

Tadeusz Kosciuszko Cracow University of Technology

Course Card

Faculty of Civil Engineering

Field of study: Civil Engineering

Study profile: general academic

Study form: full-time

Field of study code: BUD

Study cycle: 1st

Specialty: no specialty

1 COURSE INFORMATION

Course name	Podstawy planowania komunikacyjnego
Course name in English	Introduction to Transportation Planning
Course code	WIL BUD oIS C24 24/25
Course category	Basic
No. of ECTS points	3.00
Semester	3

2 CLASS TYPE, NUMBER OF HOURS ACCORDING TO THE STUDY PLAN

Semester	Lecture	Class exercise	Laboratory	Computer lab	Design exercise	Seminar
3	22	0	0	0	23	0

3 COURSE OBJECTIVES

Objective 1 Presenting of main tasks and terminology of transport planning. Basic information about modes of transport together with their functionalities, advantages and disadvantages.

Objective 2 Acquiring skills in the field of traffic forecasting, planning and development of transport network.

4 PREREQUISITES IN TERMS OF KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1 Not specified.

5 LEARNING OUTCOMES

LO1 Knowledge Basic knowledge of spatial planning including transport aspects.

LO2 Skills Basic knowledge about modes of transport, its application conditions and their functional impact on transport system.

LO3 Knowledge Demand forecasting skills aimed on development and application of transport models both for private and public transport analysis.

LO4 Knowledge Student is able to solve engineering problems with consideration of transport aspects.

6 COURSE CONTENT

Lecture		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
L1	Basic information about transport system. Role of the transport planning in development of agglomerations.	3
L2	Demand modelling and traffic forecast methodologies.	6
L3	Basic rules in development of road network.	3
L4	Role of public transport in modern cities - rules of planning and examples.	4
L5	Modes of transport - description, strengths and weaknesses.	2
L6	Rules of planning transport service at living districts.	2
L7	Road safety analysis and rules of traffic calming.	2

Design exercise		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
P1	Development of the street network model for chosen small town.	2
P2	Estimation methods of variables for demand modelling (no. of inhabitants, employees, students etc.)	3
P3	Calculation of trip generation parameters.	3
P4	Calculation of share of private car trips and forecasting analysis.	2

Design exercise		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
P5	Estimation of origin-destination matrix with consideration of external traffic.	4
P6	Optimization of road network development.	2
P7	Simulation analysis of changes in road network in chosen city - application of macro-simulation model in PTV software.	4
P8	Calibration procedures and parametrization of the obtained results.	3

7 TEACHING TOOLS

N1 Lectures

N2 Project development

8 Student workload

Activity form	Number of hours of activity
Hours realized in contact with the teacher	
Hours resulting from the study plan	45
Consultation hours	10
Exams and tests during session	10
Hours of autonomous student work	
Preparing for classes, studying literature	5
Developing results	5
Preparing of reports, projects presentations, discussion	10
Total number of hours devoted to the subject	85
Total number of ECTS points	3.00

9 Methods of grading

Partial grades

F1 Test

F2 Project

Summary grade

P1 Weighted average mark of test (0,45) and project (0,55)
