UNIVERSITY OF MINING AND GEOLOGY "ST. IVAN RILSKI"
SOFIA

FACULTY OF MINING TECHNOLOGY

CURRICULUM

VOCATIONAL FIELD:	**5.8 EXPLORATION, MINING AND PROCESSING OF MINERAL RESOURCES**
COURSE OF STUDY:	**EXPLOITATION OF MINERAL RESOURCES**
EDUCATIONAL AND QUALIFICATION DEGREE:	**BACHELOR**
VOCATIONAL QUALIFICATION:	**MINING ENGINEER**
FORM OF STUDY:	**FULL-TIME**
DURATION OF STUDY:	**FOUR YEARS (EIGHT SEMESTERS)**

Adopted at a session of the Academic Council of the University of Mining and Geology "St. Ivan Rilski"
Minutes № 15 / 26.11.2018

DEAN: _____
(Prof. Dr. I. Koprev)

SOFIA, 2018

FORM OF STUDY: FULL-TIME
DURATION OF STUDY : 4 YEARS
Durartion of semesters: 14 weeks
Duration of 8th semester: 10 weeks

Year	Semester	№	Course unit code	Full name of the course unit (course projects, practical trainings)	Form of control	Teaching hours (weekly)		Total workload for the semester by type of exercises			Overall teaching hours per semester	Credits
						L	S	S	L	P		
First	First	1	361101	Higher Mathematics, Part I (Linear Algebra and Analytical Geometry)	Exam	2	3	42			70	6
		2	291101	General Chemistry	Exam	3	2		28		70	6
		3	361105	Descriptive Geometry	Exam	2	2	28			56	5
		4	371103	Office and CAD Systems	Exam	1	3		42		56	5
		5	371143	Practical training in CAD Systems	CA						30	2
		6	211101	Introduction to Mining	Exam	2	2	14		14	56	6
		7	421100	Foreign Language - Optional	CA	0	3	42			42	3*
			431100	Sports - 2 h per week			2			28	28	1*
				First Semester	***5+2***	***10***	***17***	***126***	***70***	***42***	***408***	***30***
	Second	8	361102	Higher Mathematics, Part II (Mathematical Analysis of the Function of One Variable)	Exam	2	2	28			56	5
		9	351111	Mining Engineering Drawing	Exam	2	2	28			56	6
		10	131134	Geology, Mineralogy and Petrography	Exam	3	2	28			70	6
		11	251141	Geodesy and Mine Surveying	Exam	2	2	18		10	56	6
		12	251141	*Geodesy and Mine Surveying - Practical Training - 5 days (30 h.)*	CA						30	2
		13	181102	Physics - Part I	Exam	2	2		28		56	5
		14	421100	Foreign Language - Optional	CA	0	3	42			42	2*
		15	431100	Sports - 2 h per week	CA		2			28	28	1*
				Second Semester	***5+3***	***11***	***15***	***144***	***28***	***38***	***394***	***30***
				Overall for the first year:	***10+5***	***21***	***32***	***270***	***98***	***80***	***802***	***60***
Second	Third	16	361103	Higher Mathematics, Part III (Multivariate Analysis, Differential Equations, and Mathematical Statistics)	Exam	3	2	28			70	6
		17	181103	Physics - Part II	Exam	2	1		14		42	4
		18	151112	Engineering Geology and Hydrogeology	Exam	2	2	18	10		56	5
		19	351101	Mechanical Engineering	Exam	2	2	28			56	5
		20	311116	Mining Machines and Equipment - Part I	Exam	2	2	28			56	5
		22	281101	Theoretical Mechanics	Exam	2	2	28			56	5
		23	421100	Foreign Language - Optional	CA	0	3	42			42	3*
			431100	Sports - 2 h per week			2			28	28	1*
				Third semester:	***6+1***	***13***	***16***	***172***	***24***	***28***	***406***	***30.0***
	Fourth	24	281108	Soil and Rock Mechanics	Exam	3	2	28			70	6
		25	281105	Strength of Materials	Exam	2	3	42			70	6
		26	111118	Mineral Resources	Exam	2	1		14		42	4
		27	261103	Fluid Mechanics	Exam	2	1	4	10		42	4
		28	341103	Electrical Engineering and Electronics	Exam	2	2		28		56	5
		29	311117	Mine Machines and Equipment- Part II	Exam	3	1	14			56	5
		30	431143	Sports - 2 h per week	CA		2			28	28	1*
				Fourth Semester	***6+1***	***14***	***12***	***88***	***52***	***28***	***364***	***30***
				Overall for the second year:	***12+2***	***27***	***28***	***260***	***76***	***56***	***770***	***60***
Third	Fifth	31	231122	Mining Construction	Exam	3	2	28			70	6
		32	231123	Course project in Mining Construction	CA	0	1	14			14	1
		33	231124	*Practical training: Mining Construction*	CA						30	2
		34	221101	Open-pit Mining, Part I (Processes in Open-pit Mining of Mineral Resources)	Exam	2	3	42			70	6
		35	221102	Course project: Open-pit Mining, Part I	CA	0	1	14			14	1
		36	221103	Practical training: Open-pit Coal Mining	CA						30	2
		37	221112	Blasting Phenomena and Explosives	Exam	2	1	14			42	5
		38	221113	Mechanisation and Technology of Blasting Operations	Exam	1	2	28			42	5
		39	221114	*Practical training in Blasting Equipment and Technologies in Open-pit Mining of Coal and Ores*	CA						30	2
				Optional module (Social sciences)*	Exam*	2*	1*	14*			42*	2*
				Fifth Semester	***4+5***	***8***	***10***	***140***			***342***	***30***
		40	211103	Underground Mining, Part I (Ore Mining)	Exam	2	3	42			70	6
		41	211104	Course project in Underground Mining, Part I (Ore Mining)	CA		1	14			14	1

