# **PLAN OF STUDIES**

FACULTY: Geoengineering, Mining, and Geology

MAIN FIELD OF STUDY: mining and geology

**EDUCATION LEVEL:** 1<sup>st</sup> level, inżynier studies

FORM OF STUDIES: full-time

**PROFILE:** general academic

LANGUAGE OF STUDY: Polish

Geoengineering, Mining, and Geology Faculty Council Resolution of 05.09.2012

In effect since 01.10.2012

\*delete as applicable

Plan of studies structure in hourly layout

1<sup>st</sup> level full-time studies in the field of mining and geology

sem./ hrs.	1	ECTS points	2	ECTS points	3	ECTS points	4	ECTS points	5	ECTS points	6	ECTS points	7	ECTS points
1	Mathematical Analysis I	8	Mathematical		Physics II 20100 E FZP2072	5	Surface Mining		Introduction to Machine Construction 20010 Z	4	Mine Dewatering 20010 E GGG6105	3	Optional Course 20000 Z Geological	2
3	MAP1142		Analysis II 32000 E MAP1144	8	Mineralogy and		30020 E GGG4107	5	Electrotechnics		Occupational Safety		and Mining Law 10001 Z PRG7101	2
5	Algebra and Analytical				Petrology 10200 E	4			20100 E ELG5102	4	and Health and Rescue Work I	4	Postmining Land Reclamation and	
6 7	Geometry 21000 E MAP1140	4	Physics I		GEG3104		Mineral Deposit and Mining Geology				21100 E GGG6104		Development 10011 Z OSG7101	3
8 9	Descriptive Geometry and Technical Drawing	_	22000 E FZP1058	6	20100 E GEG3102	3	20110 E GEG4103	5	Mineral Processing II 20200 E GGG5110	6			Mineral Deposit and Production Management	2
10	10030 Z MMG1103	1					Applied Geophysics	3	0000110		Economics in Mining 30210 E	5	10020 Z GGG7108	
11			Chemistry 20200 E	4	Foreign Language	2	GGG4108	Ŭ			EKG6102		Occupational Safety and Health and	
12	Fundamentals of Mining 20000 E GGG1102	2	CHG2101		04000 Z		Drilling Technology 20000 Z	2	Underground Mining	F			Rescue Work II 21000 E	2
14	Introduction to Economics				Mathematical Statistics		Mineral Processing I		30020 E GGG5111	5			Diploma Seminar	
15	10001 E EKG1101	2	Engineering Surveys 20200 Z	3	11000Z MAP303	3	20000 Z GGG4104	3					00002 Z GGG7106	2
16	Introduction to Ecology and Environment		GKG2102						Blasting		Machinery Systems			
17	Protection 20000 Z OSG1101	2			Soil Mechanics 20100 E GGG3101	5	Foreign Language	3	00020 Z GGG5112	2	30111É MMG6102	6	Mine Ventilation And Fires II	3
18	Information Technologies	2	Technical Mechanics 22000 E	5			04000 E						GGG7113	
19	20000 Z INZ0535	-	MMG2101		Computer Science 00200 Z	2			Mining Surveying					
20	Liberal-Managerial				INZ3101		Rock Mass		20210 Z GKG5102	6	Mine Ventilation			
21	Subjects 30000 Z	3	Fundamentals of Geology	л			Mechanics 20110 E	7			20100 E GGG6106	4		
22			10020 E GEG2101	4	Strength of Materials 22000 E	5	GGG4109				Rock Extraction		Diploma Dissertation GGG7115	14
23					MMG3102		Blasting Technique I		Optional Course 20000 Z	3	and Processing 10100 Z GGG6107	2		
25					Physical Education	1	GGG4115	2			Training GGG106011	6		
26				20								20		
Total		30		30		30		30		30		30		30

# 1. Set of obligatory and optional courses and groups of courses in semestral arrangement

## Semester 1

No.	Course/group	Name of course/group of courses (denote	Wee	ekly numb	per of	f hours	Field-of-study	Numbe	r of hours	Numb	er of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	irses	
	of courses code	group of courses with symbol GK)	lec	cl lab	pr	sem	educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MMG1103	Descriptive Geometry and Technical Drawing	1		3		K_W08 K_U08	60	210	7	5	Т	Z			PD	Ob
2	GGG1102	Fundamentals of Mining	2				K_W11 K_K07	30	60	2	2	Т	Е			K	Ob
3	EKG1101	Introduction to Economics	1			1	K_W07, 10, 35 K_U01, 05, 09 K_K02, 03	30	60	2	2	Т	E, Z			KO	Ob
4	OSG1101	Introduction to Ecology and Environment Protection	2				K_W11 K_K02	30	60	2	2	Т	Z			KO	Ob
5	INZ0534	Information Technologies	2				K_W09 K_K03	30	60	2	2	Т	Z	0		KO	Ob
		Total	8		3	1		180	450	15	13						

