

Faculty of Civil and Environmental Engineering						
Study programme:	Civil Engineering	Degree level: full-time programme Bachelor's degree				
Specialization		Diploma path:				
Module name:	General Building Engineering					
Module type:	obligatory/elective	Semester: 3	ECTS 6	Module ID: ENB03425		
No. of hrs in semester:	L - 30	C - 30	LC-	P- 30	SW-	S-
Prerequisites:	<i>Complete with prerequisites or "-"</i>	Technical drawings and engineering graphics, Strength of materials, Civil engineering materials				
Aims and objectives:	The purpose of this module is to present students with: main elements and systems of buildings construction; principles of loads combinations; construction of selected elements of buildings; principles of preparation of engineering drawings of buildings built from bricks.					
Forms of teaching activities:	<i>lecture, class, project</i>	Assessment:	<i>Evaluation must be relevant to the intended learning outcomes</i>			
		L - written exam; C - written evaluation, presentation of a paper; P – completion of the student's project, written evaluation, defense of the student's project				
Module content:	<p><i>L: Traditional building engineering. Classification of buildings. Elements of buildings and building structures. Spatial rigidity of buildings. Expansion joints. Technical specifications for buildings and their location according to Polish building law. Excavations. Foundations. Building walls in traditional technology. Chimney walls. Ceilings. Staircases. Steep and flat roofs. Roofings. Windows and doors. Insulations. Finishing elements.</i></p> <p><i>C: Load combinations, calculation of loads. Simplified calculations of selected building elements. Presentation of selected technology of building construction.</i></p> <p><i>P: Specification and technical drawings of a building built from bricks</i></p>					
Teaching methods:	<p><i>A series of lectures to provide students with an overview of the main issues relating to the main elements and systems of building constructions, principles of load combinations; construction of selected elements of buildings. A series of classes covering actions on buildings, load calculations and design and calculation of simple structures. Project consisting in specification and technical drawings of a building built from bricks.</i></p>					
Learning outcomes	<i>Write min. 4, max. 8 learning outcomes in the following order: knowledge - skills - competences. Each learning outcome must be verifiable.</i>				<i>Relevance to the programme learning outcomes</i>	
LO1	Student (graduate) has a basic knowledge regarding designing and construction of selected objects				K_B1_W11	
LO2	Student (graduate) knows standard rules, regulations and building codes				K_B1_W07	
LO3	Student (graduate) recognizes and classifies different construction objects				K_B1_U02	
LO4	Student (graduate) determines and combines loads acting on elements of construction objects				K_B1_U03	
LO5	Student (graduate) selects and applies construction materials in designed objects				K_B1_U07	
LO6	Student (graduate) prepares and orally presents a selected construction technology				K_B1_U22	

LO7	Student (graduate) understands the need to learn in order to improve professional and personal skills	K_B1_K01	
LO8			
student workload	lecture attendance	30x2h	30
	participation in classes, laboratory classes, etc.	15x2h+15x2h	60
	preparation for classes, laboratory classes, projects, seminars, etc.		30
	work on projects, reports, etc.		30
	participation in student-teacher sessions related to the class / seminar / project		5
	implementation of project tasks		
	preparation for and participation in exams/tests		25
			TOTAL:
quantitative indicators	Student workload - activities that require direct teacher participation 30+60+5+2 = 97 h	97	ECTS 3,2
	Student workload - practical skills activities 60+30+30+5=125 h	125	4,2
basic references:	1. Rozporządzenia Ministra Infrastruktury z dnia 12 kwietnia 2002 r. w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie, (Dz. U. Nr 75, poz. 690), z późniejszymi zmianami. 2. Hoła J. i inni: Obliczanie konstrukcji budynków wznoszonych tradycyjnie. Dolnośląskie Wydawnictwo Edukacyjne. Wrocław 2006. 3. Allen E., Iano J.: Fundamentals of building construction: materials and methods. Hoboken, NJ: Wiley & Sons, c. 2004		
supplementary references:	1. Eurocodes: EC0, EC1, EC5		
learning outcomes	<i>methods of assessing learning outcomes</i>	type of class (if more than one) where the outcomes are assessed	
LO1	written exam, written evaluation of classes and project, completion and defense of the student's project, calculations, defense of the calculation	L, C, P	
LO2	written evaluation of classes and project, completion and defense of the student's project, calculations, defense of the calculation exercise	C, P	
LO3	written exam	L	
LO4	completion of a calculation exercise, defense of the exercise, written evaluation	C	
LO5	completion and defense of the student's project, written evaluation	P	
LO6	oral presentation of a paper, discussion	C	
LO7	discussions	C	
LO8			
Department:	Department of Construction Materials, Technology and Organization	Group instructors:	dr inż. Dorota Małaszkiwicz, mgr inż. Natalia Stankiewicz
Date:	11.12.2016	Coordinator:	dr inż. Dorota Małaszkiwicz

L - lecture C - class LC - laboratory class P-project
SW - specialization workshop S - seminar