GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Timber Structures, PG_00072573		
Field of study	Civil Engineering		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	English
Semester of study	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Engineering Structures -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Mateusz Sondej	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	15.0	0.0	30

E-learning hours included: 0.0

eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=8607

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	30	2.0	18.0	50

Subject objectives

To teach a basic knowledge for designing simple timber structures.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U03] uses, to a deeper extent, appropriately selected analytical, numerical and experimental tools and methods to carry out tasks in the construction industry	The student is able to design simple timber structures.	[SU1] Assessment of task fulfilment
[K7_W05] demonstrates knowledge of the principles of evaluation and verification of calculations, tests, measurements and monitoring of advanced structures and civil engineering works	The student is familiar with the principles for designing timber elements according to Eurocode 5.	[SW1] Assessment of factual knowledge

Subject contents

Course content – lecture

Timber as a building material. Timber species, wood-based materials, defects in sawn timber, timber assortments, grading, and strength classes of timber. Protection of timber against fire, biological degradation, and insects. Design of timber elements according to Eurocode 5. Fasteners in timber structures. Design of connections. Roof structures for pitched roofs.

Course content – project

Structural analysis of pitched roofs. Design of solid timber elements. Design of nailed and bolted connections. Preparation of structural drawings.

Prerequisites and co-requisites

Ability to solve problems in the field of structural mechanics (statically determinate and indeterminate systems) and the strength of materials.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Colloquium based on the lecture	60.0%	50.0%
Project execution	60.0%	50.0%

Recommended reading	Basic literature	1. Porteous, J., Kermani, A. – Structural Timber Design to Eurocode 5. 2. Swedish Wood – Design of Timber Structures, Volumes 1–3. 3. Swedish Wood – The Glulam Handbook, Volumes 1–4.
	Supplementary literature	1. Ozelton, E. C., Baird, J. A. – Timber Designers' Manual. 2. Thelandersson, S., Larsen, H. J. – Timber Engineering. 3. Swedish Wood – The CLT Handbook. 4. American Institute of Timber Construction – Timber Construction Manual
	eResources addresses	
Example issues/ example questions/ tasks being completed	How is the strength class of timber determined? List the advantages and disadvantages of timber. Draw a rafter-collar roof structure and describe its structural components. Calculate the final deflection of a timber beam.	
Practical activites within the subject	Not applicable	

Document generated electronically. Does not require a seal or signature.