Course Syllabus

Academic year: 2018-2019

Institution	University of Petroşani
Faculty	Mechanical and Electrical Engineering
Field of study	Industrial engineering
Level	Bachelor
Program of study	Machine Building Technology

Course	**Physics**
Code	2BB2OF14
Year of study (semester)	I (II)
Number of hours	56
Number of credits	4
Professor	Assoc. Prof., Ph.D. BUIOCA Dan Constantin

No.	Topic
1.	The object of the modern physics. Experimental and theoretical bases of quantic physics.
2.	Wawe function. Schrodinger equation and its applications to electron state study.
3.	Atom of hidrogen. Quantic theory for cinetic and magnetic moment of electron.
4.	Spin of electron. Multielectronic atoms. Atomic specters. Atomic spectroscopy.
5.	Quantic generators and amplificators. Lasers, properties of laser radiation, applicaions.
6.	Cristaline state. Clasiffication of cristals. Defects in cristals.
7.	Thermal properties of solids. Thermal conductibility.
8.	Electric properties of solid bodies. Metals. Superconductors. Insulators. Semiconductors.
9.	Magnetic properties of solids.

10.	Nuclear physics. General properties of atomic nucleus. Nucleons.
11.	Nuclear energy.
12.	Nuclear reactions.
13.	Radioactivity..
14.	Nuclear fision. Nuclear fusion. Nuclear reactors.