



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar

### Course

Field of study

Mechanical Engineering

Area of study (specialization)

Machine Design

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

3

### Lecturers

Responsible for the course/lecturer:

Roman Staniek, professor

Responsible for the course/lecturer:

### Prerequisites

Basic knowledge in the field of engineering graphics, mathematics, mechanics, strength of materials, materials technology. Advanced knowledge in the field of basics of machine construction, mechanical engineering, automation, drives and control.

Skills of logical thinking, texts understanding, technical drawings and technical documentation, mathematical formulas, kinematic, dynamic and strength calculations, usage of literature and other sources of knowledge, self-learning, design and construction of machines and devices.

Understanding the need to learn, acquire new knowledge, can define priorities for the realization of the adopted goal, work in a group, is aware of the role of the engineer in the environment, as well as the general social effects of advanced engineering activities.

### Course objective

Preparation for concise and understandable presentation of selected issues related to the realization of the thesis topic. Paying attention to the need to maintain a correct structure of thesis and linguistic correctness. Striving to complete the thesis editing and preparing to defend the master's thesis.



### Course-related learning outcomes

#### Knowledge

1. Has a knowledge connected with the construction and engineering graphic.
2. Has detailed knowledge of machines and technological equipment.
3. Has a detailed knowledge in the field of manufacturing techniques and materials processing technologies.
4. Knows the rules of patenting and patent protection of technical solutions and the rules of editing master's thesis.

#### Skills

1. Can obtain information from literature, databases and other properly selected sources (also in English) in the field of mechanical engineering.
2. Can work individually and in a team; knows how to estimate the time needed for the implementation of the commissioned tasks.
3. Can prepare and give a short presentation on the task results in the field of mechanics and mechanical engineering.
4. It has the ability to self-learning.
5. Can formulate patent claims, search in patents databases and determine the scope of patents protection.

#### Social competences

1. Understands the need for lifelong learning.
2. Realizes the importance of non-technical aspects and effects of engineering and technical activities, including its impact on the environment.
3. Can interact and work in a group, taking up various roles.
4. Is aware of the social role of a technical college graduate.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Evaluation of the presentation and the level of advancement of master's thesis; evaluation of activity in the discussion theses referred by other students.

### Programme content

Characteristic of types of master's theses (project, construction, technological, research, revive, theoretical). The layout and structure of the master's thesis, editorial requirements (table of contents, introduction, purpose, scope, main part, conclusion, literature). Formulating current problems related to the realization of thesis topic and solving them in cooperation with thesis supervisor. Presentation of



work progress in Power Point, discussions after presentation, indication of positive and possible negative parts of the paper. Discussing current problems and technological innovations in selected topics. Preparation to thesis defence.

### Teaching methods

Seminars: Goal- and problem solution-oriented brainstorming and discussions.

### Bibliography

#### Basic

1. Wojciechowska R., Przewodnik metodyczny pisania pracy dyplomowej. Wydawnictwo DIFIN, Warszawa 2010.
2. Żółtowski B., Seminarium dyplomowe: zasady pisania prac dyplomowych, Wyd. Akademia Techniczno-Rolnicza w Bydgoszczy, Bydgoszcz, 1997.
3. Opoka E., Uwagi o pisaniu i redagowaniu prac dyplomowych na studiach technicznych, Wyd. Politechnika Śląska Gliwice, 2001.
4. Individually chosen to the topic.

#### Additional

1. Materials from the specialist conferences.
2. Osuchowska B., Poradnik autora, tłumacza i redaktora, Wydawnictwo Inicjał, Warszawa 2005.
3. Dietrich J., System i konstrukcja, WNT Warszawa, 1978.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	8,0
Classes requiring direct contact with the teacher	15	3,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	60	5,0

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