

Faculty of Architecture						
Study programme:	Architecture and Urban Planning		Degree level: full-time/part-time programme: Bachelor's degree			
Specialization			Diploma path: -			
Module name:	Structural Mechanics 1					
Module type:	obligatory	Semester:	1	ECTS	2	Module ID: AUI 1053
No. of hrs in semester:	L - 15	C - 15	LC-	P-	SW-	S-
Prerequisites:	Complete with prerequisites or "-"		-			
Teaching methods:	lecture, class	Assessment:		Evaluation must be relevant to the intended learning outcomes		
		lectures, class - five written ordinary tests and four written correction tests				
Aims and objectives:	As a result of the course, students should master principles of shaping and using statically determinate structures and building systems and they should understand the basic relationships between work conditions and proportions of form for different structural materials.					
Module content:	Statics and mechanics of statically determinate systems. Analysis, synthesis and optimization. Principles of building static schemes. Principles of modelling and combining loads. The way of load transfer between elements. Types of stress and their determination. Determination of mechanical quantities required for design.					
Learning outcomes	Write min. 4, max. 8 learning outcomes in the following order: knowledge - skills - competences. Each learning outcome must be verifiable.					Relevance to the programme learning outcomes
LO1	student has knowledge of principles of using statically determinate systems					AiU1_W04, AiU1_W09
LO2	they can build static schemes of statically determinate systems, they know how to assume and transfer loads					AiU1_W04, AiU1_U04
LO3	they have ability to identify and determine stresses and mechanical quantities required for design					AiU1_W04, AiU1_U01, AiU1_U04
LO4	they have ability to shape optimal statically determinate structures from different materials					AiU1_W04, AiU1_U04
student workload	lecture attendance					15
	participation in classes, laboratory classes, etc.					15
	participation in student-teacher sessions related to the class					5
	preparation for tests					15
	TOTAL:					50

quantitative indicators	Student workload - activities that require direct teacher participation	35	ECTS
			1,4
	Student workload - practical skills activities	35	1,4
basic references:	1 Kolendowicz T., <i>Mechanika budowli dla architektów</i> , Wrocław, Oficyna Wydawnicza Politechniki Wrocławskiej, 2012. 2 Pyrak S., Szulborski K. <i>Mechanika konstrukcji: przykłady obliczeń</i> . Arkady, Warszawa, 2004.		
supplementary references:	1 Shaeffer R.E. <i>Building Structures: elementary analysis and design</i> . Prentice-Hall, Englewood Cliffs, 1980. 2 Salvadori M., Heller R. A., <i>Structure in architecture: the building of buildings</i> , Englewood Cliffs, Prentice-Hall, 1986.		
learning outcomes	<i>methods of assessing learning outcomes</i>	type of class (if more than one) where the outcomes are assessed	
LO1	written tests	L, C	
LO2	written tests	L, C	
LO3	written tests	L, C	
LO4	written tests	L, C	
Department:	Engineering Design Studio	Group instructors:	Agata Kozikowska
Date:	12.04.2019 r.	Coordinator:	Agata Kozikowska, PhD

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