GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Team Project, PG_00021232		
Field of study	Automation, Robotics and Control Systems		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	6	ECTS credits	8.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Power Electronics and Electrical Machines -> Faculty of Electrical and Control Engineering		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Ireneusz Mosoń	
	Teachers	dr inż. Filip Kutt dr inż. Robert Smyk dr hab. inż. Piotr Musznicki dr inż. Filip Wilczyński	

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	120.0	0.0	120
	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	120	10.0	70.0	200

Subject objectives	The aim of the course is to prepare team projects together with employers and research teams composed of University employees. The projects can be used to prepare engineering diploma theses.

<table>
<tr><td>Learning outcomes</td><td>
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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[K6_W06] knows the structure of computers and microprocessors and the tasks of operating systems, has basic knowledge of the basics of computer software, drivers, microprocessor technology, design of simple algorithms and the operation of information networks</td><td>The student presents the advantages and disadvantages of individual structures of microprocessor systems, their programming and data transmission through communication networks.</td><td>[SW3] Assessment of knowledge contained in written work and projects</td></tr>
<tr><td>[K6_W11] knows the hazards arising from devices, installations, systems and technical systems, basic principles of occupational health and safety, taking into account the role of control and security systems in controlling automation and robotics facilities</td><td>The student knows the applicable regulations to ensure safety and defines the control and security systems of facilities. The student distinguishes the requirements of the Machinery Directive, including the categories of emergency stop, redundancy and diversification in engine power control systems.</td><td>[SW1] Assessment of factual knowledge</td></tr>
<tr><td>[K6_U04] has the ability to self-educate, among other things, in order to improve professional qualifications</td><td>He prrovides the basics for acquiring current knowledge and regulations in the field of industrial electrical engineering. Knows how to prepare for exams for qualifications to perform independent functions in construction.</td><td>[SU2] Assessment of ability to analyse information</td></tr>
<tr><td>[K6_K05] can think and act in an entrepreneurial way</td><td>After receiving a practical engineering task, the student begins to organize a team of contractors, assigns them roles and develops a schedule and accounts for the progress of work.</td><td>[SK5] Assessment of ability to solve problems that arise in practice</td></tr>
<tr><td>[K6_W07] has basic knowledge related to control and automation systems</td><td>The student describes modern solutions of control and automation systems and the principles of their operation.</td><td>[SW3] Assessment of knowledge contained in written work and projects</td></tr>
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<tr><td>Subject contents</td><td>Team execution of a selected project in the field of automation, robotics and control systems, and electrical engineering. Cooperation with project teams from other fields/faculties.</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>Project</td><td>100.0%</td><td>100.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>1. Self-selection of literature appropriate to the topic of the selected project.</td></tr>
<tr><td>Supplementary literature</td><td>1. Grzybowski P.P., Sawicki K.: Pisanie prac i sztuka ich prezentacji. Oficyna wydawnicza "Impuls". Kraków 2010.

2. Wojciechowska R.: Przewodnik metodyczny pisania pracy dyplomowej. Wydawnictwo Difin. 2010.

3. Wolański A.: Edycja tekstów. Praktyczny poradnik. Wydawnictwo PWN. Warszawa 2008.</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
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Example issues/ example questions/ tasks being completed	1. eGokart - implementation of an autonomous driving system. 2. Controllable current/voltage source. 3. Virtual Power Analyzer. 4. Prototype IoT device based on a microcontroller for cloud connection. 5. Determination of object kinematics based on video image.
Work placement	Not applicable

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