

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Steel bridges		Code 1010101161010125139
Field of study Civil Engineering First-cycle Studies	Profile of study (general academic, practical) general academic	Year /Semester 3 / 6
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 30 Classes: 15 Laboratory: - Project/seminars: 15		No. of credits 5
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		ECTS distribution (number and %)
Responsible for subject / lecturer: dr inż. Krzysztof Sturzbecher email: krzysztof.sturzbecher@put.poznan.pl tel. 616475829 Faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań		Responsible for subject / lecturer: dr inż. Wojciech Siekierski email: Wojciech.Siekierski@put.poznan.pl tel. 616475834 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, steel structures
2	Skills	Static-strength calculation of steel structures
3	Social competencies	Honesty, responsibility
Assumptions and objectives of the course: Acquiring the knowledge on construction and design of orthotropic decks, steel box-girder bridges and suspension bridges		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Design of orthotropic decks - [K_W14, K_W16] 2. Design of steel box-girder bridges - [K_W14, K_W16] 3. Design of steel suspension bridges - [K_W14, K_W16]		
Skills:		
1. Design of steel orthotropic deck - [K_U03, K_U04] 2. Design of steel box-girder bridge - [K_U03, K_U04]		
Social competencies:		
1. Honesty - [K_K02] 2. Self-relianceResponsibility - [K_K01]		
Assessment methods of study outcomes		
Lectures: written exam Classes: written colloquium Project: completing the project and a debate on its correctness		
Course description		

Acquiring the knowledge on construction and design of orthotropic decks, stel box-girder bridges and steel suspension bridges.		
Basic bibliography:		
1. Arkadiusz Madaj, Witold Wołowicki: Budowa i utrzymanie mostów. Wymagania techniczne, badania, naprawy. WKŁ. Warszawa2001		
2. Kazimierz Furtak, Witold Wołowicki; Rusztowania mostowe. WKŁ. Warszawa 2007		
3. Leszek Janusz, Arkadiusz Madaj: Obiekty inżynierskie z blach falistych. WKŁ. Warszawa2007		
4. Jan Biliszczuk: Mosty podwieszane. Projektowanie i realizacja. Arkady, Warszawa2005		
5. Józef Głomb Technologia budowy mostów betonowych. WKŁ. Warszawa 1982		
6. Arkadiusz Madaj, Witold Wołowicki: Budowa i utrzymanie mostów. Wymagania techniczne, badania, naprawy. WKŁ. Warszawa2001		
7. Kazimierz Furtak, Witold Wołowicki; Rusztowania mostowe. WKŁ. Warszawa 2007		
8. Leszek Janusz, Arkadiusz Madaj: Obiekty inżynierskie z blach falistych. WKŁ. Warszawa2007		
9. Jan Biliszczuk: Mosty podwieszane. Projektowanie i realizacja. Arkady, Warszawa2005		
10. Józef Głomb Technologia budowy mostów betonowych. WKŁ. Warszawa 1982		
11. Ryżyński A., Mosty stalowe, PWN, Warszawa 1985		
12. Cusens A., Pama R., Analiza pomostów stalowych, WKŁ, Warszawa		
13. Ryżyński A., Mosty stalowe, PWN, Warszawa 1985		
14. Cusens A., Pama R., Analiza pomostów stalowych, WKŁ, Warszawa		
Additional bibliography:		
1. Svensson,Holger.: Cable-Stayed Bridges . Ernst &#38;#38;Sohn, Berlin 2012		
2. Paul Mondorf .:Concrete Bridges.: CRC Press (September 14, 2006)		
3. W.F. Chen Lian Duan: Bridge Engineering Handbook . Crc Employee. CRC Press 1999.		
4. Gerhard Mehlhorn: Handbuch Bruecken. Springer-Verlag, Berlin,Heidelberg,NewYork 2010		
5. Materiały z seminarium:Współczesne metody wzmacniania i przebudowy mostów. Poznań(lata 1995-2012)		
6. Svensson,Holger.: Cable-Stayed Bridges . Ernst &#38;#38;Sohn, Berlin 2012		
7. Paul Mondorf .:Concrete Bridges.: CRC Press (September 14, 2006)		
8. W.F. Chen Lian Duan: Bridge Engineering Handbook . Crc Employee. CRC Press 1999.		
9. Gerhard Mehlhorn: Handbuch Bruecken. Springer-Verlag, Berlin,Heidelberg,NewYork 2010		
Result of average student's workload		
Activity	Time (working hours)	
Student's workload		
Source of workload	hours	ECTS
Total workload	130	5
Contact hours	90	3
Practical activities	40	2