

## **PLAN OF STUDIES**

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

**MAIN FIELD OF STUDY:** geodesy and cartography

**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



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

### Semester 1

#### Obligatory courses number of ECTS points 15

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	GKG1037	Basics of Surveying and Geodesy	2		2			K_W02 K_U01 K_K01	60	150	5	3	T	E, Z			K	Ob
2	GGG1033	Engineering Graphics and Technical Drawing	1			3		K_W28 K_U31	60	120	4	3	T	Z			PD	Ob
3	INZ0534	Information Technologies	2					K_W09 K_K03	30	60	2	2	T	Z	O		KO	Ob
4	GKG1031	Geomatics	2					K_W01	30	60	2	2	T	Z			K	Ob
5	ING1032	Computer Science I			2			K_U07 K_K01, 02	30	60	2	1	T	Z			PD	Ob
Total			7		4	3			210	450	15	11						

#### Optional courses (minimum 150 hours in semester, 15 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	MAP1140	Algebra and Analytical Geometry	2	1				K_W35 K_U38 K_K01	45	120	4	1,5	Z	E, Z	O		PD	W
2	MAP1142	Mathematical Analysis I	2	2				K_W36 K_U39 K_K01	60	240	8	5	T	E, Z	O		PD	W
3	FLG108825	Liberal-Managerial Subjects	2					K_W37 K_K01	30	60	2	1	T	Z	O		KO	W
4	PKH1772	Liberal-Managerial Subjects	1					K_W37	15	30	1	0,5	T	Z	O		KO	W
Total			7	3					150	450	15	8						

<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>14</b>	<b>3</b>	<b>4</b>	<b>3</b>		<b>360</b>	<b>900</b>	<b>30</b>	<b>19</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	ING2041	Numerical Mapping	1		2			K_W03 K_U03	45	90	3	2	T	Z			K	Ob
2	GKG2037	Surveying I	2		2	1		K_W01, 02, 03, 04, 07, 09, 15, 22 K_U01, 03, 04, 05, 09, 10, 12, 21 K_K03-06	75	150	5	3,1	T	Z			K	Ob
3	JNG2044	Computer Science II			2			K_U07 K_K04, 06	30	60	2	1	T	Z			K	Ob
4	GGG2050	Fundamentals of Mining	2					K_W11 K_K07	30	60	2	2	T	E			K	Ob
5	GEG2045	Fundamentals of Geology	2		2			K_29, 32, 41 K_U30, 32 K_K01-07	60	120	4	3,5	T	E, Z			K	Ob
Total			7		8	1			240	480	16	11,6						

<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

### Optional courses (minimum 135 hours in semester, 14 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	MAP1144	Mathematical Analysis II	3	2				K_W36 K_U39 K_K01, 07	75	240	8	5	T	E, Z	O		PD	W
2	FZP001058	Physics I	2	2				K_W04 K_U06 K_K01-07	60	180	6	6	T	E, Z	O		PD	W
Total			5	4					135	420	14	11						

### 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>12</b>	<b>4</b>	<b>8</b>	<b>1</b>		<b>375</b>	<b>900</b>	<b>30</b>	<b>22,6</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 22

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	GKG3052	Surveying II	1		1	1		K_W01, 04, 06, 07, 09, 22 K_U01, 03, 04, 05, 08, 09, 10, 12, 21 K_K03-06	45	150	5	2,1	T	E, Z			K	Ob
2	GKG3053	Adjustment Calculations I	1	2				K_W06 K_U08 K_K01, 07	45	150	5	4	T	Z			K	Ob
3	GKG3054	Engineering Surveys I	1		1			K_W08 K_U11	30	90	3	2	T	Z			K	Ob
4	GKG3055	Data Bases	1		1			K_W10 K_U13 K_K07	30	90	3	2	T	Z			K	Ob
5	GKG3048	Electronic Measuring Techniques	1		1			K_W09 K_U12	30	60	2	1,5	T	Z			K	Ob
6	GGG3051	Statistical Data Analysis	2		1			K_W05 K_U06	45	120	4	3	T	Z			K	Ob
Total			7	2	5	1			225	660	22	14,6						

<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

**Optional courses (minimum 135 hours in semester, 8 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	FZP2072	Physics II	2		1			K_W04 K_U06	45	150	5	5	T	E, Z	O		KO	W
2	JZL000000BK	Foreign Language		4				K_U01	60	60	2	2	T	Z	O		KO	W
3	WFW000000BK	Physical Education		2				K_W40	30	30	1	1	T	Z	O		KO	W
Total			2	6	1				135	240	8	8						

**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>8</b>	<b>6</b>	<b>1</b>		<b>360</b>	<b>900</b>	<b>30</b>	<b>22,6</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 27

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	GKG4054	Engineering Surveys II	1		2			K_W12 K_U14	45	150	5	4	T	Z			K	Ob
2	GKG4055	Photogrammetry and Remote Sensing	2		2			K_W13 K_U15 K_K07	60	210	7	5	T	E, Z			K	Ob
3	GKG4056	Adjustment Calculations II	1	1				K_W15 K_U17	30	120	4	4	T	E, Z			K	Ob
4	GKG4057	Geographic Information Systems I	2		2			K_W14 K_U16	60	150	5	4	T	Z			K	Ob
5	GGG4014	Occupational Safety and Health and Ergonomics	1	1	1			K_W43 K_U46 K_K04	45	120	4	3,5	T	E, Z			K	Ob
6	EKG4010	Introduction to Economics	1				1	K_W21 K_U42 K_K01-07	30	60	2	2	T	E, Z			KO	Ob
Total			8	2	7		1		270	810	27	22,5						

