

Faculty of Civil and Environmental Engineering					
Study programme:	Civil Engineering	Degree level: full-time/part-time programme:		Master's degree time programme	part
Specialization	KBI, RiUOB, BK	Diploma path: -			
Module name:	Monolithic building				
Module type:	obligatory	Semester:	I	ECTS	3
				Module ID:	X01311
No. of hrs in semester:	L - 10	C - 0	LC- 0	P- 10	SW- 0
				S- 0	
Prerequisites:	Complete with prerequisites or "-"	Special concrete and recycling of concrete structures, Building technology part I, Concrete technology			
Teaching methods:	lecture, project	Assessment:	Evaluation must be relevant to the intended learning outcomes		
		lecture - written exam, project - completion, discussion of the project			
Aims and objectives:	Developing the abilities of understanding of appearing processes in monolithic works. Consolidating and the extension of knowledge about the rules of selection of machines and devices for the completion less and more complicated elements in monolithic technology. Developing competence in planning the process of monolithic work.				
Module content:	Features of the monolithic building construction. Classification and materials applied for the production of concrete formwork. Formwork for vertical and horizontal elements. Climbing formwork systems. Reinforcing concrete structures. Concreting monolithic structures. Transport distant and close to concrete mix. Care over concrete. Project - project of monolithic works				
Learning outcomes	Student that passed the module:			Relevance to the programme learning outcomes	
LO1	identifying the process of monolithic work			K_B2_W01, K_B2_W10, K_B2_W11	
LO2	designing and analysing the implementation process of monolithic work			K_B2_W13, K_B2_U13	
LO3	selecting optimal formwork to the forming of chosen concrete elements			K_B2_W05, K_B2_W06, K_B2_W08, K_B2_W16	
LO4	knows modern technologies and devices for the completion of the monolithic building construction			K_B2_W17, K_B2_W18	
LO5	analysing the effectiveness: the cost and the time of work by variant sets of machines and formwork			K_B2_U12, K_B2_U13, K_B2_U16	
LO6	predicts possibilities of later recycling of monolithic structures in the aspect of the protection of the natural environment			K_B2_W15, K_B2_K02	
-kload	lecture attendance			10 x 1h =	10
	participation in classes, laboratory classes, etc.			10 x 1h =	10
	preparation for classes, laboratory classes, projects, seminars, etc.			-	3
	work on projects, reports, etc.			-	-

student work	participation in student-teacher sessions related to the class / seminar / project	-	17
	implementation of project tasks	-	20
	preparation for and participation in exams/tests	-	20
		TOTAL:	80
quantitative indicators	Student workload - activities that require direct teacher participation 10h+10h+17h+2h=39h	39	ECTS 1,5
	Student workload - practical skills activities 10h+17h+20h+3h=50h	50	2
basic references:	1) Orłowski Z.: <i>Podstawy technologii betonowego budownictwa monolitycznego</i> , PWN, 2009; 2) Jasiczak J.: <i>Technologie budowlane II</i> , Poznań, 2003; 3) Abramowicz M.: <i>Roboty betonowe na placu budowy</i> . Arkady, W-wa, 1982; 4) Neville A.M. <i>Właściwości betonu</i> . Arkady, 2007; 5) Jamroz Z.: <i>Beton i jego technologie</i> , PWN 2008		
supplementary references:	1) Rowiński L. i inni.: <i>Technologia monolitycznego budownictwa betonowego</i> . PWN, 1986; 2) <i>Katalogi nowoczesnych urządzeń formujących</i>		
learning outcomes	<i>methods of assessing learning outcomes</i>	type of class (if more than one) where the outcomes are assessed	
LO1	evaluating the student's lecture, evaluating the student's project discussion	L, P	
LO2	evaluating the student's lecture, evaluating the student's project	L, P	
LO3	evaluating the student's lecture, evaluating the student's project	L, P	
LO4	evaluating the student's lecture	L	
LO5	evaluating the student's lecture, evaluating the student's project discussion	L, P	
LO6	evaluating the student's lecture, evaluating the student's project discussion	L, P	
LO7			
LO8			
Department:	Department of Materials, Technology and Building Organisation	Group instructors:	dr inż. Edyta Pawluczuk
Date:	02.05.2013	Coordinator:	dr inż. Edyta Pawluczuk