COURSE DESCRIPTION CARD - SYLLABUS

Course name
Diploma seminar [S1AiR1E>SD1]

Course

Field of study
Automatic Control and Robotics

Year/Semester
3/6

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
English

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

3,00

Coordinators

prof. dr hab. inż. Piotr Skrzypczyński
piotr.skrzypczynski@put.poznan.pl

Lecturers

Prerequisites

The student should have basic knowledge of the foundations of robotics, measuring systems, manipulating and mobile robots, robot programming, computer science and artificial intelligence. Should be able to obtain information from the indicated sources. They should also understand the necessity to expand their competences and acquire new skills.

Course objective

The aim of the seminar is to prepare students and equip them with the skills necessary to properly edit an engineering thesis. In particular, typical parts of the thesis are discussed: abstract, introductory chapters, conclusion of the thesis, selection and editing of literature items. The seminar also aims to consolidate practical text editing and presentation skills. In addition, as part of the seminar, BSc thesis topics are presented and proposed to students at the close of semester 6.

Course-related learning outcomes

Knowledge:
Is familiar with the current status and latest development trends of the field of automation and robotics [K1_W21 (P6S_WG)].

Knows the methods, techniques, tools and materials used in solving simple engineering tasks in the field of automation and robotics [K1_W23 (P6S_WG)].
Knows and understands the basic concepts and principles of industrial property protection and copyright; is able to use patent information resources [K1_W26 (P6S_WK)].
Skills:
Can communicate using a variety of techniques in professional and other communities [K1_U3 (P6S_UK)].
Can prepare documentation concerning the realisation of an engineering task in Polish and foreign language [K1_U4 (P6S_UW)].
Is able to give a presentation of results on an engineering task in Polish and foreign language [K1_U5 (P6S_UK)].
Has self-education skills to improve and update professional competences [K1_U6 (P6S_UU)].
Is able to use information engineering and communication techniques [K1_U8 (P6S_UW)].
Social competences:
Is ready to critically assess his/her knowledge; understands the need for and knows the possibilities of continuous training - improving professional, personal and social competence, is able to inspire and organize the learning process of others [K1_K1 (P6S_KK)].
Is aware of the responsibility for his/her own work and is ready to follow the rules of teamwork and take responsibility for jointly implemented tasks; is able to lead a small team, set goals and determine priorities leading to the realisation of the task; is ready toto play a responsible professional role. [K1_K3 (P6S_KR)].
Is ready to prioritise in order to achieve a task defined by himself or others [K1_K4 (P6S_KO)].
The graduate is aware of the need for a professional approach to technical issues, meticulous familiarization with the documentation and environmental conditions in which the equipment and its components can operate. The graduate is ready to observe the rules of professional ethics and to demand it from others, to respect the diversity of opinions and cultures [K1_K5 (P6S_KR)].
The graduate is ready to fulfil social obligations and co-organise activities for the benefit of the social environment; is aware of the social role of a graduate of a technical university and understands the need to formulate and convey to the public (in particular through the mass media) information and opinions on the achievements of automation and robotics and other aspects of engineering activities; the graduate makes efforts to communicate such information and opinions in a generally understood manner [K1_K7 (P6S_KO)].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Preparation of a report or presentation demonstrating preparation for an engineering thesis in the area covered in the course. Participation in the discussion about it. Participation in class and the report or presentation are assessed.

Programme content

- Methods and good practices for professional preparation of technical and scientific documents and theses.
- Intelectual property management and legal issues related to preparation of the thesis.
- Computational methods and tools necessary for the analysis of experimental results.
- Methods and tools for professional preparation of technical and scientific documents (LaTeX, BibTeX)

Course topics

- Structure and content division of a multimedia presentation on the thesis.
- Key principles and best practices for presenting thesis results and delivering the accompanying lecture.
- Common mistakes and awkwardness during thesis presentation and defense.
- Basic regulations concerning the thesis, including its purpose, copyright issues, and archiving.
- Division of the thesis text into main parts, their significance, text composition, mathematical formulas, tables, figures, evaluation of results, formulation of conclusions, language quality, terminology, bibliography citation, and acceptable use of copyrighted materials.
- Planning tasks and dividing work in group thesis projects (Gantt chart).
- Procedure for preparing, reviewing, and submitting the thesis.
- Procedure for thesis defense and final examination.

Teaching methods

Case study, presentation.

Bibliography

Basic:
1. A. Dudziak, A. Żejmo, Redagowanie prac dyplomowych – wskazówki metodyczne dla studentów. Difin, 2008.
2. J. Maćkiewicz, Jak pisać teksty naukowe?, Uniwersytet Gdański, 2001.
3. P. Oliver, Jak pisać prace uniwersyteckie : poradnik dla studentów, Wyd. Literackie, 1999.
4. Umberto Eco, How to Write a Thesis, MIT Press 2015.
Additional:
1. J. Pieter, Ogólna metodologia pracy naukowej, Ossolineum, 1967.

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	15	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	60	2,00