

Title <b>(Budownictwo komunikacyjne)</b>	Code <b>1010114171010120210</b>
Field <b>Civil Engineering Extramural First-cycle studies</b>	Year / Semester <b>4 / 7</b>
Specialty <b>Structural Engineering</b>	Course <b>core</b>
Hours Lectures: <b>2</b> Classes: -    Laboratory: -    Projects / seminars: <b>8</b>	Number of credits <b>3</b>
	Language <b>polish</b>

**Lecturer:**

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**Status of the course in the study program:**

Specialization course.

**Assumptions and objectives of the course:**

Introduction to selected problems of design and construction of bridges.

**Contents of the course (course description):**

Basic definitions of bridges. Basic dimensions. General classification of bridges. The main elements of bridges.  
Communication design elements of the bridge.  
Supports bridges: classification, foundation, load.  
Bearings bridges.  
Bridge expansion joints.  
Principles for determining the loads acting on the bridge.  
Elements of the technical equipment of bridges.  
Light vertical bridge. The concepts and general principles of calculation.  
Methods of static analysis and dimensioning of bridges.  
Basics of building bridges methods.

**Introductory courses and the required pre-knowledge:**

Strength of Materials, Structural Mechanics

**Courses form and teaching methods:**

lectures - multimedia presentations  
projects - a traditional form, which consists of performing computational examples corresponding to the subsequent stages of the project

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

Control job - a description of the construction and technical equipment of any bridge (Lecture)  
Test (Lecture)  
Project execution entitled 'Preliminary design of the steel-concrete bridge construction' (Class Project)

**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. J. Głomb, Drogowe budowle inżynierskie. Wprowadzenie do projektowania, WKŁ, W-wa 1988

**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. Katalog detali mostowych, GDDP Wydział mostów, Warszawa 2002