



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar II

### Course

Field of study

Mathematics in Technology

Area of study (specialization)

Programming in technology

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

2/3

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

30

### Number of credit points

14

### Lecturers

Responsible for the course/lecturer:

dr hab. inż. Katarzyna Filipiak

Responsible for the course/lecturer:

Institute of Mathematics

Faculty of Control, Robotics and Electrical

Engineering

Poznań University of Technology

### Prerequisites

Student has the knowledge due to the program of the direction of study; is experienced in realization of engineering thesis; has ability to get knowledge from various sources; is able to prepare multimedia presentation

### Course objective

The aim of the course is to teach students how to write master dissertation, how to learn for master exam and how to perform discussions; also verification of the advance of master thesis.

### Course-related learning outcomes

Knowledge

1. Student has extended and in-depth general knowledge of various branches of higher mathematics,



including theorems and proofs, and advanced detailed knowledge about the application of mathematical techniques, methods and tools in engineering and technical sciences

2. Student has deep knowledge devoted to the topic of master thesis
3. Student knows and understands the impact of mathematics on the progress of science
4. Student has expanded knowledge about the latest development trends in scientific disciplines in the field of exact and natural sciences and in the field of engineering and technical sciences
5. Student knows and understands the concepts and principles in the field of intellectual property protection, with particular emphasis on copyright and patent laws

#### Skills

1. Student can use knowledge of higher mathematics
2. Student is aware of the importance of team effort for the success of various ventures, is able to interact with other people as part of team work and manage team work; is able to develop and implement a work schedule to ensure that the deadline is met
3. Student is able to independently acquire knowledge and develop professional skills, independently designs the path of education and consistently strives to implement it, as well as is able to orient others in this regard

#### Social competences

1. Student is aware of the possibility of making mistakes by himself and others, shows prudent criticism of received content and received results
2. Student is aware of the role and importance of knowledge in solving cognitive and practical problems typical of the professions and jobs appropriate for graduates of the studied major; is aware of the need to deepen and expand knowledge
3. Student is aware of the importance of intellectual honesty in own and other people's actions; is ready to demonstrate reliability, impartiality, professionalism and an ethical attitude
4. Student is aware of the social role as a graduate of a technical university, is ready to pass on popular science content to the public and to identify and resolve basic problems related to the field of study

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

- on the base of presentation of the problems of master dissertation
- on the base of discussions during own presentations as well as discussions on the topics presented by other students in the group
- on the base of supervisor's confirmation of the advance of the thesis

#### Programme content



Presentation by students and discussions in the group all the issues connected with master exam and master dissertation.

### Teaching methods

Analysis/discussions on various methods of solving problems; multimedia presentations, case study, work in group

### Bibliography

Basic

1. Boć, J. (2009): Jak pisać pracę magisterską (wyd. 7). Wrocław: Kolonia Limited.
2. Szkutnik, Z. (2005). Metodyka pisania pracy dyplomowej. Wydawnictwo Poznańskie, Poznań.
3. Majchrzak, J., Mendel, T. (2005). Metodyka pisania prac magisterskich i dyplomowych. Wydawnictwo AE w Poznaniu.
4. Węglińska, M. (2002). Jak pisać pracę magisterską? Poradnik dla studentów. Kraków : Oficyna Wydawnicza Impuls.

Additional

### Breakdown of average student's workload

	Hours	ECTS
Total workload	350	14,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for seminars, preparation of master dissertation) <sup>1</sup>	320	13,0

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