

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	Konstrukcje drewniane
Course name in English	Timber Structures
Course code	WIL BUD oIS C35 24/25
Course category	Basic
No. of ECTS points	2.00
Semester	5

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

Semester	Lecture	Class exercise	Laboratory	Computer lab	Design exercise	Seminar
5	15	0	0	0	30	0

3 COURSE OBJECTIVES

Objective 1 Familiarize students with the timber materials and their properties

Objective 2 Familiarize students with simple timber solid structures and with designing structures based on carpentry connections

Objective 3 Familiarize students with the rules of creating documentation of timber structures

Objective 4 Development of the skill of working in project teams

4 PREREQUISITES IN TERMS OF KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1 Strength of Materials

2 Fundamentals of Civil Engineering

3 Structural Mechanics

5 LEARNING OUTCOMES

LO1 Knowledge Student knows the material properties of the timber and is able to use this knowledge to design timber structures

LO2 Skills Student is able to analyze the simple timber structure made of solid wood (floor, stairs, rafter framing)

LO3 Knowledge Student is able to design connections in timber structure (carpentry joints and with basic engineering metal dowel type fasteners - nails, screws etc)

LO4 Skills Student is able to prepare the technical documentation of the designed timber structures

LO5 Knowledge Student knows how to work in a small project team

6 COURSE CONTENT

Design exercise		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
P1	Design of timber floor	10
P2	Design of timber stairs	10
P3	Design of timber rafter framing	10

Lecture		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
L1	Introduction, terms of passing the subject, important references and codes	1
L2	Timber morphology and properties (moisture, density, strength etc.)	4
L3	Engineered wood products - short description of wood based products (glulam, CLT, LVL, PSL, plywood, OSB, SIP)	1
L4	Structure analysis - main principles for ULS according to Eurocode 5	5

Lecture		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
L5	Structure analysis - SLS according to Eurocode 5 (deflection of the structure)	2
L6	Connections in timber structures - carpentry joints, short description of metal dowel type connectors (nails, screws, bolts, dowels, staples)	2

7 TEACHING TOOLS

N1 Design Exercises

N2 Lectures

N3 Multimedia presentations

N4 Group work

N5 Consultations

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	0
Exams and tests during session	0
Hours of autonomous student work	
Preparing for classes, studying literature	5
Developing results	0
Preparing of reports, projects presentations, discussion	10
Total number of hours devoted to the subject	60
Total number of ECTS points	2.00

9 Methods of grading

Partial grades

F1 Written tests

F2 Project in groups

Summary grade

P1 Weighted average of the tests grades and the project