

## COURSE DESCRIPTION CARD

Faculty of Civil Engineering and Environmental Sciences									
Field of study								Degree level and programme type	
Specialization/ diploma path								Study profile	Academic profile
Course name	Civil engineering materials							Course code	IS-FCEE-00147S
								Course type	Erasmus
Forms and number of hours of tuition	L	C	LC	P	SW	FW	S	Semester	summer
	30		30					No. of ECTS credits	5
Entry requirements	-								
Course objectives	Developing knowledge of traditional and modern building materials, including classification, properties and basic principles of production, as well as the impact of building materials on the environment and human health. Developing skills in assessing the suitability of typical building materials for various applications. Developing skills in performing basic laboratory tests to identify and assess the quality of building materials and products. Developing teamwork skills.								
Course content	<p><u>Lecture:</u> Legislation on the standardization and marketing of building materials. History and classification of building materials. Technical features - definitions and test methods. Basic issues regarding the durability of building materials. Classification, assortment, properties and basic principles of production of the main groups of building materials (products from natural stone, ceramics, wood, asphalt, glass, metals and plastics). The impact of building materials on the environment and human health during their production phase and during their use.</p> <p><u>Laboratory classes:</u> Laboratory tests of specific technical features and parameters of selected building materials and products. Identification, description of technical features and scope of application of selected groups of materials and products.</p>								
Teaching methods	Lecture - informative lecture, problem lecture Laboratory classes - laboratory exercises, demonstration with explanation								
Assessment method	Lecture - oral exam based on presentation Laboratory classes - performance of a research task (in teams) and preparation of a report (individually), written test								
Symbol of learning outcome	Learning outcomes							Reference to the learning outcomes for the field of study	
LO1	knows the basic principles of producing building materials and understands their impact on the environment and people							K_B1_W04	

<b>LO2</b>	knows the range of modern building materials, their classification, properties and basic test methods	K_B1_W04	
<b>LO3</b>	performs simple laboratory tests of technical parameters of building materials and products based on instructions and standards, interprets results and draws conclusions	K_B1_U04	
<b>LO4</b>	identifies civil engineering materials and assesses their suitability for various applications	K_B1_U05	
<b>LO5</b>	cooperates in teams	K_B1_U14	
<b>Symbol of learning outcome</b>	<b>Methods of assessing the learning outcomes</b>	<b>Type of tuition during which the outcome is assessed</b>	
<b>LO1</b>	oral exam based on presentation	L	
<b>LO2</b>	oral exam based on presentation, written test	L, LC	
<b>LO3</b>	verification of the correctness of the report	LC	
<b>LO4</b>	verification of the correctness of the report	LC	
<b>LO5</b>	verification of the research task performance	LC	
<b>Student workload (in hours)</b>		<b>No. of hours</b>	
<b>Calculation</b>	participation in lectures	30	
	preparation for the exam and participation in it (30h + 2h)	32	
	participation in laboratory classes	30	
	preparation of reports on research tasks	6	
	preparation for written tests	30	
	participation in consultations	2	
	<b>TOTAL:</b>	<b>130</b>	
<b>Quantitative indicators</b>		<b>HOURS</b>	<b>No. of ECTS credits</b>
<b>Student workload – activities that require direct teacher participation</b>		64	2.5
<b>Student workload – practical activities</b>		66	2.5
<b>Basic references</b>	Duggal S. K. Building materials, New Age International (P) Ltd., Publisher, 2008 Zhang H. (ed.) Building materials in civil engineering. Science Press Beijing. Woodhead Publishing Limited Selected European Standards		
<b>Supplementary references</b>	Berge B. The ecology of building materials. Elsevier Ltd. 2009 Wolley T.. Building materials, health and indoor air quality :no breathing space? New York: Routledge/Taylor a. Francis Group, 2017		
<b>Organisational unit conducting the course</b>	<b>Department of Construction and Road Engineering</b>	<b>Date of issuing the programme</b>	
<b>Author of the programme</b>	<b>Beata Backiel-Brzozowska, PhD. Eng.</b>	<b>24.02.2020</b>	

L – lecture, C – classes, LC – laboratory classes, P – project, SW – specialization workshop, FW - field work,

S – seminar