STUDY MODULE DESCRIPTION FORM								
Name of the module/subject Concrete Structures II					Code 010102121010110127			
Field of study			Profile of study (general academic, practical)	Year /Semester			
Civil	Engineering Se	econd-cycle Studies	general academic	;	1/2			
Elective path/specialty Structural Engineering			Subject offered in: Polish		Course (compulsory, elective) obligatory			
Cycle o	f study:		Form of study (full-time,part-time))				
	Second-c	cycle studies	full-time					
No. of h	ours				No. of credits			
Lectu	re: 15 Classe	es: - Laboratory: -	Project/seminars:	30	4			
Status o	of the course in the study	y program (Basic, major, other)	(university-wide, from another	field)	4			
		otner	univ	ersi				
Luuuu					and %)			
Resp	onsible for subj	ject / lecturer:						
dr inz. Adam Uryzaj email: adam.uryzaj@put.poznan.pl tel. 0616652058 Wydział Budownictwa i Inżynierii Środowiska ul. Piotrowo 5, 60-965 Poznań								
Prere	equisites in term	ns of knowledge, skills an	d social competencies	:				
1	Knowledge	A student has knowledge of: general mechanics and strength of materials, basis of theory of concrete structures, knows analysis principles of simple and complex RC elements design with taken RC two-way reinforced slabs into consideration.						
2	Skills	A student can estimate and repubuilding structures, design RC s consideration and choose analy	can estimate and report loads acting on building structures. Student can classify tructures, design RC structure elements with taken two-way reinforced slabs into attion and choose analytical or numerical solution of engineering problems.					
3	Social competencies	A student understands the need for lifelong learning and knows how to interact in a group.						
Assumptions and objectives of the course:								
The gaining of knowledge concerning design of prestressed structures. Study outcomes and reference to the educational results for a field of study								
Knov	vledge:							
1. A student knows the basic type of loads acting on shell covers, he knows analysis principles rotational shells and spherodial shells whose performance is a complex state of stress [-								
2. A st [K_W0	udent knows different 1, K_W02, K_W04, I	t type of loads in design situations K_W05, K_W14, K_W09, K_W14,]	concerning prestressed structu]	ires.	-			
3. A student knows principles of designing, dimensioning and reinforcing sections in prestressed structures [K_W04, K_W07, K_W09, K_W14]								
4. A student knows principles of designing and dimensioning prestressed structures - [K_W07, K_W08, K_W11]								
Skills	5.			n				
 A student is able to calculate loads acting on ground and underground shell structures [K_U01, K_U02, K_U03, K_U04] A student is able to characterize different type of shell covers, liquid tanks, silos and he is able to calculate reinforcement [K_U02, K_U03] 								
 A student is able to calculate losses of prestress and loads acting on sections in prestressed structures [K_U04, K_U05, K_U07, K_U08] 								
Socia	al competencies	:						

1. A student understands the need of lifelong learning, is able to organize the learning process of others. -

- [K_K01, K_K02, K_K06]
- 2. A student is able to cooperate and work in a group. [K_K01]
- 3. He correctly identifies and resolves problems associated with his profession. [K_K07, K_K09]

Credit in written form (exam) 1.5h Credit of projects Estimation of individual projects on the basis of calculation and structural drawings with a defence of submitted work Number of availation [%] (grade) [90-91 A excellent 90-75 B very good 74-65 C good 64-51 D sufficient <50 E failed Course description 1. Introduction to the design of prestressed concrete structures. 3. Basic principles of designing prestressed structures. 4. Rules for selecting the shape of the cross-section. 5. Compressive forces. 6. Immediate loases of prestressed concrete structures. 9. Serviceability Limit State Basic bibliography: 1. Istrate in basic computational situations. 8. Anchorage zones in prestressed concrete structures. 9. Serviceability Limit State Basic bibliography: 1. Istrusterin design disese 3. PineN 193264:2002 ? Konstrukeje betonowe żelbetowe i sprężone. Obliczenia statyczne I projektowanie. <td colspan="2</th> <th colspan="6">Assessment methods of study outcomes</th>	Assessment methods of study outcomes							
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