



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Physics

Course

Field of study

Logistics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

I/2

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

Number of hours

Lecture

30

Laboratory classes

15

Other (e.g. online)

Tutorials

Projects/seminars

Number of credit points

4

Lecturers

Responsible for the course/lecturer:

Michał Kotkowiak PhD

Responsible for the course/lecturer:

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tel. 61 665 3182

Faculty of Materials Science and Technical

Physics

Prerequisites

Basic knowledge of high school physics.

Course objective

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

Course-related learning outcomes

Knowledge

Student knows the basics issues of chemical transformations, materials science, commodity science and strength of materials and their importance for industrial and logistics processes [P6S_WG_03]



Skills

Student knows the basic issues of chemical transformations, materials science, commodity science and strength of materials and their importance for industrial and logistics processes [P6S_UW_03]

Student is able to identify changes in requirements, standards, regulations, technical progress and reality of the labor market and based on them determine the needs of the additional knowledge [P6S_UU_01]

Social competences

Is aware of initiating activities related to the formulation and transfer of information and cooperation in society in the field of logistics [P6S_KO_02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge acquired during the lecture is verified by two 45-minute tests carried out during the 7th and 15th lectures. Each of the tests consists of 5 questions. Passing threshold: 50% of points. Final issues on the basis of which questions are prepared will be sent to students by e-mail using the university e-mail system.

Programme content

The course program includes the following topics: Principles of energy conservation, momentum, mass and angular momentum. Kinematics and dynamics of material point and rigid body. Mechanical vibration. Special relativity theory.

Teaching methods

1. Lecture: multimedia presentation, illustrated by examples on a board, demonstrations of physical experiments.
2. Laboratories: carrying out experiments that allow practical checking of physical laws.

Bibliography

Basic

1. David Halliday, Robert Resnick, Jearl Walker, Podstawy Fizyki, Wydawnictwo Naukowe PWN
2. Fizyka dla szkół wyższych. Tom 1 - OpenStax

Additional

1. Feynman Richard P., Leighton Robert B., Matthew Sands, Feynmana wykłady z fizyki, Wydawnictwo Naukowe PWN



Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,0
Classes requiring direct contact with the teacher	45	2,5
Student's own work (literature studies, preparation for laboratory classes, preparation for tests) ¹	55	1,5

¹ delete or add other activities as appropriate