COURSE DESCRIPTION CARD - SYLLABUS

Course name
Preparation of the thesis

Course

Field of study
Automatic Control and Robotics
Area of study (specialization)
Intelligent control systems
Level of study
Second-cycle studies
Form of study
full-time

Year/Semester
2/3
Profile of study
general academic
Course offered in
polish
Requirements
compulsory

Number of hours

Lecture
0
Laboratory classes
0
Other (e.g. online)
0
Tutorials
0
Projects/seminars
30

Number of credit points

20

Lecturers

Responsible for the course/lecturer:
Master's thesis supervisor

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Faculty of Control, Robotics and Electrical Engineering

ul. Piotrowo 3a, 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

Knowledge: The student starting this subject should have basic knowledge related to the selected topic of the master's thesis in the field of automation and industrial electronics and know the basic methods, techniques and tools used in solving tasks in this field.

Skills: The student should have the ability to solve basic problems in the selected field and integrate knowledge from various areas of control system and industrial electronics and the ability to obtain information from the indicated sources. He should also understand the need to expand his competences.

Social competences: The student must present attitudes such as honesty, responsibility, perseverance, cognitive curiosity, creativity, personal culture, respect for other people.

Course objective

The main goal is for students to carry out specific scientific research or a complex project in the field of control systems, automation and industrial electronics and to prepare a master's thesis

Course-related learning outcomes

Knowledge

1. Has an organized and in-depth knowledge within the selected automatics and robotics areas. [K2_W10]

2. Has the knowledge necessary to understand the economic, legal and social aspects of engineering activities and how to apply them in practice [K2_W14]

3. The graduate knows and understands basic terms and principles of intellectual property protection and copyright; he can use patent information resources, [K2_W16]

Skills

1. Is able to use bibliography information, databases and other sources critically; . [K2_U1].

2. Has the ability to self-educate in order to improve and update one's professional competences. Is able to plan one's own lifelong learning and to guide others in this area [K2_U6].

3.Is able to use information and communication technology; [K2_U8]

4. The graduate can formulate and verify (by simulation or experiment) hypotheses related to engineering tasks and simple research problems in automation and robotics; [K2_U15]

5. Can manage the work of a team. Can manage a team and estimate the time needed to complete a task; can develop a work schedule and complete tasks, ensuring that deadlines are met.[K2_U24].

Social competences

1.understands the need and knows the possibilities of continuous education - improving professional, personal and social competences, can inspire and organize the learning process of others; [K2_K1].

2. The graduate is aware of responsibility for own work and willingness to conform to 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 implementation of the task. [K2_K3]

3. Is aware of the social role of a technical university graduate and understands the need to formulate and communicate to the society (in particular through mass media) information and opinions concerning achievements of automation and robotics in research and application works and other aspects of engineering activities; [K_K6].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Summative assessment:

Checking the assumed learning outcomes is carried out by:

1. continuous assessment, through the students' report on the progress of work related to the implementation of the diploma thesis

2. assessment of the increase in the ability to use the learned principles and methods

3. evaluation of quality of documentation and timely execution of individual tasks?

4. if the work is carried out as a team - evaluation of ability to work in a team

Programme content

The subject of the master's thesis is most often the implementation of a research or project- defined by the thesis supervisor. The project is carried out under the supervision of a supervisor or a supervisor and a secondary supervisor appointed by the supervisor. This task may include designing, implementing and deployment a system in the field of automation and industrial electronics based on the indicated technologies or solution (including implementation and tests) of a research problem.

A well-run project should be based on a recognized project implementation methodology, and the progress of implementation should be shown with appropriate indicators, models and effects. The end result of the project is a report (publication) on the implementation of scientific research, working prototype or fully functional software, prototypes of the developed units. Additionally, the project's appendix is its technical and operational documentation.

Teaching methods

1. consultations on the implemented projects, workshops, discussions on the presented projects

Bibliography

Basic

1. The subject literature indicated by the thesis supervisor and found by the student in the indicated bibliographic databases

Additional

1. Pawluk Krystian. Jak pisac teksty techniczne poprawnie. Publikacja Polskiego Komitetu Terminologii Elektrycznej

2. Wydawnictwo Politechniki Poznańskiej: Vademecum autora

Breakdown of average student's workload

	Hours	ECTS
Total workload	500	20,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, project preparation) [1]	470	19,0

[1] delete or add other activities as appropriate