

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Engineering objects		Code 1010102131010126037
Field of study Civil Engineering Second-cycle Studies	Profile of study (general academic, practical) general academic	Year /Semester 2 / 3
Elective path/specialty Roads and Highways	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: - Laboratory: - Project/seminars: -		No. of credits 1
Status of the course in the study program (Basic, major, other) other		(university-wide, from another field) university-wide
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 1 100% 1 100%
Responsible for subject / lecturer: Wojciech Siekierski email: Wojciech.Siekierski@put.poznan.pl tel. 0-61 6653413 Wydział Budownictwa i Inżynierii Środowiska ul. Piotrowo 5, Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Strength of materials, structural mechanics, concrete structures, steel structures
2	Skills	Basic static-strength calculations
3	Social competencies	Honesty, responsibility
Assumptions and objectives of the course: Acquiring the knowledge on shaping, calculation, and erection of slab and beam bridges		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Shaping of reinforced concrete slab and beam bridges - [K_W02] 2. Shaping of steel beam bridges - [K_W02] 3. Shaping of pedestrian tunnels - [K_W02]		
Skills:		
1. Simple static-strength calculations of slab and beam bridges - [K_U01, K_U03, K_U04] 2. Shaping of slab and beam bridges - [K_U01, K_U03, K_U04] 3. Shaping pedestrian tunnels - [K_U01, K_U03, K_U04]		
Social competencies:		
1. Honesty - [K_U01] 2. Responsibility - [K_U02]		
Assessment methods of study outcomes		
Written colloquium..		
Course description		

Static-strength calculation of slab and beam bridges, design of reinforced-concrete and steel bridge beams. Slab and bridges: shaping, computations, construction, erection. Tunnels: shaping, design, calculations, erection.		
Basic bibliography:		
1. A. Madaj, W. Wołowicki Projektowanie mostów betonowych WKŁ Warszawa 2010		
2. A. Rzyżyński Mosty stalowe WKŁ 1985		
3. K. Furtak, M. Kędracki Podstawy budowy tuneli Wyd. PK Kraków 2004		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
Student's workload		
Source of workload	hours	ECTS
Total workload	25	1
Contact hours	15	1
Practical activities	0	0