POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Organisation and financing research and development activities

Course

Field of study	Year/Semester
automatic control and robotics	1/1
Area of study (specialization)	Profile of study
	general academic
Level of study	Course offered in
Second-cycle studies	polish
Form of study	Requirements
part-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
8		
Tutorials	Projects/seminars	
	8	

Number of credit points
2

Lecturers

Responsible for the course/lecturer:

PhD eng. Tomasz Piaścik

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Faculty of Control, Robotics and Electrical
Engineering

ul. Piotrowo 3A 60-965 Poznań

Responsible for the course/lecturer:

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Prerequisites

1. Elementary knowledge of project management and economics.

2. Student is able to obtain information from bibliography, databases and other sources; has the ability to self-educate.

Course objective

1. To provide students with knowledge regarding the understanding of the economic, legal and social aspects of conducting and financing research and development activities.

2. Developing students' skills in obtaining funding for R&D activities.

Course-related learning outcomes

Knowledge

1. Student has the knowledge necessary to understand the economic, legal and social aspects of engineering activities and the possibilities of their application in practice; [K2_W14]

2. Student has knowledge of running a business, engineering project management and quality management; [K2_W15]

3. Student knows the rules and procedures for creating individual entrepreneurship in automation and robotics; [K2_W17]

Skills

1. Student is able to analyze and interpret project technical documentation and use scientific literature related to a given problem; [K2_U2]

2. Student is able to identify non-technical aspects, including environmental, economic and legal, when formulating and solving tasks involving the design of automation and robotics systems; [K2_U14]

3. is able to make a preliminary economic analysis of engineering activities undertaken; [K2_U18]

Social competences

1. Student is aware of the responsibility for their own work and readiness to comply with the principles of teamwork and taking responsibility for jointly implemented tasks; is able to lead a team, set goals and set priorities leading to the task; [K2_K3]

2. Student is ready to think and act in an entrepreneurial manner; [K2_K5]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:

a) in the scope of lectures:

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based on homework assignments and answers to questions about the material discussed in previous lectures,

b) in the scope of the project:

based on assessment of knowledge and understanding of current issues presented in the course of the subject.

Programme content

The lecture program includes the following topics:

1. Institutions intermediating in financing B&R activities in Poland. Legal basis and amount of funding. Examples of projects that received support. Types of R&D works related to levels of technological readiness (basic research, industrial research, development works, pre-implementation works).

2. Planning and stages of preparation of the grant application for financing of B&R activities.

3. Project selection criteria - R&D work plan and milestones, R&D team, technical resources as well as intangible and legal property.

4. Project selection criteria - cost eligibility and adequacy, types of costs.

5. Project selection criteria - market demand and implementation profitability, how to implement project results.

6. Formal criteria and access criteria (National Smart Specializations, management and project management, impact on the principle of sustainable development, intellectual property protection plan).

The design class program includes:

1. Presentation of an exemplary open competition. Preparation of the application in the current competition.

2. Preparation of the schedule and work plan aimed at developing the product / service in accordance with the technological readiness levels. Determination of milestones and their measurable parameters.

3. Selection of R&D staff, technical resources and intangible assets necessary for the proper implementation of the project.

4. Preparation of the project cost estimate. Eligibility and cost adequacy analysis.

5. Developing the implementation plan and analyzing the profitability of implementing project results.

Teaching methods

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1. Lecture: presentation and discussion of source data, multimedia presentation illustrated with literature data

2. Project classes: familiarizing with the requirements of the current competition of the selected intermediate body, iterative preparation of the application for funding in the current competition, taking into account the requirements of the competition

Bibliography

Basic

1.   Podręcznik Frascati, Pomiar działalności naukowo-technicznej i innowacyjnej, OECD, 2015

2.   Poradnik wnioskodawcy, NCBR, 20193.

3.   Documentation of the selected open NCBR competition.

Additional

1.   Ustawa z dnia 30 kwietnia 2010 r. o Narodowym Centrum Badań i Rozwoju (online in Internetowym Systemie Aktów Prawnych)

2.   Ustawa z dnia 20 lipca 2018 r. - Prawo o szkolnictwie wyższym i nauce (online in Internetowym Systemie Aktów Prawnych)

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	16	1,0
Student's own work (literature studies, preparation of application for funding) [1]	34	1,0

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[1] delete or add other activities as appropriate