

# 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 projektowania konstrukcji
Course name in English	Introduction to Contruction Designing
Course code	WIL BUD oIS C27 24/25
Course category	Basic
No. of ECTS points	2.00
Semester	4

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

Semester	Lecture	Class exercise	Laboratory	Computer lab	Design exercise	Seminar
4	15	0	0	0	15	0

### 3 COURSE OBJECTIVES

**Objective 1** The aim of course is to impart knowledge necessary for understanding and application of the recommendations of standard EN 1990 and the group of Standards EN 1991 in terms of loads and load effects on structures.

## 4 PREREQUISITES IN TERMS OF KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1 Knowledge of mathematics, material strength and building mechanics in accordance with the learning outcomes of the semester 1 to 3, 1st cycle studies majoring in Civil Engineering.

## 5 LEARNING OUTCOMES

**LO1 Knowledge** Student knows and understands the Standard EN 1990 and the group of Standards EN 1991, and also has basic knowledge of the design of structures and their elements.

**LO2 Skills** Student can classify construction works.

**LO3 Knowledge** Student can assign rules of load combination to a type of structure.

**LO4 Knowledge** Student is ready to work independently and in a team on a given problem, formulate and describe the results of his work in a communicative manner, incur liability for integrity of the results of his work and their interpretation.

## 6 COURSE CONTENT

Lecture		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
<b>L1</b>	Basis of structural design according to EN 1990.	2
<b>L2</b>	Differentiation of structural reliability.	2
<b>L3</b>	Partial Factor Design. Characteristic and design values of basic variables.	2
<b>L4</b>	Load Eurocodes EN 1991	6
<b>L5</b>	Load combinations according to EN 1990	3

Design exercise		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
<b>P1</b>	Metal structures - specification and combination of loads.	4
<b>P2</b>	Concrete structures - specification and combination of loads.	4
<b>P3</b>	Timber structures - specification and combination of loads.	3
<b>P4</b>	Masonry structures - specification and combination of loads.	2
<b>P5</b>	Specification and combination of loads in assessment of structural stability.	2

## 7 TEACHING TOOLS

N1 Lectures

N2 Projects

N3 Discussion

N4 Consultations

## 8 Student workload

Activity form	Number of hours of activity
<b>Hours realized in contact with the teacher</b>	
Hours resulting from the study plan	30
Consultation hours	2
Exams and tests during session	0
<b>Hours of autonomous student work</b>	
Preparing for classes, studying literature	7
Developing results	4
Preparing of reports, projects presentations, discussion	15
examinations	2
<b>Total number of hours devoted to the subject</b>	<b>60</b>
Total number of ECTS points	2.00

## 9 Methods of grading

### Partial grades

F1 Project

F2 Oral examination

F3 Test

### Summary grade

P1 Weighted average of F1, F2 and F3