

COURSE SYLLABUS	
Course code	1080-BU400-ISA-0502
Course name	Concrete Structures I
Course version	2027L
Level of education	first cycle programme
Form and mode of study	full-time study
Study profile	general academic profile
Field of study	Civil Engineering
Specialisation	-
Organizational unit	The Faculty of Civil Engineering
Implementing unit	The Faculty of Civil Engineering
Course unit	n/a
Course groups	-
Course status	Obligatory
Language of the course	English
Study stage code	BU000-S4-ISA-1080
Number of ECTS credits	4

Part I

01. Learning outcomes and the method of conducting classes

Learning outcomes	see table "Learning outcomes"
Forms of classes and the number of hours in the semester	
project	30,00 h
lectures	20,00 h

02. ECTS balance

Number of ECTS credits	4	
Course workload	Hours	ECTS
Total number of hours and ECTS credits for the course:		
Hours and ECTS credits for courses involving direct participation of academic teachers	57	2,28
Hours and ECTS credits involving student's independent work	43	1,72
Total	100	4,00
Number of hours involving direct participation of academic teachers:		
Hours connected with class participation	50	
Other synchronous hours	7	
Total	57	
Number of hours involving student's independent work:		
Hours for student's independent work	43	

03. Course content

Course content	Basics of reinforced concrete design - theoretical background, rules for analysis, detailing of reinforcement.
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Table: Learning outcomes

Knowledge	
Outcomes code	W1
Description	Graduate knows the structural design fundamentals for the basic reinforced concrete elements (beams, slabs).
Related field-of-study learning outcomes	K1_W15, K1_W16, K1_W17, K1_W18
Outcomes code	W2
Description	Graduate has the basic knowledge on properties of concrete and reinforcement used in reinforced concrete structures.

Part I	
Related field-of-study learning outcomes	K1_W06
Outcomes code	W3
Description	Graduate knows the basis rules of European Code PN-EN 1992-1-1.
Related field-of-study learning outcomes	K1_W23
Skills	
Outcomes code	U1
Description	Graduate is able to design the reinforced concrete beams and slabs of the basic type.
Related field-of-study learning outcomes	K1_U15, K1_U18
Outcomes code	U2
Description	Graduate is able to prepare and understand the drawings for the basic reinforced concrete structural elements.
Related field-of-study learning outcomes	K1_U12
Outcomes code	U3
Description	The graduate can estimate the actions on reinforced concrete building floors.
Related field-of-study learning outcomes	K1_U15, K1_U18
Social competence	
Outcomes code	K1
Description	Graduate is conscious of responsibility for the safety of humans and goods that the structural engineer carries.
Related field-of-study learning outcomes	K1_K01, K1_K02, K1_K03, K1_K09
Outcomes code	K2
Description	Graduate is conscious of the need to raise professional expertise. Graduate is able to plan self-learning themselves.
Related field-of-study learning outcomes	K1_K01, K1_K02, K1_K03, K1_K07

Part II	
04. Year and semester of studies	
Year	2027L
Semester	4
05. Course leader and course teachers	
Course leader	Rafał Ostromecki
lectures	Rafał Ostromecki
project	Rafał Ostromecki
06. Course objective	
Course objective	Introduction to reinforced concrete theory and design basis.
07. Teaching methods and techniques	
project	Project method, multimedia presentaion, task solutions.
lectures	Lecture, multimedia presentation.
08. Methods of verifying learning outcomes	
Knowledge	
Outcomes code	W1
Description	Graduate knows the structural design fundamentals for the basic reinforced concrete elements (beams, slabs).
Verification methods	lectures: written test:Colloquium in writng project : project:Project.
Outcomes code	W2
Description	Graduate has the basic knowledge on properties of concrete and reinforcement used in reinforced concrete structures.

Part II	
Verification methods	lectures: written test:Colloquium in writng project : project:Project.
Outcomes code	W3
Description	Graduate knows the basis rules of European Code PN-EN 1992-1-1.
Verification methods	project : project:Project.
Skills	
Outcomes code	U1
Description	Graduate is able to design the reinforced concrete beams and slabs of the basic type.
Verification methods	project : project:Project.
Outcomes code	U2
Description	Graduate is able to prepare and understand the drawings for the basic reinforced concrete structural elements.
Verification methods	project : project:Project.
Outcomes code	U3
Description	The graduate can estimate the actions on reinforced concrete building floors.
Verification methods	project : project:Project.
Social competence	
Outcomes code	K1
Description	Graduate is consious of responsibilty for the safety of humans and goods that the structural engineer carries.
Verification methods	project : project:Project.
Outcomes code	K2
Description	Graduate is consious of the need to raise professional expertise. Graduate is able to plan self-learning themselves.
Verification methods	lectures: written test:Colloquium in writng project : project:Project.
09. Required and recommended reading list	
Required reading	EN-1992-1-1 : 2008 Eurocode 2: Design of concrete structures Part 1-1: General rules and rules for buildings. Lecture and project materials shared with the students by a teacher.
Recommended reading	No special recommendations, students are free to use publicatons in the national or English languages.
10. Other information	
Other information	In accordance with the Course Regulations.