

Title Intrudction to bridges	Code 1010101151010120486
Field Civil Engineering First-cycle Studies	Year / Semester 3 / 5
Specialty Bridges and Underground Engineering	Course core
Hours Lectures: 2 Classes: 1 Laboratory: - Projects / seminars: 1	Number of credits 4
Language polish	

Lecturer:

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Status of the course in the study program:

Speciality course.

Assumptions and objectives of the course:

The aim of the subject is presentation of selected problems of bridge design and building.

Contents of the course (course description):

Design of bridge crossing. Water gauge under bridges. Transportation requirements concerning bridges. Transportation types clearances. Bridge fittings. Dead and live loads of bridges according to Polish and European standards. Methods of bridge static computations. Strength computations of bridges according to safety factors method. Bridge erection methods.

Introductory courses and the required pre-knowledge:

Transport infrastructure, Strength of Materials, Structural Mechanics

Courses form and teaching methods:

Lecture, auditorium exercises, design exercises.

Form and terms of complete the course - requirements and assessment methods:

Lecture: written colloquium.

Auditorium exercises: written colloquium (last week of semester).

Design exercises: submission of correctly completed exercise and oral check of knowledge in concern.

Basic Bibliography:

1. Madaj A., Wołowicki W., Podstawy projektowania budowli mostowych WKŁ Warszawa 2007
2. Czudek H., Radomski W., Podstawy mostownictwa PWN Warszawa 1974
3. Głomb J., Drogowe budowle inżynierskie WKŁ Warszawa 1988
4. PN-85/S-10030 Obiekty mostowe. Obciążenia. (wydanie 2.) Wyd. Normalizacyjne Alfa Warszawa 1985
5. PN-EN 1990:2004 Eurokod. Podstawy projektowania konstrukcji

6. PN-EN 1991-2 Eurokod 1: Oddziaływania na konstrukcje. Część 2: Obciążenia ruchome mostów

Additional Bibliography:

1. K. Furtak, J. Śliwiński, Materiały budowlane w mostownictwie, WKŁ, W-wa 2005
2. W. Wołowicki, A. Madaj, Budowa i utrzymanie mostów, WKŁ, W-wa 2007
3. J. Łucyk-Ossowska, W. Radomski, Urządzenia dylatacyjne w mostowych obiektach drogowych, WKŁ, W-wa 2011
4. Katalog detali mostowych, GDDP Wydział mostów, Warszawa 2002