Title	Code
(Teoria eksperymentu fizycznego)	**1010341531010410719**
Field: **Mathematics**	Year / Semester: **2 / 3**
Specialty: **-**	Course: **core**
Hours: Lectures: **3** Classes: **2** Laboratory: **1** Projects / seminars: **-**	Number of credits: **7**
	Language: **polish**

Lecturer:

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Status of the course in the study program:

Theory of physical experiment

Assumptions and objectives of the course:

The student should obtain knowledge of theoretical fundamentals of mechanics, ther-modynamics, electromagnetism, optics and quantum physics and its application.

Contents of the course (course description):

Mechanics: particle kinematics and dynamics. Work and energy. Rotational kinematics and dynamics. Relativistic mechanics. Oscillations. The gravitational field. Fluid me-chanics. Waves in elastic media. Temperature expansion. Gas processes. Distribution of molecular speeds. Heat: quantity of heat and specific heat, heat conduction. Thermody-namics. The electric field. Electric current. The magnetic field. Electromagnetic induc-tion. Magnetic properties of matter. Electromagnetic oscillations and waves. Geometri-cal optics. Quantum physics. Temperature radiation; Plank?s formula. Photoelectric ef-fect. The Compton effect. The Bohr hydrogen atom.

Introductory courses and the required pre-knowledge:

Basic knowledge of mathematics and physics.

Courses form and teaching methods:

Lectures supported by transparencies and films; experiments.

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

Examination, tests.

Basic Bibliography:

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Additional Bibliography:

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