Gdańsk University of Technology

Subject card

Subject name and code	ETHICS AND ARTIFICIAL INTELLIGENCE, PG_00071063
Field of study	Economic Analytics

Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study
			Humanistic-social subject group
Mode of study	Part-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	English
Semester of study	4	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment

Conducting unit	Department of Philosophy and Science Methodology -> Faculty of Management and Economics -> Faculties of Gdańsk University of Technology

Name and surname of lecturer (lecturers)	Subject supervisor	dr Andrzej Karalus
	Teachers	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	18.0	9.0	0.0	0.0	0.0	27
	E-learning hours included: 0.0						

Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
	Number of study hours	27	3.0	45.0	75

Subject objectives	The aim of the course is to develop the ability to analyze artificial intelligence as a socio-technical phenomenon by examining the relationships between humans, technologies, institutions, and values, using various methodologies and theoretical approaches (ANT and STS).

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U06] develops his/her potential by planning and implementing the process of lifelong learning and supporting others in this area.	is able to plan and pursue continuous learning in the field of artificial intelligence and support others in developing digital and ethical competences related to AI applications.	[SU3] Assessment of ability to use knowledge gained from the subject
	[K7_W01] "demonstrates in-depth knowledge and understanding of economic problems, and selects methods for resolving them while taking into account the complex interrelationships among the phenomena being analyzed. "	knows and understands in depth the ethical challenges related to the development and application of artificial intelligence and analyses them in a socio-economic context, taking into account complex relationships between technology, organisations, and their environment.	[SW1] Assessment of factual knowledge
	[K7_K03] responsibly fulfills professional roles, demonstrating the ability to identify ethical dilemmas and recognize and evaluate alternative courses of action.	is ready to make responsible decisions in the area of artificial intelligence applications, in particular by identifying ethical dilemmas, evaluating alternative courses of action, and proposing solutions that take into account social and organisational consequences.	[SK5] Assessment of ability to solve problems that arise in practice

Subject contents	Course content – lecture
	• Introduction to Science and Technology Studies (STS) and socio-technical systems • Foundations of Actor-Network Theory (ANT) • Artificial Intelligence as a socio-technical assemblage • Human and non-human actors in AI systems • Data as a social construct and infrastructure • Algorithms as socio-technical practices • Classification, categorization, and bias in AI • Power, governance, and control in AI systems • Distributed agency and responsibility in technological networks • Digital infrastructures and invisible labor • Standards, regulation, and institutional frameworks of AI • AI in organizations: socio-technical transformations • Methods in STS and ANT research • Case study frameworks for analyzing AI systems • Synthesis: AI as a network of relations
	Course content – exercises
	• Mapping socio-technical systems (introductory exercise) • Actor-network mapping of a selected AI system • Identifying human and non-human actors in case studies • Data analysis: tracing data sources and transformations • Algorithm audit exercise (basic level) • Identifying bias in real AI applications • Classification systems analysis (hands-on) • Responsibility mapping in complex systems • Analysis of AI governance cases • Infrastructure mapping and hidden labor identification • Regulatory case study workshop • Organizational implementation analysis (group work) • Designing a case study (methods workshop) • Group project development (consultation) • Presentation and discussion of final projects

Prerequisites and co-requisites	Fundamentals of macroeconomics, sociology, and at least basic knowledge of generative artificial intelligence, algorithms, and neural networks.

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Final exam	60.0%	60.0%
	Presentation, project, discussion	60.0%	40.0%

Recommended reading	Basic literature
	• Callon, M. (1986). Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay. In J. Law (Ed.), *Power, Action and Belief: A New Sociology of Knowledge?* London: Routledge, pp. 196223. • Law, J. (2004). *After Method: Mess in Social Science Research*. London: Routledge. • Winner, L. (1980). Do artifacts have politics? *Daedalus*, 109(1), 121136. • Bowker, G. C., & Star, S. L. (1999). *Sorting Things Out: Classification and Its Consequences*. Cambridge, MA: MIT Press. • Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. New York: PublicAffairs. • Noble, S. U. (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York: NYU Press. • Crawford, K. (2021). *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. New Haven: Yale University Press.

	Supplementary literature	• Eubanks, V. (2018). *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. New York: St. Martins Press. • Seaver, N. (2017). Algorithms as culture: Some tactics for the ethnography of algorithmic systems. *Big Data & Society*, 4(2). • Gillespie, T. (2014). The relevance of algorithms. In T. Gillespie, P. Boczkowski, & K. Foot (Eds.), *Media Technologies*. Cambridge, MA: MIT Press. • Floridi, L., Cowls, J., Beltrametti, M., et al. (2018). AI4PeopleAn ethical framework for a good AI society. *Minds and Machines*, 28(4), 689707. • Pasquale, F. (2015). *The Black Box Society: The Secret Algorithms That Control Money and Information*. Cambridge, MA: Harvard University Press. • Chun, W. H. K. (2021). *Discriminating Data: Correlation, Neighborhoods, and the New Politics of Recognition*. Cambridge, MA: MIT Press. • boyd, d., & Crawford, K. (2012). Critical questions for big data. *Information, Communication & Society*, 15(5), 662679. • Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press.
	eResources addresses	
Example issues/ example questions/ tasks being completed		• How can artificial intelligence be understood as a socio-technical system? • What roles do human and non-human actors play in AI networks? • In what ways are data socially constructed and politically embedded? • How do algorithms function as social practices rather than purely technical tools? • What mechanisms lead to bias and discrimination in AI systems? • How can responsibility be distributed across complex technological systems? • What is the role of classification systems in shaping social reality? • How do power and governance operate through AI technologies? • How can a selected AI system be analyzed using STS or ANT approaches?
Practical activites within the subject	Not applicable	

Document generated electronically. Does not require a seal or signature.