



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma Seminar [S2MiBP1-MR>SD]

### Course

Field of study

Mechanical and Automotive Engineering

Year/Semester

2/3

Area of study (specialization)

Heavy-duty Machines

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

0

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

15

### Number of credit points

2,00

### Coordinators

dr hab. inż. Jarosław Selech prof. PP  
jaroslaw.selech@put.poznan.pl

### Lecturers

### Prerequisites

The student has the necessary knowledge for solving complex engineering tasks technical and general knowledge acquired in the entire teaching process to date. Can read scientific and technical texts in English. Can practically use a typical measuring apparatus. He can create mathematical models in the field of mechanics and machine construction.

### Course objective

Familiarizing students with the requirements for a master's thesis. Acquisition by students of the ability to present and interpret the results of literature studies and research own. developing the ability to solve scientific and technical problems. Acquaintance students with the methodology and technique of writing a thesis.

### Course-related learning outcomes

Knowledge:

Has extended knowledge of material strength in the field of nonlinear models, fracture and fatigue strength, calculations of statically indeterminate structures, structure stability.

Has a general knowledge of the types of research and methods of testing working machines with the use

of modern measurement techniques and data acquisition.  
He knows the main development trends in the field of mechanical engineering.

#### Skills:

He can develop a technical description, offer and design documentation for a complex machine from a selected group of machines.

Can plan and carry out experimental research of specific processes taking place in machines and routine tests of a working machine or a vehicle from a selected group of machines.

Can communicate on specialist topics with a diverse audience.

#### Social competences:

He is ready to critically assess his knowledge and received content.

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.

It is ready to fulfill social obligations, inspire and organize activities for the benefit of the social environment.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:

Assessment of the prepared presentations during the classes. Assessment of statements and activity in the discussion during the course classes. The student prepares two presentations per semester. The first at the end of the first half. The semester deals with the purpose of the work, general assumptions and an overview of the work to date, in the second half of the semester, the student presents the result of his work so far, i.e. the solution of the research problem a preliminary version of the presentation how it is to be presented on the diploma examination.

### Programme content

Defining the purpose, research methods and research area of the thesis. Presentation in the form seminar issues of diploma theses conducted by students. Reporting the results literature studies, theses and goals of the work and the ways of their implementation with a critical assessment. The presentation and discussion of the preliminary research results, which are the subject of research in the prepared work thesis. Reporting of the obtained results and their interpretation. Methodology of planning and writing work thesis: thesis layout, content division structure, chapter sequence, source selection and developing a bibliography. Technical tips for writing a thesis.

### Course topics

engineering design tasks, measuring equipment, diagnostic tests

### Teaching methods

Presentation of the requirements for writing a thesis in the form of a presentation, and sending students a pdf file with the material. Delivering and assessing the prepared presentations by students.

### Bibliography

#### Basic

1. R. Zendrowski: Master's thesis, bachelor's degree
2. M. Węglińska: How to write a master's thesis.

#### Additional

1. M. Krajewski. ON THE METHODOLOGY OF SCIENCES AND THE PRINCIPLES OF SCIENTIFIC WRITING  
[http://www.krajewskimirosław.pl/\\_media/docs/4i.%20METODOLOGIA%20NAUK.pdf](http://www.krajewskimirosław.pl/_media/docs/4i.%20METODOLOGIA%20NAUK.pdf)

### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	15	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	35	1,00