ERASMUS+
EU programme for education, training, youth and sport

Incoming student mobility

Name of UNIOS University Unit: Faculty of Civil Engineering and Architecture Osijek

COURSES OFFERED IN FOREIGN LANGUAGE
FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS

Department or Chair within the UNIOS Unit	Department for Materials and Structures

Study program	University Undergraduate Study Programme in Civil Engineering

Study level (bachelor/master)	Bachelor

Course title	Materials in Civil Engineering
Course code (ISVU)	254774
Language of instruction	English
Course content	Classification of Materials. Cement. Aggregates. Water for Concrete Production. Concrete Additives. Fresh and Hardened Concrete. Wood. Metals. Building Ceramics. Binders and Mortars. Glass. Polymers. Stone. Insulation Materials. Durability of Construction Materials.
Prerequisites for enrolment (if any)	None
Learning outcomes	Upon successful completion of the course, students will be able to: 1. Describe the production processes of various construction materials. 2. Test the properties of various construction materials. 3. Compare the properties of various construction materials. 4. Apply the results of construction material testing. 5. Select appropriate construction materials based on their intended application in construction. 6. Explain the degradation mechanisms of construction materials. 7. Identify appropriate methods for protecting construction materials against different degradation mechanisms.
Basic Literature	Bjegović, D., Štirmer, N., Teorija i tehnologija betona, Građevinski fakultet Sveučilišta u Zagrebu, Zagreb, 2015. Netinger, I.; Vračević, M.; Bačkalić, Z., Opeka – od sirovine do gotovog proizvoda, Sveučilište J. J. Strossmayera u Osijeku, Građevinski fakultet Osijek, 2014. Netinger, I.;

	Miličević, I., Zbirka riješenih zadataka iz Gradiva, Građevinski fakultet Osijek, Osijek, 2014. Mikoč, M., Građevni materijali, Građevinski fakultet Sveučilišta u Osijeku, Osijek, 2006.
Additional Literature	llston, J. M.; Domone, P. L. J.: Construction Materials: Their Nature and their Behaviour, 4th Edition. New York: Spon Press, 2010. Ashby, Michael F.; Joneas David R, H.; Engineering Materials 1, Butterworth-Heinemann, Oxford - Boston - Johannesburg - Melbourne - New Delhi - Singapore, 1996. Ghosh, N.; Cement and Concrete Science Technology Vol – 1, Part – I, New Delhi, 1991.
Form of teaching	Lectures and practical classes
Form of assessment	Written and oral examination
Number of ECTS	5,0
Class hours per week	2 (L) + 2(E)
Period of realization (summer/winter semester)	Winter semester
Teacher(s) + Email address	Prof. Ivana Miličević, PhD. in Civ. Eng., ivanak@gfos.hr
Assistant(s) + Email address(es)	Ivan Vrdoljak, PhD., ivrdoljak@gfos.hr