



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

FACULTY OF MINING TECHNOLOGY

CURRICULUM

VOCATIONAL FIELD:	5.7 ARCHITECTURE, CONSTRUCTION AND GEODESY
COURSE OF STUDY:	BLASTING TECHNIQUE AND TECHNOLOGY PRODUCTION OF BLASTING MATERIALS
EDUCATIONAL AND QUALIFICATION DEGREE:	MASTER
VOCATIONAL QUALIFICATION:	ENGINEER IN BLASTING TECHNIQUE AND TECHNOLOGY PRODUCTION OF BLASTING MATERIALS
FORM OF STUDY:	FULL - TIME
DURATION OF STUDY:	1,5 YEARS (THREE SEMESTERS)

Adopted at a session of the Academic Council of the University of
Mining and Geology "St. Ivan Rilski" :
Minutes № 15 / 02.04.2015

HEAD OF DEPARTMENT OF UNDERGROUND CONSTRUCTION: _____

(Prof. Dr. L. Totev)

DEAN: _____

(Prof.Dr. Ivan NISHKOV)

CURRICULUM

Educational-qualification degree "Master of Science"

Course of study: "Blasting technique and technology production of blasting materials"

Basic speciality: "Underground construction" and "Development of mineral resources"

Professional field: 5.7 "Architecture, construction and geodesy"

Professional field: 5.8 "Exploration, extraction and treatment of mineral resources"

Form of education: FULL - TIME

Period of training: 1,5 years

Duration of the educational semester: first and second - 15 weeks, third - 13 weeks

Year	Semester	№	Course unit code	Full name of the course unit (course projects, practical trainings)	Form of control	Teaching hours (weekly)		Overall teaching hours per semester	Credits	
						L	S			
First	First	1	232143	Theoretical basis of the explosion phenomenon and explosives	Exam	4	2	90	7	
		2	232149	Individual explosives and materials for explosive's manufacturing	Exam	3	3	90	7	
		3	222155	Volume explosions - essence and basic characteristics	Exam	3	1	60	5	
		4	232144	Technology and organization of the production of powdered explosives, gross-dispersion explosives, slurries (water-gel explosives) and emulsion explosives	Exam	4	2	90	7	
		5	232136	Engineering software	Exam	1	2	45	4	
	First semester:					5	15	10	375	30
	Second	6	232145	Technology and organization of the production of nitro-ester-explosives and plasticised explosives	Exam	3	2	75	6	
		7	232139	Special methods for underground construction	Exam	3	1	60	5	
		8	232146	Technology and organization of the manufacturing of explosive devices - primers	Exam	4	2	90	7	
		9	232141	Waste depots and soil rehabilitation	Exam	3	1	60	5	
10		232147	Basics of pyrotechnics. Manufacturing of pyrotechnical devices.	Exam	3	3	90	7		
Second semester:					5	16	9	375	30	
Overall for the first year:					10	31	19	750	60	
Second	Third - 13 weeks	11	222156	Blasting technology in open-pit and underground conditions, and special blasting activities in complicated conditions	Exam	3	2	65	5	
		12	232153	European ADR agreement, classification. Methods for testing, transportation and storage of explosive materials.	Exam	3	1	52	4	
		13	232154	Labor safety in manufacturing and application of explosive materials.	Exam	3	2	65	5	
		14	232152	Pre-graduation practice - 10 days (60 hours)	CA			60	2	
	Fourth semester:					3+1	9	5	242	16
				Preparation and evaluation of graduation thesis					15	
Overall for the second year:					3+1	9	5	242	31	
OVERALL FOR THE FULL COURSE OF STUDY					13+1	40	24	992	91	

Abbreviations:

CA - Continuous Assessment, L - Lectures, Lab - Laboratory Seminars, S - Seminars, P - Practical Seminars

Total workload for the education course :	992	teach. hrs.
Academic load :	960	teach. hrs.
Lectures :	600	teach. hrs.
Exercises :	360	teach. hrs.
Extracurricular employment (educational practices) :	60	teach. hrs.
Number of exams for the educational course :	13	
Number of the ongoing evaluations :	1	