

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

<b>Course description</b>		
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		
<b>Basic bibliography:</b>		
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		
<b>Additional bibliography:</b>		
1. PN-EN 1991-2:2007 Eurokod 1: Oddziaływania na konstrukcje, Część 2: Obciążenia ruchome mostów		
<b>Result of average student's workload</b>		
<b>Activity</b>		<b>Time (working hours)</b>
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	100	5
Contact hours	20	2
Practical activities	22	3