

SYLLABUS

Course title: Structural Mechanics

Course title (in Polish): Mechanika budowli

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: Structural Engineerings

Didactic cycle: Summer semester 2025/2026 - the 6th semester of the first degree studies

Coordinator of the course: PhD Agnieszka Padewska-Jurczak

Delivery mode: in-person

Number of ECTS credits: 1

Language:
English
Course homepage:
https://platforma.polsl.pl/rb/login/index.php
Prerequisites:
Completion of the course Strength of Materials and Structural Mechanics
Short description:
Stability of rod structures
Description:
PRACTICAL CLASSES: 1 h PROJECT: 14 h
The aim of the course is learning of basics of stability and protection against buckling of rod structures.
Bibliography:
1) Ghali et al.: 'Structural Analysis: The Unified Classical and Matrix Approach'. Taylor & Francis 2) Karnovski and O. Lebed: 'Advanced Methods of Structural Analysis'. Springer C.H. 3) Norris and J.B. Wilbur: 'Elementary Structural Analysis". McGraw Hill
Learning outcomes:
The student knows principles of stability of structures, [K1A_W04]; have skills in: assessment of critical load of structures; defining computational models of computer analysis of structures, simulating various construction variants, performing static analysis of statically determinate and indeterminate bar structures, as well as critically evaluating the results of these analyses; presenting, assessing and discussing various opinions and positions concerning structural, material and technological solutions, taking into account the costeffectiveness and durability of the analysed solution [K1A_U03, K1A_U12].

Assessment methods and assessment criteria:

Project report 100%

In order to transfer partial grades, the student should contact the instructor within the first two weeks of the semester.

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