GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Team research project I, PG_00064104						
Field of study	Electronics and Telecommunications						
Date of commencement of studies	February 2025		Academic year of realisation of subject		2024/2025		
Education level	second-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish According to the project requirements and assumptions. To obtain a grade: - satisfactory - the following must be completed: schedule, poster, and report; - higher than good - attendance at more than 50% of classes is also required;		
Semester of study	1		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Krzysztof Nowicki				
	Teachers		dr inż. Krzysztof Nowicki				

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	40.0	0.0	40
	E-learning hours included: 0.0						
	eNauczanie source address: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=44803						

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	40	2.0	33.0	75

Subject objectives	The aim of this course is to conduct a process in which students will verify a client's research hypothesis, optimize a process, or conduct work related to developing a product and business model enabling the establishment of a technology company. Students will deepen their theoretical and practical knowledge, learn to apply appropriate analytical and design methods, and develop collaborative skills within a research team. The course aims to prepare students to work independently and collaboratively to solve scientific and practical challenges, while simultaneously developing skills in developing and presenting research results.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U101] is able to formulate complex research problems and adopts appropriate methods, obtaining innovative solutions, cooperating with other people, both as a leader and a team member	When carrying out tasks related to research topics, the student demonstrates the correct methodology for conducting experiments. He or she realizes and understands the need for multi-pronged analysis of obtained results. He or she correctly conducts verification procedures and effectively utilizes them to determine the parameters of unknown elements being studied. He or she actively collaborates within the research team, acting as a leader or team member, communicating effectively, and completing tasks efficiently and on time.	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information
	[K7_K101] acknowledges the importance of knowledge related to the field of study in solving cognitive and practical problems, critically assessing the information obtained	The student can effectively utilize the knowledge acquired during their university education. Using these acquired skills, they can solve a research problem. They can design an experiment to verify the validity of a thesis.	[SK5] Assessment of ability to solve problems that arise in practice [SK2] Assessment of progress of work [SK3] Assessment of ability to organize work [SK1] Assessment of group work skills
	[K7_W101] is able to make an in-depth identification of key objects and phenomena related to the field of study, as well as theories that describe them and applicable analytical and design methods	The student utilizes advanced research techniques to verify a research thesis. They are able to apply knowledge acquired in their field of study appropriately, taking into account practical, experimental, and theoretical aspects. They are able to assemble the appropriate set of scientific tools to achieve the final result. They demonstrate the ability to apply acquired knowledge in practice, proposing solutions tailored to the specific nature of the researched issue.	[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge

Subject contents	Course content – project According to the project requirements specified by the project supervisor. The course begins with an introduction to the research project, which discusses the goals, assumptions, and structure of the research team, including the division of roles and responsibilities. Students become familiar with the principles of research methodology and the selection of appropriate research methods and tools tailored to the specific project. This is followed by an analysis of the research problem, including the identification and precise formulation of the problem, analysis of literature and secondary sources, and examination of the theoretical and practical context. The next stage involves planning and organizing the team's work, including developing a schedule of activities and allocating tasks within the team using project management tools. Research activities include fieldwork, laboratory experiments, or computer simulations, as well as data collection, processing, and analysis, including testing of research hypotheses. During the project, students participate in specialized workshops with experts, aimed at expanding their knowledge and refining their solutions. At the end of the first semester, students prepare a report in a format agreed upon with the project supervisor and a poster summarizing the completed project stages.

Prerequisites and co-requisites	Students are expected to possess knowledge of basic research and analytical methods used within their field of study, demonstrate teamwork skills, and demonstrate effective interpersonal communication. Critical analysis of literature and data, as well as knowledge of the principles of writing scientific reports and presenting results, are also important. Furthermore, students are encouraged to demonstrate openness to interdisciplinary collaboration and consultation with experts, to participate willingly in specialized seminars and workshops, and to take initiative and independently solve research problems.

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written report	70.0%	30.0%
	Attendance at seminars	70.0%	10.0%
	Poster (PL + EN)	70.0%	30.0%
	Project schedule	70.0%	30.0%

Recommended reading	Basic literature	According to the project supervisor's recommendations. Wysocki R. Effective project management. Onepress, 2018
	Supplementary literature	According to the project supervisor's recommendations.
	eResources addresses	
Example issues/ example questions/ tasks being completed	According to requirements and design assumptions.	
Practical activites within the subject	Not applicable	

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