

Study program: Mining

Semester I				
Required subject				
Code	Subject	ECTS	Hours per week	Total hours
2FI 100112	Mathematics 1	8	3+2+2	216
2FP100212	Physics 1	8	3+2+2	216
UGD101312	Computer Science	6	2+2+1	156
	Optional subject from faculty A	4	2+1+1	120
	Optional subject from faculty B	4	2+1+1	120
Total:		30	12+8+7	828

Optional subject from faculty A:

2FP100412 Principles in mining

2FP100512 Mining materials

Optional subject from faculty B:

2FP100612 Principles in geology

2FP100712 Mineralogy and petrography

Semester II				
Required subject				
Code	Subject	ECTS	Hours per week	Total hours
2FP100812	General and inorganic chemistry	8	3+2+2	216
2FP100912	Engineering graphics	6	2+2+1	156
2FP101012	Mathematics 1	6	2+2+1	156
	Optional subject from faculty 3	4	2+1+1	120
	Foreign language 1	6	2+2+1	156
	Sports and Recreation		0+0+2	24
Total:		30	11+9+8	828

Optional subject from faculty:

2FP101112 Physics 2

2FP101212 Fundamentals of programming

2ET 100112 Basic Electrical Engineering

Semester III				
Required subject				
Code	Subject	ECTS	Hours per week	Total hours
2MF100212	Technical mechanics	8	3+2+2	216
2FP101512	Numerical methods	8	3+2+2	216
2FP101612	Drilling and blasting	6	2+2+1	156
	Optional subject from faculty 4	4	2+1+1	120
	Optional subject from faculty 5	4	2+1+1	120
Total:		30	12+8+7	828

Optional subject from faculty:

2FP101712 Fundamentals of management
 2FP101812 Geodesy
 2FP101912 Construction in mining
 2FP102012 Genesis of ore deposits

Semester IV				
Required subject				
Code	Subject	ECTS	Hours per week	Total hours
2FP102112	Mining machinery	8	3+2+2	216
2MF100412	Strength of materials	6	2+2+1	156
2FP102312	Fluid mechanics	6	2+2+1	156
	Optional subject from faculty 6	4	2+1+1	120
	Optional subject from university 2	6	2+2+1	156
Total:		30	11+9+6	804

Optional subject from faculty:

2FP102412 Methods of mining exploitation
 2FP102512 Engineering of mining environment

Semester V				
Required subject				
Code	Subject	ECTS	Hours per week	Total hours
2FP102612	Mining technology	8	3+2+2	216
2FP102712	Methods of examination in mineral technology	8	3+2+2	216
2FP102812	Construction of mining facilities	6	2+2+1	156
	Optional subject from faculty 4	4	2+1+1	120
	Optional subject from faculty 5	4	2+1+1	120
Total:		30	12+8+7	828

Optional subject from faculty:

Blok A	Blok B	Blok V
2FP102912 Flotation concentration	2FP103212 Exploitation of unlayered deposits	2FP103612 Mine hoisting plants 2FP103712 Opening and development of ore deposits for underground mining
2FP103012 Leaching of sulphide and oxide minerals	2FP103312 Exploitation of layer deposits	2FP103812 Underground mining operations
2FP103112 Physical chemistry	2FP103412 Mining regulations	2FP103912 Ventilation measurements
	2FP103512 Mechanics of soil	

Semester VI

Required subject

Code	Subject	ECTS	Hours per week	Total hours
2FP104012	Rock mechanics	8	3+2+2	216
2FP104112	Transport of raw minerals 1	6	2+2+1	156
2FP104212	Basics of designing	6	2+2+1	156
	Optional subject from faculty 6	4	2+1+1	120
	Optional subject from university 3	6	2+2+1	156
Total:		30	11+9+6	804

Optional subject from faculty:

