



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Preparation of the diploma thesis with elements of scientific research

### Course

Field of study

Year/Semester

Transport

4/7

Area of study (specialization)

Profile of study

general academic

Level of study

Course offered in

First-cycle studies

Polish

Form of study

Requirements

full-time

elective

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

0

0

0

Tutorials

Projects/seminars

0

5

### Number of credit points

13

### Lecturers

Responsible for the course/lecturer:

dr inż. Marlena KUCZ

Responsible for the course/lecturer:

Diploma thesis supervisors

email: marlena.kucz@put.poznan.pltel.

616652864 WILIT, Piotrowo 5, Poznań

### Prerequisites

**KNOWLEDGE:** The student has advanced and in-depth knowledge of transport engineering, theoretical foundations, 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 hypotheses related to complex engineering problems and simple research problems.

**SOCIAL COMPETENCES:** The student understands that in computer science, knowledge and skills very quickly become outdated.

### Course objective

The aim is to deepen the knowledge and skills on planning and conducting research works and the ability to present the results of these works.



## Course-related learning outcomes

### Knowledge

The student knows the basic techniques, methods and tools used in the process of solving tasks in the field of transport, mainly of an engineering nature engineering

The student has a basic knowledge of patents, the copyright and related rights act and the act on the protection of personal data and technology transfer, in particular with regard to transport solutions

### Skills

The student is able to properly plan and conduct perform experiments, including measurements and computer simulations, interpret the obtained results, and correctly draw conclusions

The student is able, when formulating and solving tasks in the field of transport, to apply appropriately selected methods, including analytical, simulation or experimental methods

The student is able to obtain information from various sources, including literature and databases (both in Polish and in English), integrate it properly, interpret it and critically evaluate it, draw conclusions, and comprehensively justify his/her opinion

The student is able to prepare and present, in Polish and English, a well-documented study of problems in the field of transport engineering, including oral presentations

The student is able to plan and implement the process of own life long learning and knows the possibilities of further education (second and third degree studies, postgraduate studies, courses and exams conducted by universities, companies and professional organizations)

### Social competences

The student is aware of the social role of a technical university graduate, in particular, he/she understands the need to formulate and transfer to the society, in an appropriate style, information and opinions on engineering activities, technological achievements, as well as the achievements and traditions of the transport engineer profession

The student correctly identifies and solves dilemmas related to the profession of a transport engineer

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Completion of the course based on:

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

## Programme content



Compatible with the topic of the diploma thesis.

### Teaching methods

Discussion with the student about problems occurring during diploma thesis preparation, solving research problems or providing sources in the literature to solve problems.

### Bibliography

Basic

Scientific and technical literature necessary to prepare the thesis

Additional

### Breakdown of average student's workload

	Hours	ECTS
Total workload	325	13,0
Classes requiring direct contact with the teacher	100	4,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	225	9,0

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