

Title <b>Mechanics I</b>	Code <b>10102512310102102244</b>
Field <b>Mechanical Engineering</b>	Year / Semester <b>2 / 3</b>
Specialty -	Course <b>core</b>
Hours Lectures: <b>1</b> Classes: <b>1</b> Laboratory: <b>1</b> Projects / seminars: -	Number of credits <b>5</b>
	Language <b>polish</b>

**Lecturer:**

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

- Core course at the Faculty of Mechanical Engineering and Management to the first degree studies of Mechanical Engineering.

**Assumptions and objectives of the course:**

- Ability to mechanical description of motion of material objects and constructions.  
Preparation to design of complex material systems.

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

- Dynamical reactions. Vibrations of systems of one degree of freedom. Collision theory.  
Elements of analytical mechanics. The principle of virtual work. The Lagrange equations of the 2nd kind.

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

- Basic knowledge of differential calculus, vector and matrix algebra.

**Courses form and teaching methods:**

- Lectures illustrated by computer animations of constructions, classes, laboratory, exam..

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

- Written tests.

**Basic Bibliography:**

**Additional Bibliography:**