

**Faculty of Electronics (W4) / Department of Field Theory, Electronic Circuits and Optoelectronics (K35W04D02)**

**SUBJECT CARD**

Name of subject in Polish: **Projekt zespołowy i przedinżynierski**

Name of subject in English: **Team and preengineering project**

Main field of study (if applicable): **Electronic and Computer Engineering (ECE)**

Profile: **academic**

Level and form of studies: **1st level, full-time**

Kind of subject: **obligatory**

Subject code: **ECEA00106**

Group of courses: **No**

	Lecture	Exercise	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)				75	
Number of hours of total student workload (CNPS)				150	
Form of crediting				Crediting with grade	
For group of courses mark (X) the final course				X	
Number of ECTS points				5.0	
including number of ECTS points for practical (P) classes				5.0	
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)				5.0	

**PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**

**SUBJECT OBJECTIVES**

- C1. Acquiring the ability to carry out their engineering tasks as part of a complex engineering task
- C2. Gain experience in teamwork, including the ability to planning and scheduling, intra-team communication, perform the role of a team member or leader, the opportunity to demonstrate their creativity, openness to innovative approaches focused on the team's success

### SUBJECT LEARNING OUTCOMES

Relating to skills:

PEU\_U01 - is able to perform tasks in the implementation of an electronic or automation & robotics or IT or mixed project

PEU\_U02 - is able to prepare the project's documentation

Relating to social competences:

PEU\_K01 - can work with the team, has a consciousness of their role in the project and attention to the timely execution of the tasks assigned

### PROGRAM CONTENT

Project		Number of hours
Pr1	Determining the subject and purpose of the project (eg., web information system, a complex system database, a comprehensive project of computerization), the allocation of roles in the project, the initial allocation of tasks to be performed, the choice of team leader	4
Pr2	Introduction to the problem area of the project. Overview of solutions in the area of the problem - an analysis of the methods and applied information technology.	4
Pr3	Analysis of user requirements, including an analysis of the economic impact of the project implementation. Development of project assumptions. Determining the initial timetable for action (in the form of Gantt chart) and the principles of intra-team and teacher communication	8
Pr4	Analysis of risks in the project, establish emergency scenarios and ways to monitor risks. Planning for quality management principles in the project, development of quality control procedures. Establish rules for the results subsequent stages justification of a project and rules for documenting the stages	4
Pr5	The implementation of individual project tasks according to the schedule of the first stage of the project	12
Pr6	The implementation team meetings with the teacher - in accordance with the agreed schedule (milestone)	4
Pr7	The implementation of individual project tasks by scheduling the second stage of the project	12
Pr8	Presentation of the results of the executed project, discuss problems, the assessment of the completed project by the teacher. Verification of the project. Determination of possible changes	8
Pr9	Presentation of final project documentation in writing form	4
	Total hours:	60

### TEACHING TOOLS USED

- N1. Multimedia presentation
- N2. Discussion
- N3. Consultation
- N4. Own work

<b>EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT</b>		
Evaluation: F — forming (during semester), C — concluding (at semester end)	Learning outcome code	Way of evaluating learning outcome achievement
F1	PEU_U01, PEU_K01	Rating presenting subsequent stages of the project and team skills: the timetable, the activity of the team, the ability to apply the principles of project management
F2	PEU_U02	Evaluation of the quality of the executed project and design documentation
P = 0.4*F1 + 0.6*F2 (in order to pass the course, both F1 and F2 must be positive)		

<b>PRIMARY AND SECONDARY LITERATURE</b>
<p><b>PRIMARY LITERATURE:</b></p> <p>[1] Collective work, A Guide to the Project Management Body of Knowledge (PMBOK Guide), 2009</p> <p>[2] J. Robertson, Robertson, S., Full system analysis, WNT Warsaw, 2003</p> <p>[3] Dennis A., Wixam B.H., System Analysis, Design, John Wiley &amp; Sons, 2003</p> <p><b>SECONDARY LITERATURE:</b></p> <p>[1] The literature recommended by the teacher for specific project subjects.</p>

<b>SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)</b>
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