

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Fundamentals of Bridge Engineering		Code 1010104161010120359
Field of study Civil Engineering First-cycle Studies	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) part-time	
No. of hours Lecture: 20 Classes: 10 Laboratory: - Project/seminars: 12		No. of credits 4
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 4 100% 4 100%
Responsible for subject / lecturer: dr inż. Wojciech Siekierski email: Wojciech.Siekierski@put.poznan.pl tel. 61 6475834 Budownictwa i Inżynierii Środowiska ul. Piotrowo 5, 61-138 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Basics of strength of materials, structural mechanics, concrete structures, steel structures
2	Skills	Building construction behaviour, basics of structural computations
3	Social competencies	Responsibility
Assumptions and objectives of the course: Acquiring basic knowledge on bridge structures, their forms, and elements		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Basic definitions - [K_W09] 2. Bridge types and their structural elements - [K_W09] 3. Bridge equipment - [K_W10]		
Skills:		
1. Bridge drawing description - [K_U01] 2. Identification of functions of certain bridge element - [K_U14] 3. Bridge loading arrangement on deck - [K_U04]		
Social competencies:		
1. Self-reliance - [K_K01] 2. Honesty - [K_K02]		
Assessment methods of study outcomes		
Written exam Discussion on design exercise		

Course description		
Basic definitions, bridge structure main elements, types and elements of bridge spans, types and element of bridge supports, bridge bearings, bridge span equipment, brudge structure dimensions, bridge classifications, dead and live load on bridges, basic methods of bridge span and support analysis		
Basic bibliography:		
1. Ryżyński A., Wołowicki W.: Karlikowski J., Skarżewski J.: Mosty stalowe, PWN, Warszawa 1985		
2. Madaj A., Wołowicki W.: Projektowanie mostów betonowych, WKiŁ, Warszawa 2010		
3. Madaj A., Wołowicki W.: Podstawy projektowania budowli mostowych, WKiŁ, Warszawa 2007		
Additional bibliography:		
1. PN-EN 1991-2:2007 Eurokod 1: Oddziaływania na konstrukcje, Część 2: Obciążenia ruchome mostów		
Result of average student's workload		
Activity	Time (working hours)	
Student's workload		
Source of workload	hours	ECTS
Total workload	100	4
Contact hours	60	2
Practical activities	20	2