

Faculty of Civil and Environmental Engineering				
Study programme:	Civil Engineering	Degree level: full-time/part-time programme: Bachelor's degree		
Specialization	Realization and Building Exploitation	Diploma path: -		
Module name:	Monolithic building and recycling of concrete structures			
Module type:	obligatory	Semester: 7	ECTS 2	Module ID: B37312
No. of hrs in semester:	L - 30	C - 0	LC- 0	P- 0 SW- 0 S- 0
Prerequisites:	<i>Complete with prerequisites or "-"</i>	Concrete Technology, Building Engineering, Building Technology part I		
Teaching methods:	lecture	Assessment:	<i>Evaluation must be relevant to the intended learning outcomes</i>	
		lecture - written exam		
Aims and objectives:	<i>To obtain the knowledge about basis processes in monolithic work. To acquaint with the rules of selection machines and equipment to execution of basis elements in monolithic technology. To get the information about needs and benefits of recycling concrete structures.</i>			
Module content:	<i>Characteristic of monolithic building. Materials applied to formwork production and its classification. Formwork to vertical and horizontal elements, inversion and climbing systems. Reinforcement of building structure, concrete mixture preparation, concrete mixers classification. Distant and near transport of concrete mixture, transport equipment. Efficiency of machines. Caring of fresh concrete. Recycling in building industry: common information and formal regulations. Demolition methods of building structure. Processing of building waste. Recycled aggregate: production, classification, improving methods. Concrete mixture preparation with using recycled materials.</i>			
student workload	lecture attendance	3x10h	30	
	participation in classes, laboratory classes, etc.	-	-	
	preparation for classes, laboratory classes, projects, seminars, etc.	-	-	
	work on projects, reports, etc.	-	-	
	participation in student-teacher sessions related to the class / seminar / project	-	-	
	implementation of project tasks	-	-	
	preparation for and participation in exams/tests	-	14	
			TOTAL:	44
quantitative indicators	Student workload - activities that require direct teacher participation	34	ECTS	2
	Student workload - practical skills activities	0		0

basic references:	<ol style="list-style-type: none"> 1. Cooke R. <i>Building in the 21st Century</i>. Wiley-Blackwell, 2007 2. Peurifoy R.L. <i>Construction Planning Equipment and Methods</i>. McGraw-Hill, 2010 3. Neville A.M. <i>Properties of Concrete</i>. Pearson Education, 2007 4. <i>Proceedings of International RILEM Conference on the Use of Recycled Materials in Buildings and Structures</i>. Barcelona, Spain, 2004. 5. Hansen T.C. <i>Recycling of Demolished Concrete and Masonry</i>. London, 1992 		
supplementary references:	<ol style="list-style-type: none"> 1. Linsz E., Mueller A. <i>High-performance sonic impulses - an alternative method for processing of concrete</i>. <i>International Journal of Mineral Processing</i>, Vol.74, 2004 2. Padmini A.K. et al. <i>Influence of parent concrete on the properties of recycled aggregate concrete</i>. <i>Construction and Building Materials</i>, vol. 23, 2009 		
Department:	<i>Department of Materials, Technology and Building Organisation</i>	Group instructors:	dr inż. Edyta Pawluczuk, mgr inż. Nina Szklennik
Date:	05.10.2012	Coordinator:	dr inż. Edyta Pawluczuk