COURSE DESCRIPTION CARD - SYLLABUS

Course name
Physics

Course

Field of study
Logistics

Year/Semester
1/2

Area of study (specialization)

Profile of study
general academic

Level of study
First-cycle studies

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
30	15	
Tutorials	Projects/seminars	

Number of credit points

4

Lecturers

Responsible for the course/lecturer:
Ph.D., Eng Andrzej Biadasz

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Faculty of Materials Science and Technical Physics

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Prerequisites

Basic knowledge of high shool 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 importnace 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(<=50% - ndst; 50,1-60% - dst; 60,1-70% - dst+; 70,1-80% - db; 80,1-90% - db+; od 90,1% - bdb).

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. *University Physics,* three-volume collection

https://openstax.org/details/books/university-physics-volume-1
https://openstax.org/details/books/university-physics-volume-2
https://openstax.org/details/books/university-physics-volume-3

Additional

1. David Halliday, Robert Resnick, Jearl Walker, *Fundamentals of Physics Extended* , 11th Edition, 2018

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