



## 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

1/2

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

15

### Number of credit points

8

### 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 economy and the environment, as well as the general social effects of advanced engineering activities.

### Course objective

Preparation to choose the topic of the thesis. Assistance in selecting and formulating of a topic, defining its purpose, scope and structure. Preparation for concise and understandable presentation of selected contemporary technical issues. Paying attention to the need to maintain a correct structure of thesis



and linguistic correctness. Assistance and substantive advice in selecting thesis supervisors. Ensuring that Masters' thesis topics are formally issued.

### 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 and shaping techniques for machine parts 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 construction, mechanics and 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 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 of selected contemporary technical issues, the level of discussion on the issues presented, ability to answers the questions asked. Evaluation of the activity on the discussion on the possible ways of solving the issue being the subject of the paper. Confirmation of the issuance of formally approved masters thesis topics.

### Programme content



Characteristics of layout and structure requirements of the master's thesis, editorial requirements (table of contents, introduction, purpose, scope, main part, conclusion, literature). Formulating and solving problems and issues, construction and technological, choosing methods of scientific research realization and evaluation. Presentation of selected technical issues in Power Point, discussions after presentation, indication of positive and possible negative parts of the paper. Discussing current problems and technological innovations in areas related to the subject matter of ongoing works.

### 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. Opoka E., Uwagi o pisaniu i redagowaniu prac dyplomowych na studiach technicznych, Wydawnictwo Politechniki Śląskiej w Gliwicach, 2001.
3. 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