## **Obligatory courses, number of ECTS points 15**

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

 $^{2}$ Traditional – enter T, remote – enter Z

 ${}^{3}$ Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)  ${}^{4}$ University-wide course /group of courses – enter O

<sup>5</sup>Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

No.	Course/group	Name of course/group of courses	We	ekly	numb	er of l	nours	Field-of-	Numbe	r of hours	Numl	ber of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cour	rses	
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MAP1142	Mathematical Analysis I	2	2				K_W01 K_U02 K_K01, 07	60	240	8	5	Т	E, Z	0		PD	W
2	MAP1140	Algebra and Analytical Geometry	2	1				K_W02 K_U03 K_K01, 07	45	120	4	2,5	Z	E, Z	0		PD	W
3	FLG108825	Liberal-Managerial Subjects	2					K_W06 K_K03	30	60	2	1	Т	Z	0		KO	W
4	PKH1772	Liberal-Managerial Subjects	1					K_W06	15	30	1	0,5	Т	Z	0		KO	W
		Total	7	3					150	450	15	9						

#### **Optional courses (minimum 150 hours in semester, 15 ECTS points)**

### Altogether in semester:

	Tota	ll number of	hours		Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
15	3		3	1	330	900	30	22

No	Course/group	Name of course/group of courses	We	eekly	/ numb	er of	hours	Field-of-	Numbe	er of hours	Numb	per of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	CHG2101	Chemistry	2		2			K_W05 K_U07	60	120	4	3,5	Т	E, Z	0		PD	Ob
2	GKG2102	Engineering Surveys	2		2			K_W12 K_U10	60	90	3	2	Т	Z			K	Ob
3	MMG2101	Technical Mechanics	2	2				K_W13 K_U11 K_K07	60	150	5	4	Т	E, Z			К	Ob
		Total	6	2	4				180	360	12	9,5						

### **Obligatory courses, number of ECTS points 12**

## Groups of obligatory courses, number of ECTS points 4

No	Course/group	Name of course/group of courses	We	ekly	numb	er of	hours	Field-of-	Numbe	r of hours	Numb	per of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cour	rses	
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	GEG2101	Fundamentals of Geology (GK)	1			2		K_W11, 14 K_U12 K_K01-07	45	120	4	3	Т	E (lec), Z			K	Ob
		Total	1			2			45	120	4	3						

 $^{1}$ BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students  $^{2}$ Traditional – enter T, remote – enter Z

<b>Optional course</b>	s (minimum	135 hours in	n semester.	. 14 ECTS	points)
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No	Course/group	Name of course/group of courses	We	ekly	v numb	ber of	hours	Field-of-	Numbe	r of hours	Num	per of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gro	up of cour	ses	
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-Owide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MAP1144	Mathematical Analysis	3	2				K_W01 K_U02 K_K01, 07	75	240	8	5	Т	E, Z	0		PD	W
2	FZP001058	Physics I	2	2				K_W04 K_U06 K_K01	60	180	6	6	Т	E, Z			PD	W
		Total	5	4					135	420	14	11						

Altogether in semester:

	Tota	ll number of	hours		Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
12	6	4	2		360	900	30	23,5

## **Obligatory courses, number of ECTS points 18**

No	Course/group	Name of course/group of courses	We	ekly	numb	er of I	hours	Field-of-	Numbe	er of hours	Num	per of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	
	of courses	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
	coue	Symbol GIX)						effect symbol										
1	GEG3102	Hydrogeology	2		1			K_W17 K_U15 K K04	45	90	3	2,5	Т	E, Z			K	Ob
2	MAP3033	Mathematical Statistics	1	1				 K_W03 K_U04 K_K07	30	90	3	1,5	Т	Z	0		PD	Ob
3	GGG3101	Soil Mechanics	2		1			K_W18 K_U16 K_K01	45	150	5	4	Т	E, Z			К	Ob
4	ING3101	Computer Science			2			K_U05 K_K01	30	60	2	1	Т	Z			PD	Ob
5	MMG3102	Strength of Materials	2		2			K_W15 K_U13 K_K07	60	150	5	4	Т	E, Z			К	Ob
		Total	7	1	6				210	540	18	13						

