UNIVERSITY OF MINING AND GEOLOGY "ST. IVAN RILSKI"

SOFIA

FACULTY OF MINING TECHNOLOGY

CURRICULUM

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

Adopted at a session of the Academic Council at the University of Mining and Geology "St. Ivan Rilski":
Minutes № / 2021

HEAD OF DEPARTMENT OF MINERAL PROCESSING AND RECYCLING: _____
(Prof. DSc. Irena Grigorova)

DEAN: _____
(Prof. DSc. Valery Mitkov)

Sofia, 2021

CURRICULUM
EDUCATIONAL AND QUALIFICATION DEGREE: BACHELOR
COURSE OF STUDY: MINERAL PROCESSING AND RECYCLING
VOCATIONAL FIELD: 5.8. EXPLORATION, MINING, AND PROCESSING OF MINERAL

FORM OF STUDY: FULL-TIME
DURATION OF STUDY: 4 YEARS (8 semesters)
Duration of each semester: 14 weeks; of the eighth semester - 10 weeks

Year	Semester	№	Course unit code	Full name of the course units (course projects, practical training)	Form of control	Teaching hours (weekly)		Overall teaching hours by type of seminar			Overall academic load per semester	Credits acc. to ECTS
						L	S	S	Lab	P		
FIRST	First	1	361101	Linear Algebra and Analytical Geometry	E	2	2	28			56	6
		2	281101	General Chemistry	E	2	2		28		56	6
		3	361129	Introduction to Computer Technologies	E	1	3		42		56	6
		4	241101	Fundamentals of Mineral Processing and Recycling	E	2	2		14	14	56	6
		5		Elective:	CA	2	2	28			56	6
			211224	Introduction to Mining								
			361232	Computer Networks and Communications								
		6	221100	Foreign Language	CA*		3	42			42	2*
			371100	Physical Education and Sports			2			28	28	1*
		1	*121301*	*General Geology (optional)*	*E*	*2**	*2**		*28**		*56**	*6***
		First semester:			***4+2***	***9***	***16***	***98***	***84***	***42***	***350***	***30+3****
	Second	7	361102	Mathematical Analysis	E	2	2	28			56	6
		8	181102	Physics, Part I	E	2	2		28		56	6
		9	241103	Granulometric Raw Material Preparation	E	2	2		28		56	6
		10	241104	Course project: Granulometric Raw Material Preparation	CA		3	42			42	6
		11	221100	Foreign Language	CA*		3	42			42	2*
		12	371100	Physical Education and Sports	CA*		2			28	28	1*
		13	241105	Practical training: Granulometric Raw Material Preparation	CA						60	6,0
		Second semester:			***3+4***	***6***	***14***	***112***	***56***	***28***	***340***	***30+3****
Overall for the first year:					**7+6**	**15**	**30**	**210**	**140**	**70**	**690**	**60+6***
SECOND	Third	14	351133	Strength of Materials	E	2	2	28			56	5
		15	181103	Physics, Part II	E	2	2		28		56	6
		16	281104	Physico-Chemistry	E	2	2		28		56	5
		17	351129	Principles of Mechanics/Theoretical Mechanics	E	2	2	28			56	6
		18	281103	Organic Chemistry	E	2	1		14		42	5
		19	221100	Foreign Language	CA		3	42			42	2*
			371100	Physical Education and Sports			2			28	28	1*
		Third semester:			***5+1***	***10***	***13***	***98***	***70***	***28***	***336***	***27+3****
	Fourth	20	131103	Mineralogy and Petrography	E	3	2		28		70	7
		21	181106	Fluid Mechanics	E	2	2				56	5
		22	211125	Mine Technologies	E	2	2	28			56	5
		23	241106	Gravitational and Impulse Methods for Mineral Preparation and Recycling	E	2	2		28		56	6
		24	341103	Electrical Engineering	E	2	2		28		56	6

		25	371100	Physical Education and Sports	CA		2			28	28	1*
		26	241108	Practical training: Gravitational and Impulse Methods for Raw Material Preparation and Recycling	CA						60	6
		2	111318	*Minerals (optional)*	E*	2*	2*				56*	5**
		Fourth semester:			***5+2***	***11***	***12***	***28***	***84***	***28***	***382***	***35+1****
Overall for the second year:					**10+3**	**21**	**25**	**126**	**154**	**56**	**718**	**62+4***
THIRD	Fifth	27	241113	Processing and Recycling of Technogenic Raw Materials	E	2	2	16		12	56	6
		28	351101	Machine Sciences	E	2	2	28			56	6
		29	241114	Ancillary Methods in Mineral Processing and Recycling	E	2	2		28		56	6
		30	241107	Course project: Gravitational and Impulse Methods for Mineral Preparation and Recycling	CA		3	42			42	6
		31	241110	Flotation Technologies	E	2	2		28		56	6
		Fifth semester:			***4+1***	***8***	***11***	***86***	***56***	***12***	***266***	***30***
	Sixth	32	241109	Magnetic, Electromagnetic, and Special Methods for Mineral Separation and Recycling	E	2	2		28		56	6
		33	241115	Briquetting, Agglomeration, and Pelletising	E	2	2		16	12	56	6
		34	241112	Processing and Recycling of Municipal/Domestic Waste	E	2	2	16		12	56	6
		35	271105	Economics and Management	E	2	2	28			56	6
		36	241111	Practical training in Flotation Technologies	CA						60	6
		Sixth semester:			***4+1***	***8***	***8***	***44***	***44***	***24***	***284***	***30***
Overall for the third year:					**8+2**	**16**	**19**	**130**	**100**	**36**	**550**	**60**
FOURTH	Seventh	37	241117	Technological Design of Mineral Processing Plants	E	2	2	28			56	9
		38	171126	Ecology and Environmental Protection	E	2	2	14	14		56	5
		39	241118	Course project: Technological Design of Mineral Processing Plants	CA		5	50			50	7
		3	271319	*Legislative Background to the Use of Nature (optional)*	E*	2*	1*	14*			42*	4**
		Seventh semester:			***2+1***	***4***	***9***	***92***	***14***		***162***	***21***
	Eighth	40	241116	Chemical Methods in Mineral Processing and Recycling	E	3	3		30		60	7
		41	241120	Engineering Practices in the Processing of Minerals and Technogenic Raw Materials	CA		4	20		20	40	8
		42	261102	Technical Safety	E	3	3	15	15		60	7
		43	241119	Sampling and Automated Control	E	3	3	15	15		60	9
		Eighth semester:			***3+1***	***9***	***13***	***50***	***30***	***20***	***220***	***31***
		State exam:										**10**
Overall for the fourth year:					**5+2**	**13**	**22**	**142**	**44**	**20**	**382**	**62**
OVERALL FOR THE FULL COURSE OF STUDY:					**30+13**	**65**	**96**	**608**	**438**	**182**	**2340**	**244+10***

The credits for the course units in *Foreign Languages* and *Physical Education and Sports* are accumulated above the compulsory 240 credits for the full course of study.

Abbreviations: **E** - examination; **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 study:		
Overall teaching hours for the full course of study:	2340	teaching hours
Academic load:	2160	teaching hours
lectures:	932	teaching hours
seminars :	1228	teaching hours
seminars:	608	teaching hours
laboratory seminars:	438	teaching hours
practical seminars:	182	teaching hours
Extracurricular load (practical training):	180	teaching hours
Number of exams per course of study:		
Number of exams per course of study:	30	
Items of continuous assessment:	13	