



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Preparation for research (diploma thesis)

### Course

Year/Semester

2/3

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

Field of study

Mechanical and Automotive Engineering

Area of study (specialization)

Machines

Level of study

Second-cycle studies

Form of study

part-time

### Number of hours

Lecture

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

10

### Number of credit points

16

### Lecturers

Responsible for the course/lecturer:

Prodziekan ds. kształcenia

dr inż. Marlena KUCZ

email: marlena.kucz@put.poznan.pl

tel. 616652864

WILIT, Piotrowo 5, Poznań

Responsible for the course/lecturer:

Thesis promoters

### Prerequisites

**KNOWLEDGE:** The student has advanced and in-depth knowledge of mechanical engineering and transport, theoretical basis, tools and means used to solve simple engineering problems.

**SKILLS:** The student is able to plan and carry out experiments, including measurements and simulations, interpret the obtained results and draw conclusions as well as formulate and verify related hypotheses with complex engineering problems and simple research research problems.

**SOCIAL COMPETENCES:** The student understands that knowledge and skills develop very quickly outdated.



### Course objective

Expanding knowledge and skills on planning and conducting research and the ability to present the results of these works.

### Course-related learning outcomes

#### Knowledge

He has in-depth knowledge of the construction, principles of operation and classification of machines from a selected group.

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.

Has extended knowledge of the standards for working machines in the field of methods of calculating and testing machines, safety, including road safety, environmental protection as well as mechanical and electrical interface.

#### Skills

Can formulate and test hypotheses related to simple research problems.

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.

He can design the technology of exploitation of a selected machine with a high degree of complexity.

#### 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.

Is willing to think and act in an entrepreneurial manner.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Credit for the course on the basis of:

- evaluation of the presented thesis,
- regularity of its implementation,
- technical problem solving skills.

### Programme content

Compatible with the given topic of the thesis.

### Teaching methods



Discussion with the graduate about currently emerging problems, ongoing explanations or application sources in the subject literature for solving problems.

## Bibliography

Basic

1. Scientific and technical literature necessary to prepare the diploma thesis

Additional

## Breakdown of average student's workload

	Hours	ECTS
Total workload	255	16,0
Classes requiring direct contact with the teacher	45	5,0
Student's own work (literature studies, project the preparation, preparation for exam) <sup>1</sup>	210	11,0

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