### POZNAN UNIVERSITY OF TECHNOLOGY



### EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

# **COURSE DESCRIPTION CARD - SYLLABUS**

Course name

Level of study

Diploma seminar

Course

Field of study Year/Semester

Design and operation of means of transport 4/7

Area of study (specialization) Profile of study

Combustion Engines general academic

Course offered in

First-cycle studies polish

Form of study Requirements

full-time compulsory

**Number of hours** 

Lecture Laboratory classes Other (e.g. online)

Tutorials Projects/seminars

15

**Number of credit points** 

15

**Lecturers** 

Responsible for the course/lecturer: Responsible for the course/lecturer:

prof. Paweł Fuć

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Faculty of Civil and Transport Engineering

3 Piotrowo street, 60-965 Poznan, Poland

phone: 61 665 23 55

**Prerequisites** 

Knowledge: Has knowledge of the construction, operation and testing of internal combustion engines.

Skills: Is able to independently use various sources of information, also in foreign languages. Can edit technical texts.

Social competences: Demonstrates independence in solving basic engineering tasks.

### **Course objective**

Acquainting the student with the stages of writing an engineering diploma thesis and its correct editorial preparation.

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# **Course-related learning outcomes**

#### Knowledge

- 1. Has ordered basic knowledge of the main divisions of technical mechanics: statics, kinematics and dynamics of a material point and a rigid body. [M1\_W04]
- 2. Has a basic knowledge of the basics of machine construction and the theory of machines and mechanisms, including mechanical vibrations. [M1\_W05]
- 3. Has a basic knowledge of the standardized rules of notation of construction and engineering graphics [M1\_W06]

#### Skills

- 1. Can obtain information from literature, the Internet, databases and other sources. Can integrate obtained information, interpret and draw conclusions from it, and create and justify opinions [M1 U01]
- 2. Can search in catalogs and manufacturers' websites ready-made machine components to be used in their own projects. [M1 U02]
- 3. Can use computer office packages for editing technical texts, including formulas and tables, technical and economic calculations using a spreadsheet and keeping a simple relational database [M1\_U03]

### Social competences

- 1. He is ready to critically evaluate his knowledge and received content [M1 K01]
- 2. Is ready to recognize the importance of knowledge in solving cognitive and practical problems and to consult experts in the event of difficulties in solving the problem on an independent basis [M1 K02]

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

Learning outcomes presented above are verified as follows:

Discussion, combined with the assessment of exemplary implementation of engineering diploma theses. Credit based on a study containing basic information on the student's engineering diploma thesis.

## **Programme content**

The process of writing an engineering diploma thesis (the origin of the thesis topic, preparatory activities, source materials). Preparation of the thesis (general requirements, editorial work, ethical issues). Basics of the theory of the experiment (research planning, construction of research object models, analysis of results). The role of the promoter in the process of creating a job. Principles of the assessment of the engineering diploma thesis.

### **Teaching methods**

1. Lectures with multimedia presentation

#### **Bibliography**

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### Basic

- 1. Leszek W., Badania empiryczne, wyd. ITE, Radom 1997.
- 2. Majchrzak J., Mendel T., Metodyka pisania prac magisterskich i dyplomowych. Wydawnictwo Akademii Ekonomicznej w Poznaniu, Poznań 2005.
- 3. Pułło A., Prace magisterskie i licencjackie. PWN, Warszawa 2000.
- 4. Korzyński M., Metodyka eksperymentu. Wydawnictwo NT, Warszawa 2006.
- 5. Szkutnik Z., Metodyka pisania pracy dyplomowej. Wyd. Poznańskie, ISBN 8371773714, 2005

#### Additional

- 1. Leszek W. Nieempiryczne procedury badawcze w naukach przyrodniczych i technicznych. Wydawnictwo ITE, Radom 1999.
- 2. Polański Z., Planowanie doświadczeń w technice. PWN, Warszawa

# Breakdown of average student's workload

	Hours	ECTS
Total workload	365	15,0
Classes requiring direct contact with the teacher	15	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	350	14

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