Physics - selected issues

Faculty of	**Mechanical and Power Engineering**
Name in English	**Physics - selected issues**
Name in Polish	**Fizyka - zagadnienia wybrane**
Main field of study	**Power Engineering**
Specialization	**-**
Level of studies	**II level**
Form of studies	**full-time**
Kind of subject	**obligatory**
Subject code	**W09ENG-SM2332**
Group of courses	**NO**

	Wykład	Ćwiczenia	Laboratorium	Projekt	Seminarium
Number of hours of organized classes in University (ZZU)	15				
Number of hours of total student workload (CNPS)	25				
Form of crediting	control work				
For group of courses mark final course with (X)					
Number of ECTS points	1				
including number of ECTS points for practical (P) classes					
including number of ECTS points for direct teacher-student contact (BU) classes	0,68				

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1.	Competence in knowledge of mathematics and physics as evidenced by passing grades in Physics and mathematics courses in the first degree program

SUBJECT OBJECTIVES

C1	To familiarize students with the basic quantum phenomena and tools of quantum physics and prepare them to use quantum phenomena in energy and cryogenics

SUBJECT LEARNING OUTCOMES

relating to knowledge:	
PEU_W01	Has a structured and theoretically supported detailed knowledge of basic quantum phenomena, about the tools used in quantum physics, about the connections of quantum physics with energy and cryogenics

PROGRAMME CONTENT

Form of classes - lecture		Number of hours
Wy1	Introduction	1
Wy2-4	Wave and operator description of physical phenomena	6
Wy5-7	Quantum effects - use in science and technology	6
Wy8	Summary & colloqium	2
Summary		15

TEACHING TOOLS USED	
N1	informative-problematic lecture, multimedia presentation combined with traditional form

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F– forming (during semester), C– concluding (at semester end)	Educational effect number	Way of evaluating educational effect achievement
F1=P1	PEU_W01	A written or oral colloquium

PRIMARY AND SECONDARY LITERATURE

Primary literature	
1	Wichman E.H.,Quantum Physics", any addition.
2	Matthews P.T., „An Introduction to Quantum Mechanics", any edition.
Secondary literature	
1	L.D.Landau, E.M.Lifszyc, „Quantum Mechanics", any edition.
2	R.P.Feynman, R.B.Leighton, M.Sands, „The Feynman Lecture of Physics" ; any edition.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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