

Title <b>TESTING AND MAINTENANCE OF BRIDGES</b>	Code <b>1010101161010120492</b>
Field <b>Civil Engineering First-cycle Studies</b>	Year / Semester <b>3 / 6</b>
Specialty <b>Bridges and Underground Engineering</b>	Course <b>elective</b>
Hours Lectures: <b>4</b> Classes: -    Laboratory: -    Projects / seminars: -	Number of credits <b>4</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:**

Getting knowledge on a) principles and range of testing of bridges during stages of building, acceptance and exploitation, b) principles of bridge diagnostics, c) basic methods of corrosion protection, d) basic reasons of bridge damage, e) repair methods.

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

General requirements concerning bridge erection and work acceptance. Quality requirements and inspection during construction. Test during bridge acceptance, after bridge erection ? load testing of bridges. Maintenance and inspection of exploited bridges. Maintenance of decks and deck fittings. Maintenance of steel bridges. Maintenance of concrete bridges. Maintenance of under-bridge area. Basic information on corrosion of steel and concrete structures. The most frequent types of damage of concrete and steel bridges and their localisation. Repair of concrete bridges damaged due to corrosion (repair materials, repair technology. Steel and concrete bridge surface protection.

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

Basic knowledge on building materials, Chemistry of building materials, Introduction to bridges.

**Courses form and teaching methods:**

Lecture

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

Written exam

**Basic Bibliography:**

**Additional Bibliography:**