

Assessment and subject description

Óbuda University Kandó Kálmán Faculty of Electrical Engineering			Institute of Microelectronics and Technology		
Subject name and code: Physics, KEXFIBABNE					
Credits 4					
Course: Technical Management BSc					
Responsible:		Katalin Gambár, PhD.		Teaching staff:	László Balázs, PhD.
Prerequisites:		none			
Contact hours per week:	Lecture: 2	Class discussion: 1		Lab hours: 1	Tutorial: 0
Assessment and evaluation:	exam				
Subject description / Lecture					
<i>Learning objectives:</i> To give solid bases for the other professional subjects of the curriculum, to promote the better understanding of the problems from the viewpoint of Physics..					
<i>Topics to be covered: Mechanics. Thermodynamics. Optics.</i>					
Topics				Week	Lessons+ Corse discussion
Mechanics: Kinematics of a mechanical particle				1.	2+1
Mechanics: Kinetics of a mechanical particle				2.	2+1
Kinematics and Kinetics of a system of mechanical particles				3.	2+1
Rotary motion				4.	2+1
Oscillations.				5.	2+1
Waves. Sounds				6.	2+1
Thermodynamics: Main laws of thermodynamics 0 and I. Ideal gases.				7.	2+1
Thermodynamics cycles. Main law of thermodynamics II. and III.				8.	2+1
The theory of special relativity				9.	2+1
The boundary of the classical concepts: photo effect, Compton effect, waveparticle duality.				10.	2+1
Quantum mechanics				11.	2+1
Models of atom				12.	2+1
Condensed matter physics				13.	2+1
Course closure / retake tests				14.	2+1

Assessment and evaluation / Tutorial

This course will be provided via Moodle as well as MS Teams platforms for live lectures and discussions. The learning material will be uploaded in the Moodle. Questions regarding the learning topics should be posted in the Forum of the course and answers will also be posted on the Forum visible for all students. Each lesson is followed by on-line class discussion. Active participation on class discussion is mandatory. Students will fill in simple tests on each class discussion to monitor learning progress.

During the semester students need to fill in 10 on-line quizzes. Students should complete quizzes on time with greater than 50% grade. There will be 3 attempts to complete a practice quiz.

Requirements of the signature:

>70% online tests completed during the course discussion
10 practice quizzes submitted on time with > 50% grade.

Type of exam: Oral and written by simultaneously using MS Teams and Moodle. At the start of the exam, each student should answer 3 simple questions. The exam continues in case of 2 or 3 correct answer, otherwise the mark of the exam is 1. Written part of the exam will be a Moodle test, covering all topics of the course.

Evaluation of the mark: Mark is calculated from the total score according to the table below:

Mark	Total score
5	85-100 %
4	74-84 %
3	63-73 %
2	50-62 %
1	0-49 %

Suggested material:

Fundamentals of Physics, Halliday & Resnick, 10th Edition

<https://www.pdfdrive.com/fundamentals-of-physics-textbook-e33735280.html>