COURSE DESCRIPTION CARD - SYLLABUS

Course name
Diploma seminar [S1AiR2>SD]

Course

Field of study
Automatic Control and Robotics

Year/Semester
4/7

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
0

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
15

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

A student accesing the course should have fundamental knowledge and skills, acquired during the previous years of study, enabling a preparation of a diploma thesis as a team work. Moreover, in terms of social competences, the student should present such attitudes as honesty, responsibility, perseverance, congnitive curiosity, creativity, personal culture, respect to other people.

Course objective

The main objectives of the course is a presentation to the students the fundamental rules of preparation and presentation of the diploma thesis results (on the substantial, editing, and organizational sides), and presentation of basic rules and good practices for practical realization of these tasks. An additional aim is to stimulate the students' awarness of a role which a graduate of a technical university should play in a society, and awarness of necessity for professional approach to solving the technical problems and for taking a responsibility for assigned tasks.

Course-related learning outcomes

Knowledge:
1. A student knows the rules of an engineering diploma thesis preparation, and also knows good practices of work organization during preparation of the diploma thesis.
2. A student knows the rules of oral and multimedia presentation of the diploma thesis results, using selected multimedia techniques and tools.
3. A student knows and understands the basic rules and regulations applicable in the Poznań University of Technology concerning the preparation, assessment, defending, and archiving of the diploma thesis.
4. A student knows interpretation of the basic law concering a protection of intellectual property in a context of the preparation and authorship of the diploma thesis.

Skills:
1. A student is able to communicate and present the results of his/her own works in a professional community, in the Polish and foreign language, using selected information-communication techniques.
2. A student is able to develop a documentation on a realized engineering task and present the results of the task in a professional community.
3. A student is able to learn by himself/herself in order to improve and update his/her level of professional competences.

Social competences:
1. A student understands the need and knows possibilities of life-long learning in order to rise a level of professional, personal, and societal competences; a student is able to inspire and organize a learning process of other people.
2. A student is aware of a responsibility for the his/her own work duties and is ready to cooperate in a design team, taking a responsibility for the commonly performed tasks.
3. A student is able to work in a team and to determine the objectives and task priorities for the team.
4. A student is aware of the need of a professional approach to the technical issues, and also the need of a thorough realization of the tasks, preserviation of the professional ethic rules, and respectation of the other views and cultures.
5. A student is aware of a role which a graduate of a technical university plays in a society; a student understands the need and takes opportunities for transfering to the society, in a simple way, the informa-tion and opinions concering the achievements of the automation & robotics field and other issues of an engineering activity.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The student teams (of 2-4 persons) prepare two multimedia presentations and the corresponding oral talks on the meaning and importance of a diploma theme, on the main assumptions and a way the students are going to solve the problem, and on the results obtained during realization of the diploma the-
sis. The first presentation and the oral talk is prepared in English, while the second one is prepared in Polish. The two talks accompanied with slides are presented against the whole seminar group; a quality of any presentation is independently assessed (a separate rating is given for any student in the team). Activity of other students during a discussion on a presentation and during Q&A sessions is also assessed. The final rating 'FR' from the course is computed according to the rule: FR = 0.35*OWI + 0.35*OWII + 0.1*OA + 0.2*OO, where OWI is a rating obtained for the forst presentation, OWII is a rating obtained for the second presentation, OA is a rating obtained for the activity during the discussion and Q&A sessions, whereas OO is a rating obtained for the presence during the classes. To pass the course a student must earn FR>=3.0.

Programme content

The course covers the following topics:
- characterization of the engineering diploma thesis,
- rules for preparation of an engineering diploma thesis,
- basic rules and regulations concerning a submission and usage of an engineering diploma thesis,
- good practices and rules of presenting the results of an engineering diploma thesis,
- practical excercising of presenting the results of an engineering diploma thesis,
- further education possibilities after an engineering-level study.

Course topics

- A frame structure and a content breakdown of the mulitmedia presentation on a diploma thesis.
- Description of fundamental rules and good practices for multimedia and oral presentions of the diploma thesis results.
- Discussion of the most frequent mistakes and awkwardnesses during presenting and defending the results of the diploma thesis.
- Discussion of basic regulations concering the diploma thesis (what is the diploma thesis and what it should reveal, the authorship rules concering the diploma thesis, archiving the thesis work).
- Discussion of the content breakdown for the diploma thesis and discussion of the meaning of the particular content; remarks on editing (the wording, mathematical content, tables, pictures, and plots), the ways of assessing the results and formulating claims and conclusions (the rule of the rational acceptance of claims), quality of the language and professional terminology used, citations of the bibliography, admissible ways of using materials protected by copyrights.
- Planning the works and division of the work on main tasks during realization of the diploma projects (the Gantt diagram).
- A procedure of preparation, checking, and submitting the diploma thesis.
- Discussion of the diploma thesis defence procedure and diploma exam procedure.
- Short discussion of possibilities for learning continuation on the second level and third level of study.

Teaching methods

Classes are in the form of 7-8 meetings in a seminar groups, organized every two weeks. During the meetings the following teaching methods are used:
- presentations (slides) with an oral discussion of selected parts of the programme content performed by a teacher.
- multimedia presentations accompanied by oral talks (prepared by the student teams) on the diploma thesis projects,
- the Q&A sessions and discussions conducted in a seminar group on the diploma thesis presented by the student teams.

Bibliography

Basic:
[1] Diploma thesis and diploma examination procedure, Faculty of Control, Robotics, and Electrical Engineering, material available at: https://creef.put.poznan.pl/en/education-quality/procedures .

Additional:
[2]Regulamin studiów pierwszego i drugiego stopnia uchwalony przez Senat Akademicki Politechniki Poznańskiej, Uchwała Nr 42/2020-2024 z dnia 31 maja 2021 r.
[3] Zasady przeprowadzania egzaminów dyplomowych z wykorzystaniem środków komunikacji elektronicznej, Załącznik nr 2 do Zarządzenia nr 29 Rektora PP z dnia 29 maja 2020 r. (RO/V/29/2020).
[4] Nie za krótkie wprowadzenie do systemu LaTeX 2e, T. Oetiker, T. Przechlewski, R. Kubiak et al., 2007.
[5] The Beamer class. User guide for version 3.67, T. Tantau, J. Wright, V. Miletić, 2022.
[6] Elementy teorii poznania, logiki formalnej i metodologii nauk, T. Kotarbiński, DeAgostini, Ediciones Altaya Polska, 2002.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	35	1,50