SYLLABUS

Name: *Masonry & Timber Structures (BudAB>SI4MASTIS19)*
Name in Polish:
Name in English: *Masonry & Timber Structures*

Information on course:

Course offered by department: Faculty of Civil Engineering
Course for department: Silesian University of Technology

Default type of course examination report:

ZAL

Language:

English

Course homepage:

https://platforma.polsl.pl/rb/course/view.php?id=327

Short description:

The student learns the properties of materials, the method of determining the characteristic and computational strength and the behavior of the structure under load. The dimensioning of elements of masonry and wooden structures as well as the method of checking the ultimate limit state of the structure is discussed. The construction, calculation and execution of masonry infill walls is discussed. The aim of education is to prepare the student in the identification of materials and products, knowledge of the behavior of elements of masonry and wooden structures under load.

Description:

LECTURE: 8 hours
The method of determining the characteristic and computational strength of masonry structures made of various types of masonry elements and mortars, and wooden structures. Method of checking the limit state of the bearing capacity of masonry and wooden structures. Calculation, construction and construction of stiffening walls.

EXERCISES: 1 hour
Students are shown how to complete the project along with a calculation example.

PROJECT: 7 hours
The scope of the project includes checking the ultimate limit state and serviceability of a masonry stiffening wall due to eccentric compression, shear and bending.

Bibliography:

[1] Drobiec Ł., Jasiński R., Piekarczyk A.: Konstrukcje murowe według Eurokodu 6 i norm związanych. Tom 1, PWN, 2013.
[2] PN-EN 1996-1-1 Eurokod 6. Projektowanie konstrukcji murowych. Część 1-1: Reguły ogólne dla zbrojonych i niezbrojonych konstrukcji murowych PKN.
[3] PN-EN 1996-3 Eurokod 6. Projektowanie konstrukcji murowych. Część 3: Uproszczone metody obliczania murowych konstrukcji niezbrojonych PKN
[4] Hoła J., Pietraszek P., Schabowicz K.: Obliczanie konstrukcji budynków wznoszonych tradycyjnie DWE, 2013.
[5] PN-EN 1995-1-1 Eurokod 5. Projektowanie konstrukcji drewnianych. Część 1-1: Postanowienia ogólne i reguły dotyczące budynków. PKN
[6] Matysek P., Seruga T.: Konstrukcje murowe. Przykłady i algorytmy obliczeń z komentarzem. Wydawnictwo Politechniki Krakowskiej, 2005.
[7] Lewicki B., Jarmontowicz R., Kubica J.: Podstawy projektowania niezbrojonych konstrukcji murowych. Wydawnictwo ITB, 2001.
[8] Kotwica E.I., Nożyński W.: Konstrukcje drewniane - przykłady obliczeńStowarzyszenie Producentów Płyt Drewnopochodnych, 2015.

Learning outcomes:

KNOWLEDGE
(1) Knows the principles of mechanics and analysis of bar structures in the field of statics and stability - [field effect K1A_W05].
(2) Knows the standards and guidelines for the design of masonry and wooden structures and their elements - [field effect K1A_W06]..

SKILLS
(4) Can assess and make a list of loads acting on brick and wooden building structures - [field effect K1A_U02].
(5) Can shape and define structural elements and design simple timber and masonry structure - [field effect K1A_U04].

Assessment methods and assessment criteria:

PREREQUISITES: No requirements

COURSE PASS REQUIREMENTS:
1) attendance in class,
2) regular consultation on the progress of work on the project,
3) obtaining a positive assessment of the project.
4) passing the test from the lecture part.

FINAL GRADE: 50% lectures, 50% project.

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

The syllabus is effective from the summer semester of the 2025/2026 academic year, and its content is not subject to change during the semester.

Practical placement:

Not applicable.

Element of course groups in various terms:

Course group description	First term	Last term

Course group description	First term	Last term
missing group description in English (BudAB-S1-2019-sem4)	2020/2021-L	

Course credits in various terms:

<without a specific program>			
Type of credits	Number	First term	Last term
European Credit Transfer System (ECTS)	1	2020/2021-Z	