GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Team research project II, PG_00069198		
Field of study	Informatics		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	
Mode of study	Part-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	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	prof. dr hab. inż. Bogdan Wiszniewski	
	Teachers	prof. dr hab. inż. Bogdan Wiszniewski	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	18.0	0.0	18

E-learning hours included: 0.0

Additional information:

Version of the course for part-time studies, level 2 (master's degree).

Student project team works under the supervision of a project supervisor: students in the project team continue to carry out tasks in accordance with the task schedule prepared in semester 2 (course "Team Research Project I nst"). This schedule may be updated due to, for example, a need to change priorities of previously planned detailed tasks, unavailability of resources planned in the original schedule, materialization of previously identified risks, personnel fluctuations, etc. Changes should be introduced in such a way that the basic project goal described in the RB (Requirements baseline) document (part 1 of the final report) can be achieved to the greatest possible extent. The team works in an organized and systematic manner, in accordance with applicable standards for R&D projects. In accordance with the developed schedule, the project supervisor provides essential support, monitors the progress of work accounted for in subsequent project milestones, and acts as an external stakeholder in resolving any problems encountered.

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	18	3.0	54.0	75

Subject objectives

The aim of this course is to continue the research process (started in semester 2), which should culminate in semester 3 with a measurable result in the form of a demonstrator of an innovative IT product, an innovative business process, or experimental results (computer simulations, high-performance computing, machine learning methods, etc.) that will enable verification of the research hypothesis set by the project supervisor. Students learn to apply appropriate analytical and design methods, including risk management, and develop collaborative research team skills. The course prepares students for future work in a research team and teaches them how to meet deadlines while developing skills in developing and presenting research results.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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 given research thesis. He/she is able to apply the knowledge acquired in his/her field of study appropriately, taking into account practical, experimental, and theoretical aspects. The student is able to select and assemble an appropriate set of tools.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
[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 knowledge acquired during the received university education. Using the acquired skills, he/she can solve a research problem, and is able to design an experiment to verify the validity of the given thesis.	[SK1] Assessment of group work skills [SK2] Assessment of progress of work [SK3] Assessment of ability to organize work [SK5] Assessment of ability to solve problems that arise in practice
[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 a correct methodology for conducting experiments. He/she realizes and understands the need for multi-pronged analysis of obtained results. He/she correctly conducts verification procedures and effectively utilizes them to determine the parameters of unknown elements being studied. He/she actively collaborates within the research team, acting as a leader or team member, communicating effectively, and completing tasks efficiently and on time.	[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task

Subject contents

Course content – project

1. Methodologies for team-based design, implementation, testing, launching, documenting, and evaluating unconventional IT solutions.
2. Tools/platforms supporting teamwork (project management, version control, documentation generation, communication)
3. Critical evaluation of the results (solution) for completeness, verifiability, documentation, stability, and reliability
4. Acceptance of the project results (solution) by the external stakeholder (client)
5. Principles for reporting R&D results (technical report, peer-reviewed scientific publication)

At the end of the 2nd semester of the project students prepare a final report in a form agreed with the project supervisor, including specification of the requirements baseline (including acceptance criteria) of the implemented solution, its technical specification (solution architecture, algorithms, data, implementation techniques), tests carried out, the obtained results together with an assessment of their quality and the final evaluation of the implemented solution from the point of view of the originally assumed acceptance criteria (the original research hypothesis). Its final version shall be edited in English. Upon evaluation of its content, the project supervisor may recommend the team to prepare a scientific paper for submission in a peer-reviewed scientific journal (listed by the Ministry of Science and Higher Education) or for inclusion in peer-reviewed proceedings at a scientific conference. The paper should be prepared in a camera-ready format accepted by the selected journal or conference.

Prerequisites and co-requisites

Each student member of the project team is required to complete his/her assigned tasks defined in the "Team Research Project I (nst)" schedule. Students are also expected to demonstrate knowledge of the basic theoretical (knowledge) and practical (skills) topics covered in their previous studies, teamwork skills, and effective interpersonal communication. Critical literature and data analysis abilities are also important, as is familiarity with the principles of writing scientific reports and presenting reserach results. Additionally, students are encouraged to demonstrate openness to interdisciplinary collaboration and consultation with experts, regularly participate in project seminars and meetings, and demonstrate initiative in independently solving research problems.

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>1. Implementation of the detailed task schedule</td><td>50.0%</td><td>30.0%</td></tr>
<tr><td>2. Solution qualification – report part 3 (QR)</td><td>50.0%</td><td>25.0%</td></tr>
<tr><td>3. Solution acceptance – report part 4 (AR)</td><td>50.0%</td><td>25.0%</td></tr>
<tr><td>4. Attendance at the project status meetings</td><td>50.0%</td><td>5.0%</td></tr>
<tr><td>5. Presentation of project results at the faculty summary conference</td><td>50.0%</td><td>5.0%</td></tr>
<tr><td>6. Scientific article (camera-ready submission format)</td><td>50.0%</td><td>10.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>Wysocki R.: Effective Project Management: Traditional, Agile, Extreme, Seventh Edition, John Wiley & Sons, Inc., 2014</td></tr>
<tr><td>Supplementary literature</td><td>Recommended by the project supervisor</td></tr>
<tr><td>eResources addresses</td><td>Supplementary
https://www.gov.pl/web/ncbr/zarzadzanie-projektem-br - National Centre for Research and Development, R&D project management
https://www.projectmanager.com/pm-templates - (PM) ProjectManager: Free project management templates
https://www.atlassian.com/ - JIRA: AI-powered project management and issue-tracking tool developed by Atlassian, designed for teams to plan, track, and release software, bugs, and tasks.
https://about.gitlab.com/solutions/education/ - GitLab: Open source DevOps platform for software lifecycle management
https://discord.com/ - Discord: A free communication platform (text, audio, video) supporting online teamwork
https://www.gov.pl/web/nauka/ujednolicony-wykaz-czasopism-naukowych - Ministry of Science and Higher Education, list of scientific journals and conferences</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Detailed requirements are set by the project supervisor, accordingly to the specific nature of the problem being solved (auxiliary milestones included in the task schedule), assuming the following critical milestones :

• QR (Qualification review) in the 7th week of semester 3 (semester II of the course), in which a QR document (part 3 of the final report) should be presented describing the tests carried out on the developed solution, assessing its stability/repeatability and characterizing the obtained results in terms of their completeness, verifiability and reliability, as well as availability of the documentation produced;
• AR (Acceptance Review) in the 15th week of semester 3 (semester II of the course), in which the AR document (part 4 of the final report) must be submitted, describing for each acceptance criterion specified in the RB document (part 1 of the report) the activities performed, data used, results obtained, their evaluation and justification of the decisions made..</td></tr>
<tr><td>Practical activites within the subject</td><td colspan="2">Not applicable</td></tr>
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