Załącznik nr 1b do Uchwały nr 713 Senatu UZ z dnia 29.03.2023 r.

PLAN OF REGULAR STUDIESEnrollment 2022/2023Subject area of studies: PHYSICSduration: 6 semestersType of studies: REGULAR DAILY FIRST DEGREE

University of Zielona Góra FACULTY OF PHYSICS AND ASTRONOMY

								Semest	er 1				Sem	ester 2		Т		Se	mest	er 3				Seme	ster 4			5	Semes	ter 5			Sem	ester 6		
No			Number of	ECTS	Form of	For	m of ins	truction	Form of		For	n of in	structio	on Form	of	I	Form of i	nstruct	tion	Form of		For	n of in	structio	1 Form o	f	Form of	of instru	uction	Form of		Form of i	nstructio	n For	rm of	
INO.		SUBJECT	hours	ECIS	credit	T.	т		receiving	ECTS	L	т	DI	receivi	ng ECT	TS	L Т	р	L/S	receiving	ECTS	L	т	D L/	receivin	g ECTS	L,	гр	L/S	receiving	ECTS	ιт	DI	/S rece	viving F	ECTS
			0					2 2.0	a credit		-	-	2 1	a cred	11	+	2 .		2.0	a credit		-	-	2 2	a credi			. 5	12.0	a credit		2 1		a ci	redit	
1	-	A. GENERAL SUBJECTS	0			—	+	_						_	_			$\left \right $										_					\vdash	+	+	
2		English as aforeign language	120	8	mE								3	30 c/m	2				30	c/m	2			3) c/m	2			30	E	2					
3	-	Computer laboratory I - information technologies	45	3	c/m								4	45 c/m	3										+								-	\square	-	-
4	-	Physical education	60	0	cc		30		c	0		30		c	0																					
5		Selective subject in the field of humanities*	30	3	c/m						30			c/m	3														1							
6		Selective social science subject*	15	2	c/m																						15			c/m	2					
7		B. BASIC SUBJECTS	0	0																																
8		Introduction to higher physics and mathematics	30	2	c		30		c	2																										
9		Mathematical analysis I	120	8	E c/m	60	60		E c/m	8																										
10	lal	Mathematical analysis II	75	5	E c/m						30	45		E c/ı	n 5	;																			17	
11	.	Algebraic and geometrical methods in physics	75	6	E c/m	30	45		E c/m	6																									1	
12	ect	Fundamentals of physics I – Mechanics	90	7	E c/m	45	45		E c/m	7																									1	
13	lir	Fundamentals of physics II – Thermodynamics	60	5	E c/m						30	30		E c/ı	n 5	5																			1	
14	d d	Fundamentals of physics III – Electricity and	75		E a/m												20 45			E a/m	7														1	
14	and	magnetism	/3	'	E C/m											-	50 45			E C/M	1															
15	i:	Fundamentals of physics IV Optics modern physics	75	6	E o/m																	20	45		E o/m	6									1	
15	Jas	Fundamentals of physics IV – Optics, modern physics	75																			30	45		E C/II	0							\square	4		
16		Astronomy	30	2	c/m						30			c/m	2																		$ \longrightarrow $	4		
17	l Ju	Fundamentals of programming	60	5	c/m			60	c/m	5				_																			$ \longrightarrow $	4		
18	od	C. FIELD SUBJECTS	0	0										_																			\square	4		
19	Ē	Metrology	30	2	c/m c/m	15	15		c/m	2																										
20	cts	Physics laboratory L - Mechanics, thermodynamics	45		c/m	□⊢	+		C/III					45 c/m	4			$\left \right $											-				\vdash	+	+	
20) je	Physics laboratory I - Electricity and magnetism	45		c/m	୲⊢	+	_				\vdash	-+-	43 C/III		-		$\left \right $	45	c/m	4					+			+				\vdash	+-	+	
21	l Ing	Physics laboratory L- Ontics, modern physics	45		c/m	୲⊢	+								+			$\left \right $		C/III				4	5 c/m	4			+				-+	+	-+	
23	a	Computer data acquisition and processing	30		c/m									30 c/m	2			\vdash								+ *							-+	+		
24	er	Classical and relativistic mechanics	60	6	E c/m																	30	30		E c/m	6										_
25	en	Quantum mechanics foundations	60	6	E c/m										-							00	00				30 3	0		E c/m	6			+		
26	0	Electrodynamics	60	6	E c/m		+								+			\vdash							-	-			+			30 30		E	c/m	6
27	-	Constitution of matter	60	6	E c/m		+																		+	-	30 3	0		E c/m	6				c,	
28	-	Mathematical methods in physics	60	6	E c/m												30 30			E c/m	6				+											_
29	-	Fundamentals of geophysics	45	3	c/m c/m				1												-				+		30		15	c/m c/m	3					_
30	-	ELECTIVE SUBJECTS	0																						+						-			+		_
31	-	Undergraduate seminar***	30	5	c/m																				+								2	60 c	/m	5
32	1	Monographic lecture***	30	4	E		+																			1						30		Ĩ	E	4
33		Professional practice after the 4th semester, 3 weeks***	0	5	с																					1				c	5					
34	-	BACHELOR THESIS***	0	8																																8
35	-	LICENTIATE EXAMINATION	0	0	E		+								+											-			1						E	-
1		Numerical methods	60	4	E c/m			İ	İ	İ	30			30 E c/1	n 4				İ											i i						_
2	2	Object oriented programming	60	6	E c/m		+									1	15		45	E c/m	6															
3	E S	Data structures and algorithms	60	5	c/m c/m				1							1	15		45	c/m c/m	5															
4	55	Computer measuring systems	45	3	c/m				1															4	5 c/m	3										
5	lę ž	Data analysis method	45	4	E c/m																	15		3) E c/m	4										
6		Modeling phenomena in nature	60	5	E c/m																	30		3) E c/m	5										
7	Ŭ T	Signal analysis	60	6	E c/m																						30		30	E c/m	6					
8		Introduction to computer simulations	75	7	c/m c/m																											30		15 c/m	ı c/m	7

