GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	AI Strategy , PG_00066996		
Field of study	Smart Renewable Energy Engineering		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	Optional subject group Humanistic-social subject group
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	English
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Entrepreneurship -> Faculty of Management and Economics -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Marita Mcphillips	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	15.0	0.0	0.0	0.0	30

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	30	4.0	41.0	75

Subject objectives

Tworzenie i wdrażanie strategii AI w przemyśle, z uwzględnieniem wyzwań technicznych, etycznych i zarządczych.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W71] has general knowledge in humanistic, social, economic or legal sciences, including their fundamentals and applications	Has knowledge in the field of social, economic and legal aspects of the development of artificial intelligence and their practical applications in the context of strategic planning.	[SW1] Assessment of factual knowledge
[K7_U71] is able to apply knowledge from humanistic, social, economic or legal sciences in order to solve problems	Can apply knowledge to the analysis of strategic problems related to the implementation of AI, taking into account social, economic and legal aspects.	[SU2] Assessment of ability to analyse information
[K7_K71] is able to explain the need to apply knowledge from humanistic, social, economic or legal sciences in order to function in a social environment	Can explain and justify the need to develop and implement AI strategies, with particular emphasis on responsible and ethical impact on society.	[SK5] Assessment of ability to solve problems that arise in practice
[K7_U05] can produce concise, clear technical reports, documenting analytical findings and presenting them in report format	Can present the outcomes of the analysis of strategic problems related to the implementation of AI in an appropriate form.	[SU5] Assessment of ability to present the results of task

<table>
<tr><td>Subject contents</td><td>The course focuses on a comprehensive approach to implementing AI solutions in organizations. Students will learn key aspects of developing an AI strategy, implementing it, and managing AI projects, considering technical, ethical, and managerial challenges.

Overview of different AI technologies and potential applications; practical examples and use cases; benefits from a business perspective (financial and operational); lessons learned and best practices; unique challenges and opportunities for implementation in the manufacturing and energy sectors

Strategic AI implementation: developing an AI strategy; managing AI projects; managing change and organizational readiness for AI; evaluating and selecting AI tools for specific needs; measuring AI implementation success

AI solution challenges, i.e. data quality control and accuracy; ethical, legal, and regulatory aspects; technical complexity and challenges

Data management and intellectual property protection in the context of AI

Building an AI team for industrial projects; roles and skills in the AI team; collaboration between AI specialists and industry professionals

Sustainability and AI: benefits of environmental modeling; minimizing environmental footprint; ensuring compliance with regulations

Future AI trends in manufacturing and energy sectors

The assessment is based on a short quizz and small in-class assignments (e.g. case study), in-class activities, and a project to create an AI strategy for the organization (including analysis of needs and opportunities, implementation plan, change management strategy, risk assessment, presentation to the group, etc.).</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Quizzes and tasks</td><td>60.0%</td><td>30.0%</td></tr>
<tr><td>Activity during classes</td><td>60.0%</td><td>20.0%</td></tr>
<tr><td>Project</td><td>60.0%</td><td>50.0%</td></tr>
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<tr><td>Recommended reading</td><td>
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<tr><td>Basic literature</td><td>Coursera: AI for Everyone (Andrew Ng)

Current industry publications on AI implementation

Case studies from the industrial and energy sectors</td></tr>
<tr><td>Supplementary literature</td><td>Mollick, E. (2023). Co-intelligence: Living and working with AI. Harvard Business Review Press.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>Group Discussion: Key Challenges for AI Implementation in the Energy Sector.

A Short Quiz on AI Bias</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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