

Title Strength of Materials	Code 10102513410102102399
Field Mechatronics	Year / Semester 2 / 4
Specialty -	Course core
Hours Lectures: 1 Classes: 1 Laboratory: 1 Projects / seminars: -	Number of credits 3
	Language polish

Lecturer:

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Status of the course in the study program:

- Basic course at the field of study - Mechatronics

Assumptions and objectives of the course:

- Getting acquainted with basing knowledge of theoretical and experimental methods connected with fundamentals of strength analysis of structures.
Stresses and displacements in bending. Composed stress analysis.

Contents of the course (course description):

- Bending of beams. Normal (bending) stresses and shear stresses in beams.
Deflections of beams ? analytical method and ?moment-area? method.
Statically indeterminate beams. Composed stress analysis: unsymmetric bending, eccentric tension/compression, simultaneous bending and torsion.
Stability of compressed bars.

Introductory courses and the required pre-knowledge:

- Basics in mathematics (analysis, differential equations), classical mechanics (statics and dynamics).

Courses form and teaching methods:

- Lectures supported by exercises.

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

- Written tests, final examination (semestres 3 & 4)

Basic Bibliography:

Additional Bibliography: