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		STUDY MODULE D	ES	CRIPTION FORM		
Name of the module/subject  Concrete Structures				Co.	de 10102111010113706	
Field of	•	ng Second-cycle Studies		Profile of study (general academic, practical general academic		Year /Semester
	e path/specialty	_		Subject offered in: Polish		Course (compulsory, elective) <b>obligatory</b>
Cycle o	f study:	_	Fo	rm of study (full-time,part-time)		Obligatory
	•	ycle studies		full-time		
No. of h	nours		I			No. of credits
Lectu	re: - Classes	s: <b>15</b> Laboratory: -		Project/seminars:	15	2
Status	of the course in the study	program (Basic, major, other)		(university-wide, from another	field)	
		other		univ	ers	ity-wide
Educati	on areas and fields of sci	ence and art				ECTS distribution (number and %)
techi	nical sciences					2 100%
	Technical scient	ences				2 100%
Resp	onsible for subj	ect / lecturer:	Re	esponsible for subje	ct /	lecturer:
	nż. Teresa Grabiec-Mi			dr inż. Piotr Frąszczak		
	ail: teresa.grabiec-miz +48 061 665 2085	era@put.poznan.pl	email: piotr.fraszczak@put.poznan.pl tel. + 48 061 665 2085			
	ulty of Civil and Enviro	onmental Engineering	Faculty of Civil and Environmental Engineering			
	785 Poznań, ul.Piotrov			60-785 Poznań, ul.Piotrow		
Prere	equisites in term	s of knowledge, skills an	d s	ocial competencies:	•	
1	Knowledge	of reinforced concrete structures	general mechanics and strength of materials, basis of theory s, knows analysis principles of simple and complex RC ws building standards and requirements concerning design of ments.			
2	Skills		port permanent and variable loads acting on building structures. ructures, design RC structure elements and choose analytical			
3	Social	A student understands the need			s ho	w to interact in a group.
3	competencies					
Assu	mptions and obj	ectives of the course:				
		nd skills concerning design of RC ss. Preparing for modeling of RC s				
	Study outco	mes and reference to the	ed	ucational results for	a f	field of study
Knov	vledge:					
1. A st	udent knows the basic	design method of RC slab eleme	ents	in RC structures - [K 2 W02	2, K	2 W04, K 2 W14]
		sign issues of spatial RC structure				
	udent knows the range (08, K 2 W16 ]	e applying of computers program i	nee	ded to analyse and design	RC s	structures
Skills	S:					
	udent uses building st ires [K 2 W01, K 2 V	andards of loads on building struc W02, K 2 W03, ]	ture	s as well as in the static ca	Icula	ation and dimensioning of RC
		RC slab structures with taken fra	ames	s into consideration - [K 2	W03	s, K 2 W13]
Socia	al competencies:					
	udent understands the [02, K 2 W03]	e need of lifelong learning, is able	to o	rganize the learning proces	ss of	others
2. A st	udent is able to coope	rate and work in a group - [K 2 W	01, I	K 2 W06]		

3. He correctly identifies and resolves problems associated with his profession - [K 2 W07]

# Assessment methods of study outcomes

-Credit of exercise classes

Credit in written form (1.0h)

Credit of projects

Estimation of individual projects on the basis of calculations and structural drawings with a defence of submitted work

#### Number of evaluation

[%]	(grade)
100- 91	A excellent
90- 75	B very good
74- 65	C good
64- 51	D sufficient
< 50	E failed

# **Course description**

-Form of teaching: classes

Method of designing and dimensioning RC slab structures especially two-way reinforced slabs

Load report in two-way reinforced slabs

Dimensioning of reinforced concrete slab structures to bending and shear ULS, SLS.

Form of teaching: projects

Project of two-way reinforced slab

### Basic bibliography:

- 1. 1.Nilson H.A., Darwin D., Dolan w. Ch. Design Concrete Structures Mc Graw Hill Higher Education. 2004.
- 2. 2. Mosley B., Bungey J., Hulse R. Reinforced Concrete Design Palgrave Macmillan. 2007.

# Additional bibliography:

### Result of average student's workload

Activity	Time (working hours)
Participation in audience classes	15
2. Participation in design classes	15
3. Complete (at home) works involved in the project	15
4. Participation in the consultations associated with the audience and design classes	5
5. Preparing to the final test of classes content	10

### Student's workload

Source of workload	hours	ECTS
Total workload	50	2
Contact hours	35	1
Practical activities	30	1