POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Preparation of the diploma thesis with elements of scientific research [N2Trans1-TrD>PPDzEBN]

Course

Field of study Transport	**Year/Semester** 2/3
Area of study (specialization) Road Transport	**Profile of study** general academic
Level of study second-cycle	**Course offered in** Polish
Form of study part-time	**Requirements** compulsory

Number of hours

Lecture 0	**Laboratory classes** 0	**Other** 0
Tutorials 0	**Projects/seminars** 10	

Number of credit points

14,00

Coordinators

dr hab. inż. Jakub Kowalczyk
jakub.kowalczyk@put.poznan.pl

Lecturers

Prerequisites

KNOWLEDGE: The student has advanced and in-depth knowledge of transportation engineering, theoretical foundations, tools and means used to solve transportation problems. SKILLS: The student is able to plan and conduct experiments, including measurements and simulations, interpret the obtained results and draw conclusions, and formulate and verify hypotheses related to complex transportation problems and research problems. SOCIAL COMPETENCIES: The student understands that knowledge and skills become obsolete very quickly.

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:
Student knows advanced methods, techniques and tools used in solving complex engineering tasks and conducting research in a selected area of transport.
Student has knowledge of ethical codes related to scientific and research work in the field of transport

engineering.

Skills:
Student is able to obtain information from literature, databases and other sources (in Polish and English), integrate them, interpret and critically evaluate them, draw conclusions and formulate and exhaustively justify opinions.
The student is able to plan and conduct 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.
The student is able to use analytical, simulation and experimental methods to formulate and solve engineering tasks and simple research problems.
Using among others conceptually new methods, the student is able to solve complex tasks in the field of transport engineering, including typical tasks and tasks with a research component.
The student is able to prepare and present a scientific study in Polish and English, presenting the results of scientific research or an oral presentation on specific issues in the field of transport engineering.
The student is able to determine the directions of further learning and implement the process of self-education, including other people.

Social competences:
Student understands the importance of using the latest knowledge in the field of transport engineering in solving research and practical problems.
Student is aware of the need to develop professional achievements and to comply with the rules of professional ethics.

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,
- systematic execution of the thesis
, - ability to solve the problems encountered,
- report after checking the thesis in the Unified Anti-plagiarism System.

Programme content

In accordance with the assigned topic of the thesis, each time determined together with the promoter. The content will be closely related to the direction of education and specialty.

Course topics

Topics of classes will be determined with the promoter and will be related to the thesis. Examples of issues discussed with the promoter: statistics, methodology of scientific research, ethics in research, obtaining scientific information (domestic and foreign).

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	375	14,00
Classes requiring direct contact with the teacher	125	5,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	250	9,00