



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Materials

Course

Field of study

ARCHITECTURE

Area of study (specialization)

-

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

I/1

Profile of study

general academic

Course offered in

polish/english

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

Lecturers

Responsible for the course/lecturer:

dr hab. inż. arch. Jerzy Suchanek, prof. PP

e-mail: jerzy.suchanek@put.poznan.pl

tel. 61 665 33 12

Wydział Architektury ul. J. Rychlewskiego 2,

61-131 POZNAŃ

Tel. 61 665 32 60

Responsible for the course/lecturer:

dr hab. inż. arch. Jerzy Suchanek, prof. PP

e-mail: jerzy.suchanek@put.poznan.pl

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, well-matched 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 situations during the construction 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

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

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

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:

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	27	1,0
Classes requiring direct contact with the teacher	15	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹		

¹ delete or add other activities as appropriate