Title	Code
Strength of Materials (Wytrzymałość materiałów)	**1010401131010210641**
Field: **EDUCATION IN TECHNOLOGY AND INFORMATICS**	Year / Semester: **2 / 3**
Specialty: **-**	Course: **core**
Hours: Lectures: **2** Classes: **-** Laboratory: **1** Projects / seminars: **-**	Number of credits: **4**
	Language: **polish**

Lecturer:

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Status of the course in the study program:

Core course of the study for Education in Technology and Informatics, Faculty of Technical Physics.

Assumptions and objectives of the course:

The student should obtain knowledge of theoretical fundamentals and of practical methods used in Strength of Materials analysis.

Contents of the course (course description):

Internal force, stress, strain. Stress-strain diagrams. Mechanical properties of materials. Differential strain-displacement relations. Generalized Hooke?s law. Stress concentration. Saint-Venant?s principle. Statically indeterminate systems of bars. Analysis of plane stress and plane strain. Principal stresses. Mohr?s circle for biaxial stress. Stresses in thin-walled pressure vessels. Moments of inertia of plane areas. Torsion of a circular shaft. Statically indeterminate shafts. Torsion of noncircular cross-section shaft. Shaft of rectangular cross-section. Torsion of thin-walled open or closed sections shafts.

Introductory courses and the required pre-knowledge:

Basic knowledge of mathematics and mechanics are necessary.

Courses form and teaching methods:

Lectures, supported by examples of structure members calculating.

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

Written tests

Basic Bibliography:

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Additional Bibliography:

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