Title:	**Mechanics - Kinematics and Dynamics**
Lecture hours:	30
Study period: (summer/winter)	**summer** semester
Number of credits:	3 ECTS
Assessment methods:	two tests during the semester, and a final exam during finals week
Language of instruction:	English
Prerequisites:	no formal prerequisites
Course content:	Kinematics of Rigid Bodies, Kinematics of a Particle Trajectory in a Non-rotating Frame of Reference, Point Trajectories in Body Moving in Three Dimensions. Introduction to Dynamics, Dynamics of a Particle, Dynamics of Particle Systems, Kinetics of Rigid Bodies (force-mass-acceleration method & work-energy and impulse-momentum methods), Rigid-Body Dynamics in Three Dimensions, Rotational Dynamics (torque, moment of inertia, angular momentum).
Learning outcomes:	On successful completion of the course a student has the basic technical knowledge to identify forces and their effect upon matter, can analyse how forces affect moving bodies, can describe the motion of bodies (objects) and systems (groups of objects), while ignoring the forces that cause the motion.
Name of lecturer:	Jacek Jackiewicz, PhD, DSc
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Literature:	Pytel A., Kiusalaas J.: Engineering Mechanics, Dynamics. Cengage Learning 2009.