<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

### Optional courses (minimum 60 hours in semester, 3 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	JZL000000BK	Foreign Language		4				K_U01	60	90	3	3	T	Z	O		KO	W
		Total		4					60	90	3	3						

### 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>8</b>	<b>6</b>	<b>7</b>		<b>1</b>	<b>330</b>	<b>900</b>	<b>30</b>	<b>25,5</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

<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 5

### Obligatory courses number of ECTS points 28

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	GKG5056	Geodesy I	1		2			K_W01 K_U27	45	120	4	3	T	Z			K	Ob
2	GKG5050	Engineering Surveys III	1			2		K_W12, 17 K_U19, 21, 26	45	150	5	4	T	E, Z			K	Ob
3	GKG5058	Geographic Information Systems II	1		2			K_W18 K_U20	45	150	5	4	T	E, Z			K	Ob
4	GKG5055	Mining Surveying	1		2			K_W19 K_U01 K_K07	45	120	4	3	T	E, Z			K	Ob
5	GKG5010	Hydrogeology	1		1			K_W30 K_U33 K_K04	30	60	2	1,5	T	Z			K	Ob
6	GHG0115	Geotechnics	1		1			K_W31, 32 K_U34, 35, 36 K_K01, 04, 06	30	60	2	2	T	Z			K	Ob
7	IBG000115	General Structural Engineering	1		1			K_W08, 33 K_U35, 36, 47 K_K01, 04, 06	30	60	2	1,3	T	Z			K	Ob
8	BDG5010	Civil Engineering	1			1		K_W03, 33 K_U36 K_K01, 04	30	60	2	1,4	T	Z			K	Ob
9	GKG5051	Spatial Planning and Development	1		1			K_W20 K_U22	30	60	2	1,5	T	Z			K	Ob
Total			9		10	3			330	840	28	21,7						

<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

## 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	GKG5053	Environmental Protection (GK)	1		1			K_W10, 14, 21, 23 K_U02, 03, 13, 16, 20, 23, 24, 30 K_K02, 04	30	60	2	1,5	T	Z (lec)			K	Ob
Total			1		1				30	60	2	1,5						

## 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>11</b>	<b>3</b>		<b>360</b>	<b>900</b>	<b>30</b>	<b>23,2</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 6

### 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	GKG6010	Cartography I	1		2	1		K_W22 K_U24, 30	60	90	3	2	T	Z			K	Ob
2	GKG6011	Land Cadastre and Management	2		2			K_W20, 23 K_U19, 25 K_K04	60	90	3	2,5	T	Z			K	Ob
3	GKG6020	Monitoring of Deformations	1		2			K_W18 K_U20	45	90	3	2	T	Z			K	Ob
4	GKG6012	Satellite Geodesy	1		2			K_W16 K_U09, 18	45	90	3	2	T	E, Z			K	Ob
5	GGG6030	Mining Areas Protection	2			2		K_W26 K_U29 K_K07	60	90	3	2	T	E, Z			K	Ob
6	GKG6013	Geodesy II	1			2		K_W01 K_U27	45	120	4	2,5	T	E, Z			K	Ob
7	GEG6011	Tectonics and Geophysics	1			1		K_W41 K_U44 K_K07	30	60	2	1,5	T	Z			K	Ob
Total			9		8	6			345	630	21	14,5						

<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

### Optional courses (minimum 150 hours in semester, 9 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	GKG000067	Optional Course	2						30	90	3		T	Z			K	W
2	GKG106010	Training		30					120	180	6		T	Z			K	W
		Total	2	30					150	270	9							

### 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>11</b>		<b>8</b>	<b>6</b>		<b>495</b>	<b>900</b>	<b>30</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

<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 7

### Obligatory courses number of ECTS points 10

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	PRG7010	Surveying and Mining Law	2				2	K_W34 K_U37	60	150	5	4	T	Z			K	Ob
2	GKG7020	Cartography II	1		1			K_W27 K_U30	30	150	5	4	T	E, Z			K	Ob
Total			3		1		2		90	300	10	8						

### Optional courses (minimum 255 hours in semester, 20 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	GKG7021	Diploma Seminar					2		30	60	2	2	T	Z				
2	GKG000067	Optional Course	2						30	90	3		T	Z				
3	GKG7011	Diploma Dissertation		13					195	450	15	5	T	Z				
Total			2	13			2		255	600	20	7						

### 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>5</b>	<b>13</b>	<b>1</b>		<b>4</b>	<b>345</b>	<b>900</b>	<b>30</b>	<b>15</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
MAP1140	1.Algebra and Analytical Geometry	1
MAP1142	2.Mathematical Analysis I	1
GKG1037	3.Basics of Surveying and Geodesy	1
MAP1144	1. Mathematical Analysis II	2
FZP001058	2.Physics I	2
GGG2050	3.Fundamentals of Mining	2
GEG2045	4.Fundamentals of Geology	2
GKG3052	1.Surveying II	3
FZP2072	2.Physics II	3
GKG4055	1.Photogrammetry and Remote Sensing	4
GKG4056	2.Adjustment Calculations II	4
GGG4014	3.Occupational Safety and Health and Ergonomics	4
EKG4010	4.Introduction to Economics	4
GKG5050	1.Engineering Surveying III	5
GKG5058	2.Geographic Information Systems II	5
GKG5055	3.Mining Surveying	5
GKG6012	1.Satellite Geodesy	6
GGG6030	2.Mining Areas Protection	6
GKG6013	3.Geodesy II	6
GKG7020	1.Cartography II	7

<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



### 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>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

Opinion of student government legislative body

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Date            Name and surname, signature of student representative

.....

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

<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