



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar [S2AiR2-SIiB>SD]

Course

Field of study

Automatic Control and Robotics

Year/Semester

2/3

Area of study (specialization)

Intelligent and Unmanned Systems

Profile of study

general academic

Level of study

second-cycle

Course offered in

polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

30

Number of credit points

2,00

Coordinators

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Lecturers

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 robotics and know the basic methods, techniques and tools used in solving tasks in this field. Social competences: The student must present attitudes such as honesty, responsibility, perseverance, cognitive curiosity, creativity, personal culture, respect for other people. Skills: The student should have the ability to solve basic problems in the selected field and integrate knowledge from various areas of computer science and the ability to obtain information from the indicated sources. He should also understand the need to expand his competences.

Course objective

1. Provide students with basic knowledge of the methodology of preparing and presenting scientific studies, including diploma theses in the field of automation and robotics. 2. Developing students' skills in solving problems related to acquiring knowledge from selected sources, integrating and interpreting the obtained information and presenting the results of scientific research. Expanding the knowledge of methods, techniques and tools related to conducting research in a specific field.

Course-related learning outcomes

Knowledge:

A student:

1. Has an extended knowledge of selected areas of automation and robotics [K2_W10].
2. Has knowledge of development trends and the most important new achievements in the field of automation and robotics and related scientific disciplines [K2_W12].
3. Has a basic knowledge of the life cycle of automation and robotics systems as well as control and measurement systems [K2_W13]
4. Knows and understands the basic concepts and principles of the protection of intellectual property and copyright. Can use the resources of patent information [K2_W16]

Skills:

A student:

1. Is able to critically use literature information, research data and other sources in Polish and a foreign language [K_U1].
2. Is able to analyze and interpret technical design documentation and use the scientific literature related to a given problem [K_U2]
3. Can communicate using various techniques in the professional environment and in other environments, also in a foreign language [K_U3]
4. Can prepare a scientific study in the mother tongue and a short scientific report in English, presenting the results of own research [K_U4]
5. Can prepare and present in Polish and a foreign language an oral presentation on specific issues in the field of automation and robotics [K_U5]
6. Has self-education skills in order to raise and update professional competences [K_U6]
7. Can use information and communication techniques [K_U8]

Social competences:

A student:

1. Understands the need and knows the possibilities of continuous training, improving professional, personal and social skills, can inspire and organize the learning process of other people [K_K1].
2. Is aware of the need for a professional approach to technical issues, meticulous reading of the documentation and environmental conditions in which the devices and their components can function [K_K4]
3. Is aware of the social role of a technical university graduate and understands the need to formulate and transmit to the society (in particular through the mass media) information and opinions on the achievements of automation and robotics in the field of research and application works and other aspects of engineering activities [K_K6]
4. Makes efforts to provide such information and opinions in a commonly understandable manner with justification of various points of view [K_K6].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

- Assessment of multimedia presentations regarding diploma theses
- Assessment of participation in the discussion on the presentations presented
- Analysis and discussion of different methods of solving the problem
- Time management skills in designing and implementing project work and presenting results
- Rewarding the growth of skills in using the learned principles and methods

Programme content

The diploma seminar is devoted to the methodology of developing the results of diploma projects and, in particular, to their public presentation. Before students present their works on the group forum, they become familiar with the editorial rules for diploma thesis and methodology of its preparing and giving a presentation. This takes the form of presentations prepared by the lecturer, and their finale includes an academic discussion and case analysis. In the second part of the semester, as part of the classes, students prepare papers on the topic discussed in their diploma theses. During workshops related to the presentation of diploma projects, the instructor tries to develop students' awareness of the social role of a technical university graduate, and especially understanding of the need to formulate and convey to society, in particular through the mass media, information and opinions regarding technological achievements, research work and other aspects technical and scientific activities.

During individual presentations, the remaining student audience is responsible for: 1. actively participate in classes, 2. indicate doubts / ambiguities regarding the presented material and solutions, 3. make suggestions for possible improvements and deepening the topic, 4. participate in the discussion scheduled after each presentation.

Teaching methods

1. A multimedia presentation, a presentation illustrated with the examples given on the board, a multimedia show
2. Presentation of the obtained results, demonstration of the developed or extended software, questions and discussion

Bibliography

Basic:

1. Profesjonalna prezentacja multimedialna. Jak uniknąć 27 najczęściej popełnianych błędów, Lenar P., Helion, Gliwice, 2010
2. Sekrety skutecznych prezentacji multimedialnych. Wydanie II rozszerzone, Lenar P., Helion, Gliwice, 2011.

Additional:

1. Prezentacja, która robi wrażenie. Projekty z klasą, Williams R., Helion, Gliwice, 2011.
2. Jak pisać teksty naukowe?, Jolanta Maćkiewicz. - [Wyd.2 poszerz., dodr.]. - Gdańsk: Uniwersytet Gdański, 2001.
3. Metodologia nauk, Jerzy Apanowicz. - Toruń : Towarzystwo Naukowe Organizacji i Kierownictwa Dom Organizatora, 2003.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00