str. 1

			Number of		Form of			Semes	ster 1		Т		S	Semest	ter 2				Sem	ester 3					Semes	ter 4				Sem	ester 5				Seme	ster 6	
No.		SUBJECT	teaching	ECTS	receiving a	For	n of ins	truction	1 Form	of	F	Form o	of instru	uction	Form of		Forn	n of ins	tructio	n For	m of		Form	of ins	truction	Form of		For	m of ir	nstructio	n Form	of	Fo	rm of i	nstructic	n Form o	i 👘
			hours		credit	L	Т	D L/S	S receiv	ing EC dit	TS I	LII	r D	L/S	a credit	ECTS	L	Т	D L	/S rece	viving 1 redit	ECTS	L	Т	D L/S	receiving a credit	ECTS	L	T	D L/	S receivi	ng ECT	S L	Т	D L	S receivin a credi	3 ECTS
1		Astronomical instruments	60	4	4 E c/m						3	30 3	0		E c/m	4																					
2	S	Introduction to analysis of astrophysical time series	30		3 c/m c/m																							15	15		c/m c	m 3					
3	I K H	The physics of stars and the scattered matter	60		6 E c/m																		30	30		E c/m	6										
4	X E	Scientific calculations and numerical methods	45		3 c/m																								45		c/m	3					
5	UPU DPH	Observational methods and data analysis in astrophysics	60		6 c/m c/m																		30	30		c/m c/n	n 6										
6		The basics of spherical astronomy and astrometry	60		6 E c/m												30	30		E	c/m	6															
7	I C IS	Introduction to celestial mechanics and solar system	60		5 E c/m												30	30		E	c/m	5															
8	◄	Systems of stars and structure of the Universe	60		5 E c/m																												30	30		E c/m	5
9		Introduction to the compact objects astrophysics	30		2 c/m																												30			c/m	2
1	S	Algebraic and geometrical methods in physics II	45		4 E c/m						1	15 3	0		E c/m	4																					
2		Differential equations in physics	60		5 E c/m												30	30		E	c/m	5															
3	X S	General chemistry	45		3 E c/m												30		1	5 E	c/m	3															
4	H	Vibrations and waves	30		3 c/m												30			c	/m	3															
5	L L	Introduction to electronics	45		4 E c/m																		30	15		E c/m	4										
6	AL	Elements of modern physics	30		3 c/m																		30			c/m	3										
7	R	Physics of nature	60		5 E c/m																		30	30		E c/m	5										
8	E	Physics laboratory	60		6 c/m																									6	0 c/m	6					
9		History of physics	30		2 c/m																												30			c/m	2
10	G	Probability and statistics	45		5 E c/m																												15	30		E c/m	5
			1	1	_				-											-											_		_			_	
		Common subjects	s 1560	13:	5		435		-	3	0		375			26		210)	_	- F	19		210)		18	I	21	0	-	24			20	4	23
		Speciality 1: COMPUTER PHYSICS	6 465	4	0		0		-)		60			4		120)	_	_ -	11		150)		12	<u> </u>	6	0	-	6		7	5	4	7
		Speciality 2: COMPUTER ASTROPHYSICS	<u> </u>	4	0		0		-	()		60			4		120)	_	_ -	11		120)		12	<u> </u>	7:	5	4	6		9	0	4	7
		Speciality 3: GENERAL PHYSICS	<u>5 450</u>	4	0		0			()		45			4		120)		L	11		135	5		12		6	0		6		9	0		7
		Practice	e 60		5				-	_										_						-		_			_		_			_	-
		SumCOMPUTER PHYSICS	5 2085	18	0		435		_	3	0		435		1	30		330				30		360		1	30		27	/0	_	30		1	95	4	30
		SumCOMPUTER ASTROPHYSICS	3 2085	18	0		435		1	3	0		435			30		330)			30		330)		30		28	85	_	30		2	10	_	30
		SumGENERAL PHYSICS	3 2070	180	0	1	435		1	3	0		420			30		330)			30		345	5		30		27	' 0	1	30		2	10		30

SumGENERAL PHYSICS	2070	180
Sum without Practice		
COMPUTER PHYSIC	2025	175
COMPUTER ASTROPHYSIC	2025	175
GENERAL PHYSICS	2010	175

Plan studiów został zatwierdzony na Wydziałowej Radzie ds. Kształcenia dnia 16 marca 2021 roku

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

Lectures: Astronomy, Fundamentals of geophysics - credit and mark

English as a foreign language - Semesters 2-4- credit and mark.

Introduction to higher physics and mathematics, Physical education- credit without grade.

Selective subject in the field of humanities*: Language culture / Humanistic subject from another faculty (30 hours, 3 ECTS)- credit and mark.

Selective social science subject*: Intellectual property protection, occupational safety, ergonomics / Social subject from another faculty (15 hours, 2 ECTS)- credit and mark.

LectureIntroduction to computer simulations- credit and mark

LectureObservational methods and data analysis in astrophysics- credit and marks

LectureVibrations and waves- credit and mark

Professional practice after the 4th semester, 3 weeks, credit in semester V

Bachelor thesis- credit without grade.

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30	285
30	270

30	195
30	210
30	210

30
30
30