STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Physics**		Code **1010104111010400007**
Field of study **Civil Engineering First-cycle Studies**	Profile of study (general academic, practical) **(brak)**	Year /Semester **1 / 1**
Elective path/specialty **-**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**
Cycle of study: **First-cycle studies**	Form of study (full-time,part-time) **part-time**	
No. of hours Lecture: **12** Classes: **10** Laboratory: **8** Project/seminars: **-**		No. of credits **4**
Status of the course in the study program (Basic, major, other) **(brak)**	(university-wide, from another field) **(brak)**	
Education areas and fields of science and art		ECTS distribution (number and %)

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	basic knowledge of physics and mathematics (core curriculum for high schools, elementary level)
2	**Skills**	ability to solve elementary problems of physics on the basis of their knowledge, the ability to acquire information from the indicated sources
3	**Social competencies**	understanding of the need to broaden their competence, willingness to cooperate within the team

Assumptions and objectives of the course:

a) Transfer students with basic knowledge of physics, to the extent specified by the content of the curriculum relevant to the field of study

b) To develop in students the ability to solve simple problems and perform simple experiments and analyze the results based on the knowledge gained

c) Developing students' teamwork skills

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

Knowledge:

1. The student can define the basic physical concepts in the field spanned by the content of the curriculum relevant to the field of study and give simple examples of their use in the surrounding world - [W01]

2. The student is able to formulate and explain the basic laws of physics in the range spanned by the software content specific to the field of study, determine the basic limitations and scope of applicability and provide examples of the use to describe phenomena in the surrounding world - [W02]

Skills:

1. The student is able to apply the basic laws of physics and simplified models in solving simple problems of the male by the content of the curriculum relevant to the field of study - [U01]

2. The student is able to plan and carry out the standard measurements of basic physical phenomena, identify and evaluate the importance of the fundamental factors interfering - [U02]

3. Student is able to make a qualitative and quantitative analysis of the results of simple physics experiments - [U03]

4. The student is able to formulate simple conclusions based on the results of calculations and measurements made - [U04]

5. The student can benefit from an understanding of the identified sources of knowledge (basic bibliography) and gain knowledge from other sources - [U05]

Social competencies:

1. Student is able to actively engage in solving the questions posed, independently develop and expand their competencies - [K01] 2. The student is able to work within a team, to discharge the duties conferred under the division of work in a team, demonstrate responsibility for their own work and responsibility for the results of the team - [K02]

Assessment methods of study outcomes
Lecture - exam in the form of test exercise - test laboratory - reports in writing
Course description
Fundamentals of classical mechanics. Elements of thermodynamics. Properties of states of matter. Mechanisms of energy transport and heat, thermal insulation. Elements of Hydromechanics. Gravity. Vibrations. Mechanical waves. Elements of acoustics. Electric and magnetic properties of matter. Electricity. Electromagnetic waves. Structure of the atom and atomic nucleus.
Basic bibliography:
Additional bibliography:

Result of average student's workload

Activity	Time (working hours)
1. Participation to the lectures	12
2. preparation for the exam	40
3. participation in consultations related to the lecture	4
4. exam	2
5. Participation in the laboratory	8
6. preparation for the laboratory	16
7. development of results	16
8. participation in consultations related to laboratory	4
9. participation in exercises	10
10. preparation for exercises	30

Student's workload

Source of workload	hours	ECTS
Total workload	132	4
Contact hours	32	1
Practical activities	8	1