

LP.	NAZWA PRZEDMIOTU	Liczba godzin	ECTS	Forma zaliczenia	SEMESTR 1				SEMESTR 2				SEMESTR 3				SEMESTR 4					
					Forma zajęć				Forma zaliczenia	ECTS	Forma zajęć				Forma zaliczenia	ECTS	Forma zajęć				Forma zaliczenia	ECTS
					W	Ć	K	L/S			W	Ć	K	L/S			W	Ć	K	L/S		

No.	SUBJECT	Number of teaching hours	ECTS	Form of receiving a credit	Semester 1				Semester 2				Semester 3				Semester 4							
					Form of instruction				For m of receiv	ECT	ECT	Form of instruction				For m of receiv	ECT	ECT	Form of instruction				For m of receiv	ECT
					L	T	D	L/S				L	T	D	L/S				L	T	D	L/S		
1	A. GENERAL SUBJECTS	0	0																					
2	English language	30	2	E			30	E	2															
3	Selective subject in the field of humanities*	15	2	c/m					15			c/m	2											
4	Selective social science subject*	30	3	c/m										30				c/m	3					
5	B BASIC SUBJECTS	0	0																					
6	Physics laboratory II	120	12	c/m/c/m			60	c/m	6	60			c/m	6										
7	C. FIELD SUBJECTS	0	0																					
8	Elements of theoretical physics I	60	5	E c/m	30	30			E c/m	5														
10	Solid state physics	60	7	E c/m										30	30			E c/m	7					
12	Quantum physics	60	6	E c/m	30	30			E c/m	6														
14	Nuclear and high energy physics	60	6	E c/m										30	30			E c/m	6					
16	Applied statistical physics	60	5	c/m c/m	30	30			c/m c/m	5														
18	Introduction to atomic and molecular physics	60	7	E c/m				30	30				E c/m	7										
20	Groundbreaking experiments in physics	30	2	c/m										30				c/m	2					
21	ELECTIVE SUBJECTS***	0	0																					
22	Graduate seminar I	30	4	c/m											30			c/m	4					
23	Graduate seminar II	30	4	c/m																30	c/m	4		
24	General seminar	30	4	c/m																30	c/m	4		
25	Monographic lecture I	30	4	E										30				E	4					
26	Monographic lecture II	30	4	E																30		E	4	
27	MASTER'S THESIS	0	12																					
28	MAGISTER EXAMINATION	0	0	E																		E	12	
29		0	0																					
30		0	0																					
31		0	0																					
32		0	0																					
33		0	0																					
34		0	0																					
35		0	0																					
36		0	0																					
37		0	0																					
38		0	0																					
39		0	0																					
40		0	0																					
41		0	0																					
42		0	0																					
43		0	0																					
44		0	0																					
45		0	0																					
1	COMPUTER PHYSICS	60	6	E c/m	15		45	E c/m	6															
3	Methods of programming in scientific applications	60	6	E c/m						30		30	E c/m	6										
5	Modeling and simulations of physical systems	30	2	c/m						30		30	c/m	2										
6	Physics of computer games	30	3	E						30			E	3										
7	Dynamics of nonlinear systems	45	4	E c/m						15		30	E c/m	4										
9	Internet applications programming	60	4	E c/m											30		30	E c/m	4					
11	Advanced data analysis methods	60	6	E c/m													30			30	E c/m	6		
13	Quantum systems simulations	0	0																					
14		0	0																					
15		0	0																					
16		0	0																					
17		0	0																					
1	YSICS	60	6	E c/m	30		30	E c/m	6															
3	Mathematical methods in physics	30	3	c/m								30	c/m	3										
4	Packages for symbolic computations	45	6	E c/m						15		30	E c/m	6										

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					W	Ć	K	L/S			W	Ć	K	L/S			W	Ć	K	L/S			W	Ć	K	L/S
6	Field theory	60	6	E c/m					30	30			E c/m	6												
8	Quantum physics II	60	4	E c/m													30	30			E c/m	4				
10	Elements of theoretical physics II	60	4	c/m c/m																	30	30			c/m c/m	4
12	Elementary particle physics	30	2	c/m																	30				c/m	2
13		0	0																							
14		0	0																							
15		0	0																							
16		0	0																							
1	Astrophysics I	45	6	E c/m	15	30			E c/m	6																
3	Astrophysics II	60	6	E c/m							30	30			E c/m	6										
5	Extragalactic astronomy and cosmology	30	4	c/m c/m							15	15			c/m c/m	4										
7	Astrophysics of compact objects	45	6	E c/m																	15	30			E c/m	6
9	Contemporary radioastronomy	30	2	c/m													30				c/m	2				
10	High-energy astrophysics	30	2	E													30				E	2				
11	Radiative processes in astrophysics	75	5	E c/m							30	45			E c/m	5										
13		0	0																							
14		0	0																							
15		0	0																							
16		0	0																							
1	Dosimetry and quality control in medical physics	45	6	E c/m	15			30	E c/m	6																
3	Packages for statistical analysis	30	3	c/m								30			c/m	3										
4	Medical image analysis algorithms	60	7	E c/m							30				E c/m	7										
6	Mathematical methods in biophysics and medical physics	45	5	c/m c/m							15	30			c/m c/m	5										
8	Elements of bioinformatics	45	4	E c/m													15			30	E c/m	4				
10	Physics of fluids in biology and medicine	60	4	E c/m																	30			30	E c/m	4
12	Elements of microbiology	30	2	c/m																	30				c/m	2
13		0	0																							
14		0	0																							
15		0	0																							
16		0	0																							

Common subjects	735	89
Speciality 1: COMPUTER PHYSICS	345	31
Speciality 2: THEORETICAL PHYSICS	345	31
Speciality 2: COMPUTER ASTROPHYSICS	315	31
Speciality 4: MEDICAL PHYSICS	315	31
Practice		
SumCOMPUTER PHYSICS	1080	120
SumTHEORETICAL PHYSICS	1080	120
SumCOMPUTER ASTROPHYSICS	1050	120
SumMEDICAL PHYSICS	1050	120

270
60
60
45
45

24	135
6	165
6	135
6	165
6	135

15	240
15	60
15	60
15	60
15	45

26	90
4	60
4	90
4	45
4	90

24
6
6
6
6

330
330
315
315

30	300
30	270
30	300
30	270

30	300
30	300
30	300
30	285

30	150
30	180
30	135
30	180

30
30
30
30

SumCOMPUTER PHYSICSwithout Practice	1050	120
SumTHEORETICAL PHYSICSwithout Practice	1080	120
SumCOMPUTER ASTROPHYSICSwithout Practice	1050	120
SumMEDICAL PHYSICSwithout Practice	1050	120

Blue color: all selective courses, * - common selective courses, *** - common selective courses within speciality

English, Graduate seminar I, II, General seminar- credit and mark

Selective subject in the field of humanities*: Philosophy of nature / Humanistic subject from another faculty

Selective social science subject*: Elements of economics / Social subject

Lectures:Elementary particle physics- credit and mark

Lectures:Extragalactic astronomy and cosmology- credit and mark

Lectures:Mathematical methods in biophysics and medical physics- credit and mark

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					W	Ć	K	L/S	W	Ć	K	L/S	W	Ć	K	L/S	W	Ć	K	L/S	W	Ć