### Groups of obligatory courses, number of ECTS points 4

No	Course/group	Name of course/group of courses	Wee	ekly	numb	er of [	hours	Field-of-	Numbe	r of hours	Numb	per of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	GEG3104	Mineralogy and Petrology (GK)	1		2			K_W05, 16, 22	45	120	4	3,5	Т	E (lec), Z			К	Ob
		Total	1		2				45	120	4	3,5						

 $^{1}$ BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students  $^{2}$ Traditional – enter T, remote – enter Z

#### **Optional courses (minimum 135 hours in semester, 8 ECTS points)**

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No.	. Course/group of	Name of course/group of	We	eekly	numb	er of I	hours	Field-of-	Numbe	er of hours	Num	ber of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	
	courses code	courses (denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	FZP2072	Physics II	2		1			K_W04 K_U06	45	150	5	5	Т	E, Z	0		PD	W
2	JZL000000BK	Foreign Language		4				K_U01	60	60	2	2	Т	Z	0		KO	W
3	WFW00000BK	Physical Education		2				K_W36	30	30	1	1	Т	Z	0		KO	W
		Total	2	6	1				135	240	8	8						

#### Altogether in semester:

	Tota	ll number of	hours		Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
10	7	9			390	900	30	24,5

 ${}^{1}BK$  – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students  ${}^{2}Traditional$  – enter T, remote – enter Z

### **Obligatory courses, number of ECTS points 27**

No	Course/group	Name of course/group of courses	Week	ly num	ber of	hours	Field-of-	Numbe	r of hours	Numb	per of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec c	l lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	GGG4107	Surface Mining Technology	3		2		K_W07, 08,09 K_U05,17 K_K01,02	75	150	5	4	Т	E, Z			К	Ob
2	GEG4103	Mineral Deposit and Mining Geology	2	1	1		K_W20 K_U18	60	150	5	3,5	Т	E, Z			К	Ob
3	GGG4108	Applied Geophysics	1		1		K_W20 K_U18 K_K02, 07	30	90	3	2,5	Т	E, Z			К	Ob
4	GGG4103	Drilling Technology	2				K_W21 K_K02, 07	30	60	2	2	Т	Z			К	Ob
5	GGG4104	Mineral Processing I	2				K_W22 K_U19 K_K07	60	90	3	3	Т	Z			К	Ob
6	GGG4109	Rock Mass Mechanics	2	1	1		K_W23 K_U20 K_K04	60	210	7	5,5	Т	E, Z			К	Ob
7	GGG4110	Blasting Technique I	2				K_W19, 26,35	30	60	2	2	Т	Z			К	Ob
		Total	14	2	5			315	810	27	22,5						

## **Optional courses (minimum 60 hours in semester, 3 ECTS points)**

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No	Course/group	Name of course/group of courses	We	ekly	numb	er of l	nours	Field-of-	Numbe	r of hours	Num	ber of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	JZL000000BK	Foreign Language		4				K_U01	60	90	3	3	Т	Z	0		KO	W
		Total		4					60	90	3	3						

#### Altogether in semester:

	Tota	al number of	hours		Total	Total	Total	Number of
					number	number of CNPS	number of FCTS	for BK
					ZZU	hours	points	classes <sup>1</sup>
					hours			
lec	cl	lab	pr	sem				
14	4	2	5		375	900	30	25,5

 ${}^{1}BK$  – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students  ${}^{2}Traditional$  – enter T, remote – enter Z

## **Obligatory courses, number of ECTS points 23**

No	Course/group	Name of course/group of courses	We	ekly 1	numb	er of I	hours	Field-of-	Numbe	r of hours	Numl	per of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
								symbol										
1	GGG5110	Mineral Processing II	2		2			K_W22 K_U19					Т	E, Z			K	Ob
2	GGG5111	Underground Mining Technology	3		2			K_K07 K_W07,					Т	E, Z			К	Ob
								26, 50, 52 K_U05, 23, 32 K_K01, 02										
3	GGG5112	Blasting Technique II				2		K_U23, 32 K_K04					Т	Z			К	Ob
4	GKG5102	Mining Surveying	2		2	1		K_W12, 27 K_U10, 24 K_K04, 07					Т	Z			К	Ob
5	ELG5102	Electrotechnics	2		1			K_W25 K_U22 K_K01					Т	E, Z			K	Ob
		Total	9		7	3			285	690	23	16						

