

CURRICULUM

EDUCATIONAL AND QUALIFICATION DEGREE: BACHELOR
 COURSE OF STUDY: GEOLOGY AND EXPLORATION OF MINERAL AND ENERGY RESOURCES
 VOCATIONAL FIELD: 5.8. EXPLORATION, MINING, AND PROCESSING OF MINERALS

FORM OF STUDY: FULL TIME
 DURATION OF STUDY: 4 YEARS
 Duration of the semester: 14 weeks

Year	Semester	N	Course unit code	Full name of the course unit (course projects, practical trainings)	Form of control	Teaching hours		Teaching hours per type of seminars			Overall teaching hours per semester	Credits according to ECTS	
						L	S	S	Lab	P			
FIRST	First	1	121101	General geology	E	2	3		3		70	6	
		2	131101	Mineralogy and crystallography	E	3	3		3		84	7	
		3	361101	Mathematics part I	E	2	2	2			56	5	
		4	291102	Inorganic and analytical chemistry	E	2	2		2		56	5	
		5	371102	Introduction to computer sciences	CA		2		2		28	2	
		6	421100	Foreign language	CA		3	3			42	3*	
		7	431100	Physical education and sports	CA		2			2	28	1*	
				Optional									
	8	411300	Humanities, social and legal sciences	CA	2	2	2				(56)	4**	
	Overall for the 1st semester:					4+2	9	14	2	10	2	322	25+1*
	Second	9	181102	Physics part I	E	2	2		2		56	5	
		10	361102	Mathematics part II	E	2	2	2			56	5	
		11	121102	Paleontology	E	3	3		3		84	7	
		12	131145	Crystal optics	CA	1	2		2		42	2	
		13	251124	Geodesy and mine surveying	E	2	2		2		56	4	
		14	421100	Foreign language	CA		3	3			42	3*	
15		431143	Physical education and sports – 2 hours per week	CA						(28)	1*		
			Optional course										
Overall for the 2nd semester:					4+2	10	11	2	9		(42)	3**	
		<i>Summer practice</i>											
		121126	General geology			3 days, 6 hours each				18	1		
		121128	Paleontology and stratigraphy			3 days, 6 hours each				18	1		
		131107	Mineralogy and crystallography			3 days, 6 hours each				18	1		
		251141	Geodesy and mine surveying			3 days, 6 hours each				30	2*		
Overall for the first year:					8+5	21	25	6	19		738	51+4*	
SECOND	Third	17	181103	Physics part II	E	2	2		2		56	5	
		18	121103	Stratigraphy	E	2	2	2			56	5	
		19	111101	Sedimentology	E	3	3		3		84	7	
		20	131127	Igneous petrology	E	3	3		3		84	7	
		21		<i>Elective courses</i>	CA	2	1		1		42	3	
			291205	Physical chemistry									
			291204	Organic chemistry									
				Optional courses									
	22	421100	Foreign language	CA		3	3			42	3*		
	23	431143	Physical education and sports – 2 hours per week	CA						(28)	1*		
	Overall for the 3rd semester:					4+3	12	14	5	9		364	27+4*
	Fourth	24	111103	Fundamentals of geostatistics	E	2	2		2		56	5	
		25	121154	Structural geology and geotectonics	E	3	3		3		84	7	
		26	131104	Metamorphic petrology	E	2	2		2		56	5	
		27	121105	Geomorphology and quaternary geology	CA	2	1	1			42	2	
		28	151130	Hydrogeology and engineering geology	E	2	2		2		56	5	
29		431143	Physical education and sport – 2 hours per week	CA						(28)	1*		
			Optional course										
30		131332	Environmental geochemistry	CA						(56)			
Overall for the 4th semester:					4+3	11	13	4	9		336	24+4*	
		<i>Summer practice</i>											
		111134	Sedimentology			3 days, 6 hours each				18	1*		
		131123	Igneous petrology			4 days, 6 hours each				24	1		
		131108	Metamorphic petrology			3 days, 6 hours each				18	1		
		121129	Structural geology			3 days, 6 hours each				18	1*		
Overall for the second year:					8+6	23	27	9	18		780	55+8*	

