

## **PLAN OF STUDIES**

**FACULTY:** Geoengineering, Mining, and Geology

**MAIN FIELD OF STUDY:** mining and geology

**EDUCATION LEVEL:** 2<sup>nd</sup> level, magister studies

**FORM OF STUDIES:** part-time

**PROFILE:** general academic

**SPECIALIZATION:** Underground and Surface Mining

**LANGUAGE OF STUDY:** Polish

Geoengineering, Mining, and Geology Faculty Council Resolution of 05.09.2012

In effect since 01.10.2012



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

### Semester 1

#### Obligatory courses number of ECTS points 21

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	GEG1412	Geology and Exploration of Mineral Deposits	2				2	K_W04 K_U06 K_K01, 02	40	120	4	3	T	E, Z			S	Ob
2	GFG1401	AutoCAD			2			K_U10 K_K01	20	60	2	1	T	Z			S	Ob
3	GEG1403	Geostatistics	1		3			K_W01 K_U01, 04, 09, 10	40	120	4	3	T	Z			S	Ob
4	GGG1408	Rock Mass Mechanics	2				1	K_W02, 03, 09, 11 K_U05, 09, 13, 14 K_K01	30	120	4	3	T	E, Z			S	Ob
5	GGG1401	Surface Mining Technology	2				2	K_W05 K_U07 K_K01	40	150	5	4	T	E, Z			S	Ob
6	FZP1016	Physics-The Structure of Matter	2					K_W02	20	60	2	2	T	Z	O		PD	Ob
Total			9		5		5		190	630	21	16						

<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

### Altogether in semester

Total 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				
<b>9</b>		<b>5</b>	<b>5</b>		<b>190</b>	<b>630</b>	<b>21</b>	<b>16</b>

<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

## Semester 2

### Obligatory courses number of ECTS points 16

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	ZMG2402	Operational Research in Management	1		1			K_W06 K_U08 K_K01	20	90	3	2	T	Z			S	Ob
2	GKG2401	Rock Mass Changes Monitoring and Mining Area Surface Protection	2		1			K_W10, 15 K_K01, 02	30	90	3	2,5	T	Z			S	Ob
3	GGG2415	Rock Engineering in Mines	2			1		K_W03, 09, 11 K_U05, 09, 13, 14 K_K01, 02	30	90	3	2	T	E, Z			S	Ob
4	GGG2401	Underground Mining Technology	2			2		K_W07, 09 K_U05 K_K01, 02	40	150	5	4	T	E, Z			S	Ob
5	ELG2401	Industrial Automation	1		1			K_W12 K_U15K_K01	20	60	2	0,8	T	Z			S	Ob
Total			8		3	3			140	480	16	11,3						

### Optional courses (minimum 50 hours in semester, 4 ECTS points)

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	PSG108837	Liberal-Managerial Subjects	1					K_W19 K_K01	10	30	1	1	T	Z	O		KO	W
2	JZL100622	Foreign Language		3				K_U14	30	60	2	1	T	Z	O		KO	W
3	JZL100622	Foreign Language		1				K_U13	10	30	1	0,5	T	Z	O		KO	W
Total			1	4					50	120	4	2,5						

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<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

### Altogether in semester

Total 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				
<b>9</b>	<b>4</b>	<b>3</b>	<b>3</b>		<b>190</b>	<b>600</b>	<b>20</b>	<b>13,8</b>

<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

## Semester 3

### Obligatory courses number of ECTS points 21

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MMG3403	Machinery Systems	2		1	1		K_W08 K_U11	40	150	5	4,5	T	E, Z			S	Ob
2	ING3402	Computer-Aided Mine Planning and Design	2			3		K_W06, 07 K_U09, 10	50	150	5	4	T	E, Z			S	Ob
3	GGG3401	Mine Ventilation and Fires	1			2		K_W16 K_U19 K_K01, 02	30	120	4	3	T	E, Z			S	Ob
Total			5		1	6			120	420	14	11,5						

### Groups of obligatory courses number of ECTS points 2

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	OSG3404	Environment Management (GK)	2				1	K_W15 K_U01, 18 K_K01	30	60	2	1,5	T	Z (lec)			S	Ob
Total			2				1		30	60	2	1,5						

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<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

### Optional courses (minimum 40 hours in semester, 5 ECTS points)

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	GGG020002	Optional Course	3						30	120	4		T	Z			S	W
2	GGG3403	Diploma Seminar					1		10	30	1	1	T	Z			S	W
Total			3				1		40	150	5	1						

### Altogether in semester

Total 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				
<b>10</b>		<b>1</b>	<b>6</b>	<b>2</b>	<b>190</b>	<b>630</b>	<b>21</b>	<b>14</b>

<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



## Semester 4

### Obligatory courses number of ECTS points 5

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	GGG4407	Occupational Safety and Health	1		1			K_W18 K_U21 K_K01	20	60	2	1,5	T	Z			S	Ob
2	PRG4401	Geological and Mining Law and Rescue Work	1	1			1	K_W14 K_U18, 21 K_K02	30	90	3	2,5	T	E, Z			S	Ob
Total			2	1	1		1		50	150	5	4						

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

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	ZMG4401	Finance Management (GK)	1	1	1			K_W17 K_U20 K_K01	30	90	3	2,5	T	E (lec), Z			KO	Ob
2	GGG4404	Processing Systems (GK)	1			2		K_W13 K_U16	30	60	2	2	T	E (lec), Z			S	Ob
Total			2	1	1	2			60	150	5	4,5						

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<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

### Optional courses (minimum 80 hours in semester, 18 ECTS points)

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	GGG020002	Optional Course	2						20	60	2		T	Z			S	W
2	GGG4405	Diploma Seminar					2		20	30	1	1	T	Z			S	W
3	GGG4408	Diploma Dissertation		4					40	450	15	5	T	Z			S	W
Total			2	4			2		80	540	18	6						

### Altogether in semester

Total 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				
<b>6</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>190</b>	<b>840</b>	<b>28</b>	<b>14,5</b>

<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

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

## 2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
GEG1412	1.Geology and Exploration of Mineral Deposits	1
GGG1408	2.Rock Mass Mechanics	1
GGG1401	3.Surface Mining Technology	1
GGG2415	1.Rock Engineering in Mines	2
GGG2401	2.Underground Mining Technology	2
MMG3403	1.Machinery Systems	3
ING3402	2.Computer-Aided Mine Planning and Design	3
GGG3401	3.Mine Ventilation and Fires	3
ZMG4401	1.Finance Management	4
PRG4401	2.Geological and Mining Law and Rescue Work	4
GGG4404	3.Processing Systems	4

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

Semester	Allowable deficit of ECTS points after semester
1	10
2	10
3	6

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<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

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

Opinion of student government legislative body

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Date    Name and surname, signature of student representative

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Date    Dean's signature

<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

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