Year	Semester	№	Course unit code	Full name of the course unit (course projects, practical trainings)	Form of control	Teaching hours (weekly)		Total workload for the semester by type of exercises			Overall teaching hours per semester	Credits
						L	S	S	L	P		
Third	Sixth	42	211105	*Practical training in Underground Mining, Part I (Ore Mining)*	CA						30	2
		43	221104	Open-pit Mining, Part II (Technology of Open-pit Mining of Mineral resources)	Exam	2	3	42			70	6
		44	221105	Course project: Open-pit Mining, Part II	CA		1	14			14	1
		45	221108	Draining and Stability of Slopes	Exam	2	2	28			56	5
		46	261104	Mining Aerology	Exam	2	2	18	10		56	5
		47	211102	Rock Mechanics In the Exploitation of Mineral Deposits	Exam	2	1	11		3	42	4
				Sixth Semester	***5+3***	***10***	***13***	***169***	***10***	***3***	***352***	***30***
				Overall for the third year:	***10+8***	***18***	***23***	***309***	***10***	***3***	***694***	***60***
Fourth	Seventh	48	211106	Underground Mining, Part II (Underground of Layered depositts)	Exam	2	3	42			70	6
		49	211107	Course project in Underground Mining, Part II (Underground of Layered depositts)	CA		1	14			14	1
		50	211108	Practical training in Underground Mining, Part II (Underground of Layered depositts)	CA						30	2
		51	221106	Open-pit Mining, Part III (Mining and Processing of Industrial Minerals)	Exam	2	3	42			70	6
		52	221107	Practical training in Open-pit Mining and Processing of Industrial Minerals	CA						30	2
		53	211109	Sinking Plant and Overground Mining Complex	Exam	2	2	28			56	4
		54	271113	Economics and Management	Exam	3	1	14			56	4
		55		Optional:	Exam	2	1	14			42	3
			331203	Automation of Production								
			321215	Mining Electrical Engineering								
				Seventh Semestar:	***5+3***	***11***	***11***	***154***			***368***	***28***
	Eight	56	261102	Technical Safety	Exam	3	3	30			60	4
		57	221110	Principles of Designing	Exam	3	4	25		15	70	5
		58	241102	Fundamentals of Mineral Processing and Recycling (for non-specialists)	Exam	2	1		10		30	3
		59	211147	Successful mining practices	Exam	1	3	20		10	40	4
		60		Optional:	Exam	2	1	10			30	2
			221109	Construction and Maintenance of Mining Roads								
			231226	Mining Support Constructions and Linings								
			211210	Combined mining of mineral resources								
		61	261105	Ecology and Environmental Protection	Exam	3	2	10	4	6	50	4
				Eight Semester	***6***	***14***	***14***	***95***	***14***	***31***	***280***	***22***
				State exam:								10
				Overall for the fourth year:	***11+3***	***25***	***25***	***249***	***14***	***31***	***648***	***60***
				OVERALL FOR THE COURSE OF STUDY:	**43+18**	**91**	**108**	**1088**	**198**	**170**	**2914**	**240+14***

***** The credits above 240 (14 credits for the first and second year) are accumulated from the course units in *Foreign Languages* and *Physical Education and Sports*

Abbreviations:
CA -continuous assessment, L - lectures, Lab - laboratory seminars S -seminars, P - practical seminars

Parameters of the Curriculum:

Overall teaching hours for the full course of	2914	teach. hrs.
Academic load:	2674	teach. hrs.
lectures:	1218	teach. hrs.
seminars:	1456	teach. hrs.
Extracurricular load (practical training):	240	teach. hrs.
Number of exams per course of study:	40	
Items of continuous assessment:	19	