

Title Strength of Materials I	Code 10102512410102102255
Field Mechanical Engineering	Year / Semester 2 / 4
Specialty -	Course core
Hours Lectures: 2 Classes: 1 Laboratory: 2 Projects / seminars: -	Number of credits 6
	Language polish

Lecturer:

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Status of the course in the study program:

- Basic course of the study program.

Assumptions and objectives of the course:

- Getting acquainted with base knowledge of theoretical and experimental methods connected with fundamentals of strength analysis of structures, stability, experimental material testing, and vibrations of mechanical systems.

Contents of the course (course description):

- Normal and shear stresses in beams. Differential equation of the elastic line of the beam and the equation of elastic line. Clebsch method. Mohr method. Statically indeterminate beams, three moments equation. Application of the superposition principle to determine the deflections and angle of rotation in beams. Unsymmetrical bending. Compound stresses in beams. Bars under tension or compression and bending, bars under bending and torsion.

Introductory courses and the required pre-knowledge:

- The knowledge of fundamentals in mathematics, applied mechanics, and statics.

Courses form and teaching methods:

- Lectures supported by exercises and laboratory practices.

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

- Oral examination and evaluation of knowledge and laboratory reports.

Basic Bibliography:

Additional Bibliography: