STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Physics		**1011101321010410382**

Field of study	Profile of study (general academic, practical)	Year /Semester
Logistics - Full-time studies - First-cycle studies	**(brak)**	**1 / 2**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**full-time**

No. of hours					No. of credits
Lecture: **30**	Classes: **-**	Laboratory: **15**	Project/seminars: **-**		**4**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)

Responsible for subject / lecturer:

dr inż. Andrzej Biadasz
email: andrzej.biadasz@put.poznan.pl
tel. 616653182
Wydział Fizyki Technicznej
ul. Nieszawska 13, 60-965 Poznań

Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic news from high school
2	**Skills**	Basic knowledge of experimental physics in the field of secondary school.
3	**Social competencies**	Ability to work in a team

Assumptions and objectives of the course:

The aim of the course is to familiarize students with the basic physical phenomena and their theoretical description at the academic level. To develop in students the habit of thinking in physical terms.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. He knows the basic methods and materials used in simple engineering solutions in the field of physics - [K1A_W02]

Skills:

1. Is able to independently develop a set problem within physics - [K1A_U05]
2. Can use analytical, simulation and experimental methods to formulate and solve engineering problems in the field of physics - [K1A_U09]

Social competencies:

1. He can complete and improve acquired knowledge and skills - [K1A_K01]

Assessment methods of study outcomes

Forming rating:

a) in the field of exercises: on the basis of an assessment of the current progress of the implementation of tasks assessed by written work - colloquia

b) in the field of lectures: based on the answers to questions about material assimilated in previous lectures,

Summary rating:

a) in the scope of exercises based on the results of the average partial grades of the formulating assessment

b) in the field of lectures: exam in the form of a test. You can take the exam after completing the exercises.

http://www.put.poznan.pl/

Course description

The program of the subject includes the following topics: Principles of conservation of energy, momentum, mass and momentum of momentum. Kinematics and dynamics of a material point and rigid body. Mechanical vibrations. A special theory of relativity. Electrostatic field. Loads and conductors in the electric and magnetic field. Maxwell's equations. Electromagnetic waves. Geometric and wave optics. Radiation of the black body, photoelectric effect, de Broglie waves, atomic model according to Bohr. Schrödinger's equation with solutions for an oscillator and for a hydrogen atom.

Teaching methods:

Lecture - informative and conversational lecture

Classes / laboratories - laboratory method

Basic bibliography:

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)
1. Lecture	30
2. Classes	15
3. Consultation	10
4. Pass the classes	2
5. Pass the lecture	2
6. Preparation to the classes	25
7. Preparation to pass the classes	10
8. Preparation to pass the lecture	6

Student's workload

Source of workload	hours	ECTS
Total workload	100	4
Contact hours	59	2
Practical activities	15	1

http://www.put.poznan.pl/