



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Materials [S1Arch1E>MTRZ]

Course

Field of study
Architecture

Year/Semester
1/1

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
english

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
30

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
0

Number of credit points

3,00

Coordinators

Lecturers

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Prerequisites

1. Knowledge: the student has a systematic body of knowledge concerning the structure of building and architectural raw material; the student has a systematic body of general knowledge of physics and of chemistry. 2. Skills: the student knows how to derive the information from a literature, databases, and other, wellmatched resources; he can integrate informations, he knows how to interpret it, and how to conclude, to formulate and to justify opinions . 3. Social competences: the student can cooperate within a group, playing various roles, the student correctly identify and solves problems concerning various social sytuations during the constructional materials' turnover.

Course objective

The scope is to transmit a knowledge on architectural materials, as a discipline concerning research on and use of functional properties of construction materials and products

Course-related learning outcomes

Knowledge:

Student knows and understands:

B.W4. mathematics, space geometry, statics, material strength, shaping, construction and dimensioning of

structures, to the extent necessary to formulate and solve tasks in the field of architectural and urban design;

B.W5. issues of construction, construction technologies and installations, construction and building physics, covering key issues in architectural, urban and planning design as well as issues related to fire protection of buildings;

Skills:

Student can:

B.U2. recognize the importance of non-technical aspects and effects of an architect's design activity, including its impact on the cultural and natural environment;

B.U4. develop solutions for individual building systems and elements in terms of technology, construction and materials;

B.U5. make a preliminary economic analysis of planned engineering activities;

Social competences:

Student is capable of:

B.S1. formulating opinions on the achievements of architecture and town planning, their determinants and other aspects of the architect's activity, as well as providing information and opinions;

B.S2. reliable self-assessment, formulating constructive criticism regarding architectural and urban planning activities.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assesment

Assessment scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0

Summative assesment: The grade obtained during written test

Assessment scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0

Programme content

1. Classification and basic properties of construction materials.
2. Natural stones and soils. 3. Binders. 4. Concrete.
5. Ceramics.
6. Glass.
7. Metals.
8. Timber.
9. Plastics.
10. Water barriers and thermal insulations.
11. Paints.
12. Acoustic insulations.
13. Materials for installations (wiring, heating, cooling, hydraulic and sewerage systems)

Teaching methods

Lecture with presentation;
on-line presentation (eKursy)

Bibliography

Basic

1. Lyons A., Materials for Architects and Buildres. Elsevier Ltd. 2006
2. Soutsos M., Domone P., (ed.) Construction Materials: Their Nature and Behavior. Kindle Edition (5th Edition)

Additional

Brownell B., Material Strategies. Innovative Applications in Architecture. Princeton Architectural Press, New York 2012

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	45	2,00