



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar

### Course

Field of study

Construction and operation of means of transport

Area of study (specialization)

Industrial mechatronics

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

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

15

### Number of credit points

15

### Lecturers

Responsible for the course/lecturer:

DSc Eng. Krzysztof Talaśka

email: krzysztof.talaska@put.poznan.pl

phone: 61 665 2246

Faculty of Mechanical Engineering

ul. Piotrowo 3, 61-138 Poznań

Responsible for the course/lecturer:

PhD Eng. Dominik Wilczyński

email: dominik.wilczynski@put.poznan.pl

phone: 61 224 4512

Faculty of Mechanical Engineering

ul. Piotrowo 3, 61-138 Poznań

### Prerequisites

Knowledge: General knowledge, knowledge and skills in the field of the studied specialization.

Skills: Computer and MS Office skills.

Social competences: The student understands the need to expand his competences, shows readiness to cooperate within the team.

### Course objective

To acquaint students with the assumptions of the methodology of science. Preparation for self-completion of the diploma thesis.



Supplementing knowledge and skills in the field of conducting research and presenting its results.

### Course-related learning outcomes

#### Knowledge

1. Is aware of the latest trends in machine construction, ie automation and mechatronization, automation of machine design and construction processes, increased safety and comfort of operation, use of modern construction materials.
2. Has extended basic knowledge necessary to understand specialist subjects and specialist knowledge about the construction, construction methods, manufacturing and operation of a selected group of working, transport, thermal and flow machines covered by the WMRT specialization profile, in particular: Mechatronic systems.

#### Skills

1. Can obtain information from literature, the Internet, databases and other sources. Can integrate the obtained information, interpret and draw conclusions from it, as well as create and justify opinions
2. Can search catalogs and manufacturers' websites for ready-made machine components to be used in his own projects
3. Can prepare and present a short verbal and multimedia presentation on the results of an engineering task
4. Is able to use integrated with the packages for spatial modeling, programs for calculating mechanical structures by the finite element method and correctly interpret their results

#### Social competences

1. Is ready to critically evaluate the knowledge and content received.
2. Is ready to recognize the importance of knowledge in solving cognitive and practical problems and to consult experts in case of difficulties in solving the problem on its own.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Grade based on the presented speeches and activities.

### Programme content

The genesis of theses topics and the role of the promoter. Sources of scientific and technical information and ways of using them. Formulating hypotheses. Models and modeling. Elements of scientific language: regularities, laws, theories, rules. The structure of the thesis. Technique of writing scientific papers and editorial rules. Preparation for the diploma examination.

### Teaching methods

Informative lecture with a multimedia presentation, using the case study method - analysis of sample engineering works. Students' own presentation on their progress in thesis.



## Bibliography

### Basic

1. Boć J., Jak pisać pracę magisterską, Wyd. Kolonia, Wrocław 2003
2. Dietrich J., System i konstrukcja, WNT, Warszawa 1978
3. Oliver P., Jak pisać prace uniwersyteckie, Wyd. Literackie, Kraków 1999
4. Orczyk J., Zarys metodyki pracy umysłowej, PWN, Warszawa 1988
5. Pieter J., Ogólna metodologia pracy naukowej, Ossolineum, Wrocław 1967
6. Szkutnik Z., Metodyka pisania pracy dyplomowej, Wyd. Poznańskie, Poznań 2005
7. Tarnowski W., Podstawy projektowania technicznego, WNT, Warszawa 1997
8. Żółtowski B., Seminarium dyplomowe; zasady pisania prac dyplomowych, Wyd. ATR, Bydgoszcz 1997

### Additional

1. Literature on the subject of the diploma thesis

## Breakdown of average student's workload

	Hours	ECTS
Total workload	400	15,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	370	14,0

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