### Groups of obligatory courses, number of ECTS points 4

No.	Course/group	Name of course/group of courses (denote	Wee	kly nu	mber	of hou	rs	Field-of-	Numbe	r of hours	Numb	er of ECTS points	Form <sup>2</sup> of	Way3 of	Course/gr	oup of cou	ırses	
	of courses code	group of courses with symbol GK)	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MMG5101	Introduction to Machine Construction (GK)	2			1		K_W24 K_U21 K_K07	45	120	4	2,5	Т	Z (lec)			K	Ob
		Total	2			1			45	120	4	2,5						

 $^1BK$  – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students  $^2Traditional$  – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem) <sup>4</sup>University-wide course /group of courses – enter O

<sup>5</sup>Practical course / group of courses – enter O.
<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
<sup>7</sup> Optional – enter W, obligatory – enter Ob

### **Optional courses (minimum 30 hours in semester, 3 ECTS points)**

N	Со	ourse/group	Name of course/group of courses	We	ekly	numb	er of I	hours	Field-of-	Numbe	r of hours	Numb	ber of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	
	O	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	lec cl lab pr sem structure education efficiency efficiency syr		study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>		
1	I GC	GG010001	Optional Course	2						30	90	3		Т	Z			Κ	W
			Total	2						30	90	3							

### Altogether in semester:

	Tota	al number of	hours		Total	Total	Total	Number of
					number	number	number	ECTS points
					of	of CNPS	of ECTS	for BK
					ZZU	hours	points	classes1
					hours			
lec	cl	lab	pr	sem				
13		7	4		360	900	30	18,5

### **Obligatory courses, number of ECTS points 24**

No	Course/group	Name of course/group of courses (denote	We	ekly	numl	oer o	f hours	Field-of-	Numbe	r of hours	Numb	er of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	irses	
	of courses code	group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical5	kind <sup>6</sup>	type <sup>7</sup>
1	GGG6105	Mine Dewatering	2			1		K_W28 K_U25 K_K02	45	90	3	2	Т	E, Z			K	Ob
2	GGG6104	Occupational Safety and Health and Rescue Work I	2	1	1			K_W33 K_U33, 34 K_K04	60	120	4	3,5	Т	E, Z			K	Ob
3	EKG6102	Economics in Mining	3		2	1		K_W10, 31, 35 K_U28 K_K04-06	90	150	5	3,5	Т	E, Z			КО	Ob
4	MMG6102	Machinery Systems	3		1	1	1	K_W24 K_U29	90	180	6	5	Т	E, Z			К	Ob
5	GGG6106	Mine Ventilation and Fires	2		1			K_W30 K_U27 K_K043	45	120	4	4	Т	E, Z			K	Ob
6	GGG6107	Rock Extraction and Processing	1		1			K_W19, 22 K_U04, 19 K_K01	30	60	2	1,5	Т	Z			K	Ob
		Total	13	1	6	3	1		360	720	24	20,5						

### **Optional courses (minimum 120 hours in semester, 6 ECTS points)**

No	Course/group	Name of course/group of courses	We	eekly	numbe	er of l	nours	Field-of-	Numbe	r of hours	Numl	ber of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses	1
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
_								symbol										
1	GGG106011	Training		30					120	180	6		Т	Z		Р	K	W
		Total		30					120	180	6							

#### Altogether in semester:

	Tota	l number of	hours		Total	Total	Total	Number of
					number of ZZU hours	number of CNPS hours	number of ECTS points	ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
13	1	6	3	1	480	900	30	20,5

### **Obligatory courses, number of ECTS points 7**

No	Course/group	Name of course/group of courses (denote group	Wee	ekly	num	ber o	of hours	Field-of-	Numbe	r of hours	Numb	er of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	irses	
	of courses	of courses with symbol GK)	lec	cl	lab	pr	sem	study educational	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical5	kind <sup>6</sup>	type <sup>7</sup>
	code							effect symbol										
1	PRG7101	Geological and Mining Law	1				1	K_W34 K_U31 K_K02	30	60	2	1,5	Т	Z			K	Ob
2	GGG7109	Occupational Safety and Health and Rescue Work II	2	1				K_W33 K_U30 K_K02, 03	45	60	2	2	Т	E, Z			К	Ob
3	GGG7113	Mine Ventilation and Fires	2		1			K_W30 K_U27 K_K01	60	90	3	2	Т	E, Z			K	Ob
		Total	5	1	1		1		135	210	7	5,5						

