



COURSE DESCRIPTION CARD - SYLLABUS

Course name

General construction I [S1Bud1>BO1]

Course

Field of study

Civil Engineering

Year/Semester

2/3

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

30

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

30

Number of credit points

3,00

Coordinators

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Lecturers

Prerequisites

KNOWLEDGE: the student has basic knowledge of building materials, technical drawing, structure strength and building mechanics **SKILLS:** the student is able to determine the static patterns of building elements, determine the stresses **SOCIAL COMPETENCES:** the student is aware of the need to constantly update and supplement construction knowledge and engineering skills

Course objective

Provide students with maximum knowledge of the basics of general construction

Course-related learning outcomes

Knowledge:

The student knows the standards and guidelines for the design of general construction facilities and their elements, both in terms of materials and technology.

The student knows the rules of constructing and dimensioning elements of building structures.

The student knows the rules of constructing and analyzing selected general construction objects.

The student knows the basic provisions of the construction law regarding the design of general construction facilities.

Skills:

The student is able to assess and make a list of loads acting on building objects.

The student is able to design selected building elements.

The student is able to design simple foundations for general construction objects.

The student is able to select materials and technologies for the implementation of general construction facilities.

The student is able to apply the basic provisions of the construction law to the design of general construction facilities.

Social competences:

The student is responsible for the reliability of the obtained results and their interpretation.

The student independently completes and extends the knowledge in the field of modern processes and technologies of general construction.

The student is aware of the need to improve professional and personal competences.

The student is able to formulate opinions on technical and technological processes in construction.

The student follows the rules of ethics.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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The knowledge acquired during the lecture is verified by the final, written exam, which consists of 15-20 questions (test and open), with different scores. Passing threshold: 50% of points. Passing issues on the basis of which the questions are developed will be sent to students by e-mail using the university's e-mail system.

The skills acquired during the exercises are verified on the basis of the tasks completed by the students and a final test consisting of 5-7 tasks with different scores depending on the degree of their difficulty.

Passing threshold: 50% of points

The skills acquired in the project are verified on the basis of the project made by the students.

Programme content

Wooden roof structures, large-span cover structures, partition walls, traditional plasters, thin-layer plasters, window and door joinery, building insulation, wood in construction, breakdowns - examples of repairs.

Course topics

Architecture and construction - definitions, styles in architecture

Factors affecting architectural design

Principles of technical design development

Building grounds- division, general technical characteristics

Principles of staking buildings in the field

Foundation excavations

Direct foundations

Indirect foundations

Walls and walls

Lintels, vaults, crowns

Traditional ceilings, balconies and terraces

Teaching methods

1. Lecture: multimedia presentation illustrated with examples given on the blackboard.

2. Exercises: calculation examples given on the blackboard and the execution of tasks given by the teacher.

3. Project: drawing examples given on the blackboard and carrying out the tasks given by the teacher..

Bibliography

Basic

Neufert E. : Handbook of architectural and construction design. Arkady, Warsaw 1995.

Collective work under the supervision of L. Lichołai: General construction, vol. 3 - building elements, basics of design. ARKADY, Warsaw 2008.

Collective work under the supervision of W. Buczkowski: General construction, vol. 4 - building structures. ARKADY, Warsaw 2009.

Collective work under the supervision of P. Klemma: General construction volume 2 - building physics. ARKADY, Warsaw 2005.

Żenczykowski W. : General construction, vol. 1 - building materials and products. Arkady, 1976.

Żenczykowski W. : General construction, vol. 2/1 - building elements and structures. Arkady, Warsaw 1990.

Żenczykowski W. : General construction vol. 2/2 - building elements and structures. Arkady, Warsaw 1990.

Żenczykowski W. : General construction volume 3/1 - problems of building physics and insulation. Arkady, Warsaw 1987.

Żenczykowski W. : General construction, vol 3/2 - finishing works and installations. COIB, Warsaw 1998.

Collective work under the direction of J. Panas: new tutorial foreman of construction, ARKADY, Warsaw 2008.

Jasiczak J., Kuiński M., Siewczyńska M. : Calculation of thermal insulation and load-bearing capacity of brick external walls. P.P, 2008.

Tomasz Błaszczński: Roofs. Basics of design and execution
Additional
Guides, Catalogs, Albums, Instructions, Technical Approvals.

Miłobędzki A. : An outline of the history of architecture in Poland. Wiedza Powszechna, Warsaw 1988.

Trzeciak P. : 1000 secrets of architecture. Our bookstore, Warsaw 1967.

Arendarski J. : Durability and reliability of residential buildings erected using industrialized methods. Arkady, Warsaw 1978.

Korzeniewski W. : Housing construction. A designer guide. Arkady, Warsaw 1989.

Korzeniewski W. : Single-family housing. Usage requirements and technical conditions. Arkady, Warsaw 1989.

Michalak H., Pyrak S. : Single-family houses. Constructing and computing. Arkady, Warsaw 2005.

Collective work under the supervision of W Buczkowski: How to build a modern single-family house, PWRiL, P-ń, 2000.

Pyrak S., Włodarczyk W. : Building structures. The foundation of buildings, masonry and wooden structures. WSiP, Warsaw 2006.

Lenkiewicz W. : Structures of single-family houses and small buildings. Design and calculation. Arkady, Warsaw 1989.

Pierzchlewicz W., Jarmontowicz R. : Brick buildings, materials and structures. Arkady, Warsaw 1994.

Mielczarek Z. : Wooden construction. Arkady, Warsaw 1994.

Nożyński W. : Examples of calculations for building structures made of wood. WSiP, Warsaw 2000.

Pogorzelski J.A. : Thermal physics of buildings. PWN, Warsaw 1976.

Breakdown of average student's workload

	Hours	ECTS
Total workload	90	3,00
Classes requiring direct contact with the teacher	60	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00