Blok A	Blok B	Blok V
2FP104312 Mathematical methods in mineral technology	2FP104512 Special blastings	2FP104712 Modern methods in underground mining of metallic mineral raw materials
2FP104412 Extractive metallurgy	2FP104612 Modeling in mining	2FP104812 Special facilities ventilation
		2FP104912 Tunnel construction

Semester VII

Required subject

Code	Subject	ECTS	Hours per week	Total hours
2FP105012	Mineral technology 1	8	3+2+2	216
2MF100212	Occupational Safety and Health in mining	8	3+2+2	216
2FP105212	Transport of raw minerals 2	6	2+2+1	156
	Optional subject from faculty 7	4	2+1+1	120
	Optional subject from faculty 8	4	2+1+1	120
Total:		30	12+8+7	828

Optional subject from faculty:

Blok A	Blok B	Blok V
2FP105312 Industrial application	2FP105612 Designing of surface mine for architectural building stone	2FP106012 Underground excavation of stone bloks 2FP106112 Underground mining methods for vein deposits
2FP105412 Designing in mineral engineering	2FP105712 Blasting methods	2FP106212 Thermal analysis and conditioning 2FP106312 Environmental Protection Laws
2FP105512 Processing of industrial minerals	2FP105812 GPS, GIS and navigation	2FP106412 Defining the rock type 2FP106512 Modelling pit structures
	2FP105912 Deep drilling	

Semester VIII				
Required subject				
Code	Subject	ECTS	Hours per week	Total hours
2FP106612	Ventilation engineering	6	2+2+1	156
2FP106712	Mineral technology II	6	2+2+1	156
	Optional subject from faculty 9	4	2+1+1	120
	Optional subject from university 4	6	2+2+1	156
2FP106812	Diploma	8	0+0+8	192
Total:		30	8+7+12	780

Optional subject from faculty:

Blok A	Blok B	Blok V
2FP106912 Building tailing dam	2FP107212 Mining of dimension stone	2FP107512 Underground mining of coal
2FP107012 Processing of Au, Ag and rare metals	2FP107312 Coal gasification	2FP107612 Air quality control
2FP107112 Recycling technology	2FP107412 Basics of oil and gas exploitation	2FP107712 Rehabilitation of mining facilities

Optional subject from university:

Code	<i>Optional subject from university (for 180/240 ECTS are selected 3/4 subjects)</i>			
First year				
UGD100112	Foreign language 1 – English 1*	6	0+0+4	156
UGD100212	Foreign language 1- Italian 1*	6	0+0+4	156
UGD100312	Foreign language 1- German 1*	6	0+0+4	156
UGD100412	Foreign language 1– French 1*	6	0+0+4	156
UGD100512	Foreign language 1- Spanish 1*	6	0+0+4	156
UGD100612	Foreign language 1 - Russian 1*	6	0+0+4	156
Second year				
UGD100712	Foreign language 2 – English 2**	6	0+0+4	156
UGD100812	Foreign language 2 – Italian 2**	6	0+0+4	156
UGD100912	Foreign language 2 - German 2**	6	0+0+4	156
UGD101012	Foreign language 2 – French 2**	6	0+0+4	156
UGD101112	Foreign language 2 – Spanish 2**	6	0+0+4	156
UGD101212	Foreign language 2 – Russian 2**	6	0+0+4	156
Third year				
UGD101412	Math	6	2+2+1	156
UGD101512	Phylosophy	6	2+2+1	156
UGD101612	Ethics	6	2+2+1	156
UGD101712	Macedonian	6	2+2+1	156
UGD101812	Entrepreneurship	6	2+2+1	156
UGD101912	Environmental protection	6	2+2+1	156
UGD102812	Contractual right	6	2+2+1	156
Fourth year				
UGD102212	Fundamentals of Tourism	6	2+2+1	156
UGD102312	Eart scieance	6	2+2+1	156
UGD102412	Physics	6	2+2+1	156
UGD102512	Biology	6	2+2+1	156
UGD102612	Health care	6	2+2+1	156
UGD102012	History of Art	6	2+2+1	156
UGD102112	National History	6	2+2+1	156