



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Engineering thesis

### Course

Field of study

Education in Technology and Informatics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

4/7

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

75

Tutorials

Projects/seminars

### Number of credit points

15

### Lecturers

Responsible for the course/lecturer:

dr hab. Dobrosława Kasprowicz

Responsible for the course/lecturer:

dobroslaw.kasprowicz@put.poznan.pl

Faculty of Material Science and Technical

Physics

Piotrowo 3, 60-696 Poznań

### Prerequisites

Knowledge of experimental physics and basic specialist knowledge in the field of information systems and the operation of computer networks in the scope of the curriculum content implemented in semesters 1-6 at the 1st degree of education in the field of Technical and IT Education. The ability to solve problems in the field of physics and computer science based on the acquired knowledge, the ability to obtain information from the indicated sources. Understanding the need to expand your competences.

### Course objective

1. Teaching students to use the acquired knowledge and skills to solve a complex structural or scientific problem.



2. Developing the ability to use literature sources and the method of quoting sources.
3. Developing the ability to create experimental and IT documentation.
4. Developing the ability to write a scientific text.

### Course-related learning outcomes

#### Knowledge

W01 has an ordered knowledge of the basic physical phenomena in the field of selected issues of experimental physics K1\_W03

W02 has knowledge of information systems including the architecture of computer and operating systems K1\_W14

W03 has basic knowledge of the theory, technology and operation of computer networks; knows the properties and principles of operation of various network devices K1\_W15

W04 has knowledge of computer-aided technical education K1\_W20

W05 knows the state of knowledge concerning the issues included in the thesis K1\_W17

#### Skills

U01 can, on the basis of literature, independently make a preliminary analysis of experimental / programming results and draw conclusions K1\_U01, K1\_U02

U02 can prepare a written work independently and efficiently present in Polish an oral presentation of the work with the description of the experiment / programming and with well-documented and interpreted results of the experiment K1\_U03

#### Social competences

K01 is able to work independently on a given task, demonstrates responsibility in this work K1\_K01

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Effect	Form of evaluation	Evaluation criteria
W01-W05	evaluation of the thesis	50.1% -70.0% (3)
	evaluation of the oral presentation of work	70.1% -90.0% (4)
	assessment of responses to presentation questions from	90.1% (5)
U01, U02	thesis grade	50.1% -70.0% (3)
	evaluation of the oral presentation of work	70.1% -90.0% (4)
	assessment of responses to presentation questions from	90.1% (5)
K01	thesis grade	50.1% -70.0% (3)



evaluation of the oral presentation of the work	70.1% -90.0% (4)
assessment of responses to presentation questions from	90.1% (5)

### Programme content

1. Principles of preparing the thesis.
2. Tips for preparing a presentation in Power Point programs.
3. The current state of knowledge in the field of selected issues of experimental physics and computer science.
4. Additional content depending on the subject of the implemented engineering thesis.

### Teaching methods

Laboratory exercises: practical exercises, performing experiments, discussion, team work.

### Bibliography

Basic

Selected individually by the student in accordance with the topic of the work.

Additional

Selected individually by the student in accordance with the topic of the work.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	305	15,0
Classes requiring direct contact with the teacher	95	4,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	155	7

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