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|---|-------------------------------------|
| Title<br><b>Mechanics</b>   | Code<br><b>10102513210102102374</b> |
| Field<br><b>Mechatronics</b>  | Year / Semester<br><b>1 / 2</b>     |
| Specialty<br>-  | Course<br><b>core</b>               |
| Hours<br>Lectures: <b>1</b> Classes: <b>1</b> Laboratory: <b>1</b> Projects / seminars: - | Number of credits<br><b>4</b>       |
|   | Language<br><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 Mechatronics.

**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):**

- Forces, moments, equilibrium. Trusses. Kinematics of the material point.  
Rigid body kinematics. Complex motion. Dynamics of the material point.  
Geometry of mass. Dynamics of the material point, the set of material points and rigid body. Work, energy, power, elements of field theory.

**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.

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

- Written tests.

**Basic Bibliography:**

**Additional Bibliography:**