GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Social and Psychological Aspects of Robotics & Automatic Controls, PG_00064532		
Field of study	Automatic Control, Cybernetics and Robotics		
Date of commencement of studies	February 2027	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	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 Decision Systems and Robotics -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Michał Czubenko	
	Teachers	dr hab. inż. Michał Czubenko	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	15.0	15.0	45

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	45	6.0	24.0	75

Subject objectives

The aim of the subject is to familiarize participants with philosophical, psychological, and sociological aspects of the latest technological trends in the field of robotics, automation, and IT. The subject is carried out with the help of Oxford debates (concerning specific theses), student seminar presentations, and quasi-grant projects. The subject may cover topics such as: three laws of robotics, aspects of robot autonomy, and legal issues of artificial intelligence, and many others. The subject has been modernized as part of the IDUB project.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U71] is able to apply knowledge from humanistic, social, economic or legal sciences in order to solve problems	Student is able to assess the long-term social effects of the aspects of robotization.	[SU5] Assessment of ability to present the results of task [SU2] Assessment of ability to analyse information
[K7_W71] has general knowledge in humanistic, social, economic or legal sciences, including their fundamentals and applications	Student has the basics of psychological and sociological knowledge in the aspect of RiA.	[SW1] Assessment of factual knowledge
[K7_W11] knows and understands, to an increased extent, the general principles of creation and development of forms of individual entrepreneurship and the economic, legal and other conditions of various types of activities related to the awarded qualification, including the principles of protection of industrial property and copyright law	Student has the foundations for performing technical and patent review of solutions; is able to design a project budget; knows contemporary grant programs.	[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation
[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	Student can refer to certain socio-psychological values at work.	[SK4] Assessment of communication skills, including language correctness

<table>
<tr><td>Subject contents</td><td>Course content – lecture

The subject will cover issues such as:
• the progressive development of artificial intelligence and its impact on society
• humanoid robotics
• can robots have emotions
• development of robotization in the context of human support
• development of vehicle autonomy and its effects
• the loss of society in social media</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Basic knowledge of Robotics and Artificial Intelligence.</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></td><td>60.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Mori, Masahiro, Karl F. MacDorman, and Norri Kageki. "The uncanny valley." Robotics & Automation Magazine, IEEE 19.2 (2012): 98-100.
Inoue, Hirochika, et al. "Overview of humanoid robotics project of METI." Proc. of the 32nd ISR (2001).
Daisuke Chugo, Sho Yokota "Introduction to Modern Robotics" CreateSpace Independent Publishing Platform (2012)</td></tr><tr><td>Supplementary literature</td><td>Bekey, G. "Current trends in robotics: technology and ethics." Robot ethics: the ethical and social implications of robotics. MIT Press, Cambridge (2012): 17-34.
Balaguer, Carlos, and Mohamed Abderrahim. Trends in robotics and automation in construction. INTECH Open Access Publisher, 2008.</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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