GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00071497		
Field of study	Automation, Robotics and Control Systems		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	4	ECTS credits	9.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Power Electronics and Electrical Machines -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Roland Ryndzionek	
	Teachers	dr hab. inż. Roland Ryndzionek	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	60.0	0.0	60

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	60	0.0	0.0	60

Subject objectives

The aim of the course is to develop the students ability to independently plan, design, and implement an innovative technical solution. The student identifies a problem, formulates a project concept, selects appropriate tools and components, creates a model and project documentation, and presents the results of their work.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U07] can build and analyze models of systems and systems in the field related to control systems and automation	The student is able to develop and analyze a model of the designed object or system, using appropriate modelling methods, analytical techniques, and engineering tools applied in automation and control systems.	[SU3] Assessment of ability to use knowledge gained from the subject
[K6_W08] knows the basics of equipment selection and control of electrical machines and servos	The student knows the principles of selecting devices, components, and actuators (including electrical machines and servomechanisms) suitable for the developed project and understands their impact on the functionality of the proposed solution.	[SW1] Assessment of factual knowledge
[K6_U02] can work individually and in a team, can communicate using various techniques in a professional environment, as well as document and analyze the results of their work, can estimate the time needed to perform the entrusted task can prepare and present a presentation on the problems and results of an engineering task	The student is able to effectively organize project work, plan tasks, estimate the time required, and prepare technical documentation. The student can also communicate professionally, present project results, and collaborate within a team when necessary.	[SU2] Assessment of ability to analyse information

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

The course consists of independently developing an innovative technical solution, including needs analysis, preliminary design, component selection, development of a functional or conceptual model, and evaluation of feasibility. The student prepares technical documentation, creates a prototype or conceptual framework, and presents the final results together with an analysis of the project process, time management, and acquired competencies.</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>presentation</td><td>50.0%</td><td>100.0%</td></tr>
</table>
</td></tr>
<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Jabłonowska, L., Wachowiak, P., Winch, S., Prezentacja profesjonalna. Teoria i praktyka?, Difin, Warszawa, 2008

Turmański S.: Technika pomiarowa. WNT, 2007 (2013, 2020)

Leksiński W., Nabiałek I., Żakowski W.: Matematyka Definicje, twierdzenia, przykłady, zadania. Wydawnictwa Naukowo-Techniczne, Warszawa, 2003</td></tr>
<tr><td>Supplementary literature</td><td>Nise N.S. Control System Engineering. 3th edition. John Wiley & Sons, 2000</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table>
</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>system presentation</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
</table>

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