

## SYLLABUS

**Course title:** Masonry & Timber Structures

**Course title (in Polish):** Konstrukcje murowe i drewniane

The syllabus is valid since the summer semester of the academic year 2025/26 and its content is not subject to changes during the semester.

### Course details:

**Unit offering the course:** Faculty of Civil Engineering

**Course designated for the unit:** The Silesian University of Technology

**Specialization:**

**Didactic cycle:** Summer semester 2025/2026 - the third year of first degree studies

**Coordinator of the course:**

**Delivery mode:** in-person

**Number of ECTS credits:** 1

<b>Language:</b>
English
<b>Course homepage:</b>
<a href="https://platforma.polsl.pl/rb/">https://platforma.polsl.pl/rb/</a>
<b>Prerequisites:</b>
prior completion of the Structures of Buildings and Mechanics of Buildings courses
<b>Short description:</b>
The main course objective is to acquaint students with the principles of structural design of selected types of timber structures. Moreover, the course aims at providing students with practical knowledge regarding code requirements, constructing and analytical calculations of connections in timber structures. The course covers the area of timber structures and connections of timber elements. It includes information and discussion on the following areas: code requirements, static schemes, specifics of the material. The course also provides design examples of dowel connections using nails, bolts and joining plates made of different materials.
<b>Description:</b>
<b>LECTURES:</b> 8h Introduction to the design of timber structures, code requirements, static schemes, the specifics of the material. Timber structural systems - the formulation, design and calculation. Connections in timber structures, dimensioning of the connections.
<b>PRACTICAL CLASSES:</b> 2h Discussion of the timber connections. The project will be discussed during the exercise.
<b>PROJECT:</b> 5h

The project includes the design of selected types of connections in timber structures. As a part of the project, a construction drawing of the connection is carried out.

**Bibliography:**

- Kermani A., „Structural Timber Design“, Wiley-Blackwell, London, 1999
- “Design of timber structures Volume 1. Structural aspects of timber construction”, Swedish Wood, 2011
- “Design of timber structures Volume 2. Rules and formulas according to Eurocode 5 and EKS 9”, Swedish Wood, 2011
- “Design of timber structures Volume 3. 14 calculated practical examples with solutions”, Swedish Wood, 2011
- EN 1990 Eurocode: Basis of structural design
- EN 1991 Eurocode 1: Actions on structures
- EN 1995 Eurocode 5: Design of timber structures

**Learning outcomes:**

KNOWLEDGE:

K1A\_W05,  
K1A\_W06.

SKILLS:

K1A\_U02,  
K1A\_U04.

**Assessment methods and assessment criteria:**

Course credit requirements:

- 1) Attendance (may be monitored)
- 2) Passing the lecture test.
- 3) Defense of the completed project.
- 4) Obtaining a positive grade for the project.

Final grade = 0.5 x project grade + 0.5 x test grade

To have partial grades transferred, students should contact their instructor within the first two weeks of the semester.

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**ECTS points: 1**