerequisites to Obtain Signature and Take Final Exam	1. Regular attendance (attendance at least 70% of classes) 2. Properly completed seminar obligations				
Examination Manner	Continuous evaluation of student work through: 1. Teaching activities: seminar presentation 2. Final exam (written)				
Grading Manner	Continuous evaluation of student work results in an overall grade: insufficient (1) 0-59.9% points sufficient (2) 60-69.9% points good (3) 70-79.9% points very good (4) 80-89.9% points excellent (5) 90-100% points				

Detailed Overview of Grading within ECTS

ACTIVITY TYPE	ECTS Student Workload Coefficient	GRADE PERCENTAGE (%)
Class Attendance	1.3	0
Seminar Presentation	0.8	30
Midterm Exam	0	0
Midterm Exam	0	0
Total in Class	**2.1**	**30**
Final Exam	1.9	70
TOTAL ECTS (Classes + Final Exam)	**4**	**100**

Midterm Exam Dates	-

Final Exam Dates	According to published timetable

IV. WEEKLY CLASS SCHEDULE

Lectures

Week	Topic
1.	Introduction to AI in Healthcare: Promise and Peril
2.	Ethical Frameworks in Healthcare
3.	Algorithmic Bias and Health Equity
4.	Epistemic Challenges in AI Ethics
5.	Trust and Accountability in AI-Assisted Care
6.	Informed Consent in the Age of AI
7.	Overreliance and Automation Bias in Clinical Decision-Making
8.	Bias and Trustworthiness
9.	The Alignment Problem
10.	AI agents vs. AI assistants
11.	Global Perspectives: AI Ethics Across Different Health Systems
12.	Designing Ethical AI: Human-Centered and Inclusive Approaches
13.	Explainability and Transparency in Medical AI
14.	AI in Diagnostics: Ethical Case Studies
15.	Regulation and Governance of AI in Healthcare

Seminars

Week	Topic
1.	
2.	
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Exercises

Week	Topic
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