## Groups of obligatory courses, number of ECTS points 5

No	Course/group of courses	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )		Weekly number of hours			Field-of-study educational	eld-of-study Number of educational hours		Number of ECTS points		Form <sup>2</sup> of Way <sup>3</sup> of course/group crediting		Course/group of courses			
	code		lec	cl la	p pr	sem	effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	of courses		university-wide4	practical5	kind <sup>6</sup>	type <sup>7</sup>
1	OSG7101	Postmining Land Reclamation and Development (GK)	1		1	1	K_W29 K_U01, 05, 26, 32, 34	45	90	3	2	Т	Z (lec)			К	Ob
2	GGG7108	Mineral Deposit and Production Management (GK)	1		2		K_W35 K_U32 K_K07	45	60	2	1,5	Т	Z (lec)			K	Ob
		Total	2		3	1		90	150	5	3,5						

 $^1BK$  – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students  $^2Traditional$  – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem) <sup>4</sup>University-wide course /group of courses – enter O

<sup>5</sup>Practical course / group of courses – enter O.
<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
<sup>7</sup> Optional – enter W, obligatory – enter Ob

#### **Optional courses (minimum 135 hours in semester, 18 ECTS points)**

No.	Course/group	Name of course/group of courses Weekly number of h			hours	Field-of-	Number of hours		Number of ECTS points		Form <sup>2</sup> of	Way <sup>3</sup> of	Course/gr	oup of cou	rses			
	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	GGG010001	Optional Course	2						30	60	2		Т	Z			Κ	W
2	GGG7106	Diploma Seminar					2		30	60	2	2	Т	Z			Κ	W
3	GGG7114	Diploma Dissertation		5					75	420	14	5						
		Total	2	5			2		135	540	18	7						

#### Altogether in semester:

	To	otal number o	of hours		Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
9	6	1	4	4	360	900	30	16

 ${}^{1}$ BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students  ${}^{2}$ Traditional – enter T, remote – enter Z

## 2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
MAP1142	1.Mathematical Analysis I	1
MAP1140	2.Algebra and Analytical Geometry	1
GGG1102	3.Fundamentals of Mining	1
EKG1101	4.Introduction to Economics	1
MAP1144	1.Mathematical Analysis II	2
FZP001058	2.Physics I	2
CHG2101	3.Chemistry	2
MMG2101	4.Technical Mechanics	2
GEG2101	5.Fundamentals of Mining	2
GEG3104	1. Mineralogy and Petrology	3
GEG3102	2.Hydrogeology	3
GGG3101	3.Soil Mechanics	3
MMG3102	4.Strength of Materials	3
GGG4107	1.Surface Mining Technology	4
GEG4103	2.Mineral Deposit and Mining Geology	4
GGG4108	3.Applied Geophysics	4
GGG4109	4.Rock Mass Mechanics	4
GGG5110	1.Mineral Processing II	5
GGG5111	2.Underground Mining Technology	5
ELG5102	3.Electrotechnics	5
GGG6105	1.Mine Dewatering	6
GGG6104	2. Occupational Safety and Health and Rescue Work	6
EKG6102	3.Economics in Mining	6
MMG6102	4.Machinery Systems	6
GGG6106	5.Mine Ventilation and Fires I	6
GGG7109	1. Occupational Safety and Health and Rescue Work II	7
GGG7113	2.Mine Ventilation and Fires II	7

 <sup>&</sup>lt;sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students
<sup>2</sup>Traditional – enter T, remote – enter Z
<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)
<sup>4</sup>University-wide course / group of courses – enter O
<sup>5</sup>Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
<sup>7</sup>Optional – enter W, obligatory – enter Ob

## **3.** Numbers of allowable deficit of ECTS points after particular semesters

Semester	Allowable deficit of ECTS points after semester
1	8
2	8
3	12
4	12
5	12
6	6

 <sup>&</sup>lt;sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students
<sup>2</sup>Traditional – enter T, remote – enter Z
<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)
<sup>4</sup>University-wide course / group of courses – enter O
<sup>5</sup>Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
<sup>7</sup>Optional – enter W, obligatory – enter Ob

Opinion of student government legislative body

Date Name and surname, signature of student representative

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Date Dean's signature

 $^{1}$ BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students  $^{2}$ Traditional – enter T, remote – enter Z