



**МИННО-ГЕОЛОЖКИ УНИВЕРСИТЕТ "СВ. ИВАН РИЛСКИ"
СОФИЯ**

FACULTY OF MINING TECHNOLOGY

CURRICULUM

VOCATIONAL FIELD:	5.7. ARCHITECTURE, CONSTRUCTION AND GEODESY
COURSE OF STUDY:	UNDERGROUND CONSTRUCTION
EDUCATIONAL AND QUALIFICATION DEGREE:	BACHELOR
VOCATIONAL QUALIFICATION:	ENGINEER IN UNDERGROUND CONSTRUCTION
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 № 8 / 22.12.2016

HEAD OF DEPARTMENT OF UNDERGROUND CONSTRUCTION: _____
(Prof. Dr. L. Totev)

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

CURRICULUM

**EDUCATIONAL AND QUALIFICATION DEGREE: BACHELOR
 COURSE OF STUDY: UNDERGROUND CONSTRUCTION
 VOCATIONAL FIELD: 5.7 ARCHITECTURE, CONSTRUCTION, AND GEODESY**

FORM OF STUDY: FULL-TIME

DURATION OF STUDY : 4 YEARS

Duration 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)		Teaching hours per type of seminars			Overall teaching hours per semester	Credits	
						L	S	S	Lab	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	3	42			70	6	
		4	371103	Office and CAD Systems	Exam	1	3		42		56	5	
		5	371143	<i>Practical Training: CAD Systems, 5 days</i>	CA						30	3	
		6	231107	Introduction to the Course of Study	CA	3					42	4	
		7	421100	Foreign Language - Optional	CA		3	42			42	3*	
			431100	Physical Education and Sports - 2 teach.hrs.			2		28		28	1*	
	First semester:					4+3	11	16	126	70	28	408	30+4*
	Second	Second	9	361102	Higher Mathematics, Part II (Mathematical Analysis of the Function of One Variable)	Exam	2	3	42			70	6
			10	351111	Mine Engineering Drawing	Exam	2	2	28			56	5
			11	231108	<i>Practical and Field Training in Mining, 5 days</i>	CA						30	4
			12	251141	Geodesy and Mine Surveying	Exam	2	3	21		21	70	6
			13	251142	<i>Practical Training: Geodesy and Mine Surveying, 5 days</i>	CA						30	4
			14	181102	Physics, Part I	Exam	2	2		28		56	5
			15	421100	Foreign Language - Optional	CA		3	42			42	3*
16	431100	Physical Education and Sports - 2 teach.hrs.	CA		2			28		28	2*		
Second semester:					4+4	8	15	133	28	49	382	30+4*	
Overall for the first year:					8+7	19	31	259	98	77	790	60+8*	
Second	Third	17	361104	Higher Mathematics, Part III (Multivariate Analysis, Differential Equations, and Mathematical Statistics)	Exam	3	3	42			84	7	
		18	181103	Physics, Part II	Exam	2	2		28		56	5	
		19	121120	Geology and Mineral Resources	Exam	2	3	42			70	6	
		20	311118	Mining and Construction Machines	Exam	2	3	42			70	6	
		21	281101	Principles of Mechanics	Exam	2	3	42			70	6	
		22	421100	Foreign Language - Optional	CA		3	42			42	3*	
		23	431100	Physical Education and Sports - 2 teach.hrs.			2			28		28	1*
	Third semester:					5+1	11	19	210	28	28	420	30+4*
	Fourth	Fourth	24	281105	Strength of Materials	Exam	2	4	56			84	7
			25	341103	Electrical Engineering and Electronics	Exam	2	2		28		56	5
			26	231127	Mechanics of Fluids	Exam	2	3	30	12		70	8
			27	211112	Rock Mechanics	Exam	2	3		42		70	6
			28	271106	Economics and Finances	Exam	2	1	14			42	4
29	431100	Physical Education and Sports - 2 teach.hrs.	CA		2			28		28	1*		
Fourth semester:					5+1	10	15	100	82	28	350	30+2*	
Overall for the second year:					10+2	21	34	310	110	56	770	60+5*	
Third	Fifth	30	231113	Engineering Geology and Hydrogeology	Exam	4	2	14	14		84	7	
		31	231114	Structural Mechanics of Underground Equipment	Exam	3	2	28			70	6	
		32	271115	Economics	Exam	2	1	14			42	4	
		33	231115	Blasting Equipment and Technology	Exam	2	3	42			70	6	
		34	221115	<i>Practical Training: Blasting Equipment and Technology, 5 days</i>	CA						30	1	
		35	231117	Building Materials	Exam	2	3	42			70	6	
Fifth semester:					5+1	13	11	140	14		366	30	

Year	Semester	№	Course unit code	Full name of the course unit (course projects, practical trainings)	Form of control	Teaching hours (weekly)		Teaching hours per type of seminars			Overall teaching hours per semester	Credits	
						L	S	S	Lab	P			
Third	Sixth	36	231109	Soil Mechanics and Foundation	Exam	3	4	56			98	9	
		37	231110	Course Project: Soil Mechanics and Foundation	CA		1	14			14	2	
		38	231101	Underground Construction	Exam	2	3	42			70	6	
		39	231102	Course Project: Underground Construction	CA		1	14			14	2	
		40	231103	<i>Practical Training: Underground Construction, 10 days</i>	CA						60	4	
		41	211116	Mining of Mineral Resources	Exam	4	2	28			84	7	
Sixth semester:					3+3	9	11	154	0	0	340	30	
Overall for the third year:					8+4	22	22	294	14	0	706	60	
Fourth	Seventh	42	231111	Reinforced Concrete	Exam	3	2	28			70	6	
			231122	Course Project: Reinforced Concrete			1	14			14	2	
		43	231104	Underground Urban Infrastructure	Exam	3	3	42			84	7	
		44	261105	Course Project: Underground Urban Infrastructure	CA		1	14			14	2	
		45	231106	<i>Practical Training: Underground Urban Infrastructure, 14 days</i>	CA						84	2	
		46	261101	Ventilation of Underground Sites	Exam	2	2	14	14		56	5	
		47	261119	Course Project: Ventilation of Underground Sites	CA		1	14			14	2	
	Seventh semester:					3+3	8	10	126	14	0	336	26
	Eighth	48	231118	Testing of Engineering Structures	Exam	3	4	40			70	6	
		49	231119	Tunneling Mine Construction (Metropolitan Railways)	Exam	3	4	40			70	6	
			231120	Course Project: Tunneling Mine Construction	CA		1	10			10	2	
50		231121	Overground Mine Construction	Exam	3	4	40			70	6		
51		261102	Technical Safety	Exam	3	3		20	10	60	4		
Eighth semester:					4+1	12	16	130	20	10	280	24	
State exam											10		
Overall for the fourth year:					7+4	20	26	256	34	10	616	60	
OVERALL FOR THE FULL COURSE OF STUDY:					33+18	82	113	1119	256	143	2882	240+13*	

* 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 study: 2882 teach. hrs.

Academic load: 2618 teach. hrs.

lectures: 1148 teach. hrs.
seminars: 1582 teach. hrs.

Extracurricular load (practical training): 264 teach. hrs.

Number of exams per course of study: 33

Items of continuous assessment: 18