COURSE DESCRIPTION CARD - SYLLABUS

Course name

Preparation for research (diploma thesis)

Course

Field of study	Year/Semester
Mechanical and Automotive Engineering	2/3
Area of study (specialization)	Profile of study
Rail vehicles	general academic
Level of study	Course offered in
Second-cycle studies	Polish
Form of study	Requirements
full-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
0	0	0
Tutorials	Projects/seminars	
0	0	

Number of credit points

16

Lecturers

Responsible for the course/lecturer:

Prodziekan ds. ksztalcenia

dr inż. Marlena KUCZ

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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SOCIAL COMPETENCES: The student understands that knowledge and skills develop very quickly outdated.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	425	16,0
Classes requiring direct contact with the teacher	125	5,0
Student's own work (literature studies, project the preparation, preparation for exam) [1]	300	11,0

[1] delete or add other activities as appropriate