



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar

### Course

Field of study

Automation and Robotics

Area of study (specialization)

Level of study

Second-cycle studies

Form of study

part-time

Year/Semester

2/4

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

18

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

dr hab. inż. Tomasz Pajchrowski

email: tomasz.pajchrowski@put.poznan.pl

tel. 61-6652385

Wydział Elektryczny

ul. Piotrowo 3A, 60-965 Poznań

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### Prerequisites

She/He is familiar with the current status and the latest development trends in the field of automation and robotics. The topic of the master's thesis selected and discussed with the supervisor.

### Course objective

Expanding knowledge in the field of the subject of the diploma paper. To get to know selected issues concerning the collection of necessary materials and the rules of preparation/editing of the Master's thesis.



## Course-related learning outcomes

### Knowledge

### Skills

K2\_U3 is able to communicate using a variety of techniques in professional and other environments, also in a foreign language;

K2\_U4 is able to prepare a scientific paper in his/her native language and a short scientific report in English, presenting the results of his/her own research;

K2\_U5 has the ability to prepare and deliver in Polish and foreign language an oral presentation on a specific topic in the field of automation and robotics

K2\_U7 has language skills in the field of automation and robotics, in compliance with the requirements specified for the B2+ level of the Common European Framework of Reference for Languages;

K2\_U14 in formulating and solving tasks involving the design of automation and robotics systems, is able to notice their non-technical aspects, including environmental, economic and legal ones;

### Social competences

K2\_K1 understands the need and knows the opportunities of continuous education - improving professional, personal and social competences, is able to inspire and organise others' education process;

K2\_K2 is aware of the importance of and understands non-technical aspects and effects of engineering activity, including its influence on the environment and the related responsibility for taking decisions; is willing to develop professional achievements

K2\_K6 is aware of the social role of a technical university graduate and understands the need to formulate and communicate to the society (particularly through mass media) information and opinions on the achievements of automation and robotics in the field of research and application works, as well as other aspects of engineering activity; he/she makes efforts to convey such information and opinions in a commonly understood way, justifying various points of view;

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

- Evaluation of progress of the diploma thesis
- Evaluation of multimedia presentations concerning diploma theses
- Evaluation of participation in the discussion on the papers
- Analysis and discussion of different methods of problem solving
- The ability to manage time in the design and implementation of the project work
- Assessment of incremental skills in the use of known principles and methods



- Current progress in the completion of tasks
- Assessment and defence by the student of the report on the implementation of the selected task

### Programme content

- Principles and standards of creating scientific papers and diploma theses (bibliography, illustrations, citations).
- Copyright and related rights in the practice of preparing diploma theses.
- IT tools necessary for analysing the results of experiments and visualisation.
- IT tools useful in preparing the diploma paper (LaTeX, BibTeX).

### Teaching methods

#### Project

Depending on the research group: lecture with multimedia presentation (including: drawings, photos, animations, sound, films) supplemented with examples given on the blackboard, demonstration, performing experiments, .team discussion, case study.

### Bibliography

#### Basic

1. Maria Węglińska, Jak pisać pracę magisterską? Impuls 2016
2. Jak pisać prace uniwersyteckie : poradnik dla studentów, Paul Oliver ; przekł. [z ang.]. - Kraków : Wydaw. Literackie, 1999.
3. Dobre rady dla piszących teksty naukowe, David Lindsay ; przeł. [z ang.].- Wrocław : Politechnika Wrocławska, 1995.
4. Bibliografia wyszukana przez studenta.
5. <https://www.latex-project.org/about/>
6. <https://www.latex-tutorial.com/quick-start/>

#### Additional

1. Jak pisać teksty naukowe?, Jolanta Maćkiewicz. - [Wyd.2 poszerz., dodr.]. - Gdańsk : Uniwersytet Gdański, 2001.
2. Metodologia nauk, Jerzy Apanowicz. - Toruń : Towarzystwo Naukowe Organizacji i Kierownictwa Dom Organizatora, 2003.



### Breakdown of average student's workload

	Hours	ECTS
Total workload	40	2,0
Classes requiring direct contact with the teacher	18	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	22	1,0

<sup>1</sup> delete or add other activities as appropriate