

University of Bucharest (Universitatea din București)
Faculty of Physics (Facultatea de Fizică)
Bachelor Study Program – Physics (Domeniul de studii universitare de licență- Fizică)
Specialization – Physics [Specializarea - Fizică]
Graduation Title – Bachelor in Physics (Titlul absolventului – Licențiat in Fizică)
Duration of Studies – 3 years (Durata studiilor - 3 ani)
Type of Study – Full-time Study (Forma de învățământ – zi)

First year

C= course; L=Laboratory; R=Recitation; E=exam; C=tutorial; V=verification; CRD=Number of transferred credits; Ob.xxxx=mandatory discipline; Op.xxxx=optional discipline; Of.xxxx= facultative discipline, T=test

No	Code	Mandatory Disciplines	Semester I			CRD. Sem I	Semester II			CRD. Sem.II
			C	L/R	V		C	L/R	V	
1	Ob.101F	Real and Complex Analysis	3	2	E	6	2	3	E	5
2	Ob.102F	Algebra, Geometry, and Differential Equations	3	3	E	6				
3	Ob.103F	Programming Languages	2	2	C	3				
4	Ob.104F	Mechanics	2	2	E	6	2	2	E	5
5	Ob.105F	Molecular Physics	2	2	E	6	2	2	E	5
6	Ob.106F	Electricity and Magnetism					2	3	E	5
7	Ob.107F	Optics					2	2	E	5
8	Ob.108F	Scientific English		2	T*	2		2	V	2
9	Op109F	History of Physics – Module DI-I	1	1	C	1				
10	Op 110F	Programming Languages – Programming in C++ – Module DI-II					1	2	C	3
11	Ob.109F	Sport		1	T*			1	V	
Total hours per week Total Credits			28 4E, 1C, 2T			30	28, 6E, 1C, 2V			30

DI – First year optional modules

DI-I/ DI-II	Crt. No.	Code	Lecture
DI-I	1	Op.109AF	General Chemistry
	2	Op.109BF	History of Physics
DI-II	1	Op.110AF	Programming Languages – Programming in C
	2	Op.110BF	Programming Languages – Programming in C++

Second year

Nr. Crt.	Cod	Mandatory Disciplines	Semester III			CRD. Sem I	Semester IV			CRD. Sem.II
			C	L/R	V		C	L/R	V	
1	Ob.201F	Electricity and Magnetism	2	2	E	5				
2	Ob.202F	Analytical Mechanics	2	2	E	5				
3	Ob.203F	Quantum Mechanics					2	2	E	5
4	Ob.204F	Equations of Mathematical Physics					3	2	E	6
5	Ob.205F	Optics	2	2	E	5				
6	Ob.206F	Spectroscopy and Lasers					2	2	E	5
7	Ob.207F	Electronics	2	3	E	6				
8	Ob.208F	Electronic Devices and Electronic Circuits					2	2	E	5
9	Ob.209F	Processing of Physical Data and Numerical Methods I	1	2	C	2				
10	Ob.210F	Fundamentals of Atomic Physics	2	2	E	5				
11	Ob.211F	Fundamentals of Nuclear Physics					2	2	E	5
12	Op.212F	Processing of Physical Data and Numerical Methods II					1	2	C	2
13	Ob.213F	Scientific English		2	T*	2		2	V	2

14	Ob.214F	Sport	1	T*		1	V	
15	Ob.215F	Research Activity				1		
Total hours per week Total Credits			27	5E,1C,2T	30	28	5E, 1C,2V	30

DII – Second year optional module

DII	Crt.No.	Code	Lecture
DII	1	Op.212AF	Processing of Physical Data and Numerical Methods II
	2	Op.212BF	Basic Concepts in Metrology

Third year

Nr. Crt.	Code	Mandatory and Optional Disciplines	Semester V			CRD. Sem I	Semester VI			CRD. Sem.II
			C	L/R	V		C	L/R	V	
1	Ob.301F	Quantum Mechanics	2	2	E	4				
2	Ob.302F	Electrodynamics and Theory of Relativity	2	2	E	4	2	1	E	4
3	Ob.303F	Atomic and Molecular Physics	2	2	E	5				
4	Ob.304F	Thermodynamics and Statistical Physics	3	2	E	5				
5	Ob.305F	Nuclear and Elementary Particle Physics	2	2	E	5				
6	Ob.306F	Solid State Physics	2	2	E	5				
7	Ob.307F	Special Topics in Theoretical Physics	2	1	E	2				
8	Ob.308F	Plasma Physics					2	2	E	3
9	Op.309F	Optional lecture – Module DIII					2	2	C	4
10	Op.310F	Optional lecture – Module DIII					2	2	C	4
11	Op.311F	Optional lecture – Module DIII					2	2	C	4
12	Op.312F	Optional lecture – Module DIII					2	2	C	4
13	Ob.311F	Work towards diploma completion					5-10 hrs × 4 weeks.			7
Total hrs/ Total Number of Credits			28	6E		30	28	2E, 3C		30
14	Diploma Thesis Examination for Graduation, Physics field (3 years)		- Written examination “Fundamentals of Physics”				5			
			- Oral presentation of Diploma Thesis				5			

Total ECTS for license 10

DIII - Third year optional modules

DIII-I/ DIII-III	Crt. No.	Code	Lecture
DIII-I	1	Op.308AF	Introduction into Environmental Physics
	2	Op.308BF	Introduction into Polymer Physics
	3	Op.308CF	Introduction in Cosmology and Particle Astrophysics
DIII-II	1	Op.318F	Solid state Electronics
	2	Op.309BF	Experimental Methods in Surface Physics
DIII-III	1	Op.310AF	Special Topics in Condensed Matter Physics
	2	Op.310BF	Numerical Methods in Quantum Theory
	3	Op.310CF	Transport Phenomena in Solids
DIII-IV	1	Op.309 Op.311	Symmetry and macroscopic properties of crystalline solids Physics at the Nanoscale

For obtaining a Certificate from the Psycho-pedagogical Department, the curriculum proposed for Physics Specialization in Romanian language must be mandatory attended and graduated.

Decan,

Prof. Dr. Ștefan ANTOHE