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						L	S	S	Lab	P			
THIRD	Fifth	31	111102	Fundamentals of geochemistry	E	3	2		2		70	6	
		32	261102	Technical safety	CA	2	1	1			42	3	
		33	111106	Petroleum geology	E	3	3		3		84	7	
		34	161114	Fundamentals of drilling	E	2	2		2		56	5	
		35	121108	Field geology	E	2	3		3		70	6	
				<i>Optional courses</i>									
		36	431343	Physical education and sports – 2 hours per week							(28)	1**	
	37	131328	Genetical mineralogy	CA						(56)	4**		
			Overall for 5th semester:	4+1	12	11	1	10		322	27		
	Sixth	38	121106	Historical geology	E	2	3	3			70	6	
		39	111104	Geology of mineral deposits	E	3	3		3		84	7	
		40	111105	Coal geology	E	3	3		3		84	7	
		41	121107	Regional geology	E	2	2	2			56	5	
		42	112121	Geographic information systems - GIS	CA	1	2		2		42	3	
				<i>Optional courses</i>									
		43	121364	Geological heritage	CA						(28)	2**	
	44	431343	Physical education and sports – 2 hours per week							(28)			
			Overall for 6th semester:	4+1	11	13	5	8		336	28		
			<i>Summer practice</i>										
		121130	Field geology			11 days, 6 hours each					66	4	
	111150	Geology of mineral resources and regional geology			14 days, 6 hours each					84	5		
		Overall for the third year:	8+2	23	24	6	18		808	64			
FOURTH	Seventh	45	111107	Deposits of metallic ores	E	3	3		3		84	7	
		46	111108	Deposits of industrial minerals and rocks	E	3	3		3		84	7	
		47	111109	Prospecting for mineral deposits	E	2	2		2		56	5	
		48	111112	Prospecting and exploration of oil and gas deposits	E	2	2	2			56	5	
		49	171126	Ecology and environmental protection	CA	2	2	2			56	5	
		50	111116	Practical training in Geology, prospecting and exploration of mineral deposits - I	CA		2		2		28	2	
				Overall for 7th semester:	4+2	12	14	4	10		366	31	
	Eight	51	111111	Exploration of mineral deposits	E	3	3		3		84	7	
		52	271113	Economics and management	E	2	2	2			56	5	
		53	141114	Applied geophysics	E	2	2		2		56	5	
		54		<i>Elective</i>	E	2	2		2		56	5	
			111213	A. Structure of mineral deposits									
			111214	B. Industrial oil geology									
		55		<i>Elective</i>	CA	2	2	2			56	5	
			111210	A. Physics of layer									
			231216	B. Mining technologies									
		56	111116	Practical training in Geology, prospecting and exploration of mineral deposits - II	CA		2		2		28	2	
		<i>Optional course</i>											
57	241302	Basics of processing and recycling of mineral resources	CA						(56)	4**			
		Overall for the 8th semester:	4+2	11	13	4	9		336	29			
		Overall for the fourth year:	8+4	23	27	8	19		700	60			
		State exam								10			
		OVERALL FOR THE FULL COURSE OF STUDY :	32+1	88	103	27	74	2	2986	240+12*			

PARAMETERS OF THE EDUCATION PROCESS

Overall teaching hours: 2986, distributed as follows:

Lectures 1232

Exercises 1442 teaching hours, including:

- seminars - 378
- laboratory - 1036
- practical - 28

Practice – 312 teaching hours, including:

- educational - 312
- pre-diploma-

The credits above 240 are formed by the disciplines "Foreign language", Physical education and sports" and partially by the practices, marked with asterisk.

Abbreviations: E – exam; CA - continuous assessment; L - lectures; S - seminars; Lab - laboratory seminars; P - practical seminars; CP – course project; CW – course work.