

## **PLAN OF STUDIES**

**FACULTY: FACULTY OF ENVIRONMENTAL ENGINEERING**

**MAIN FIELD OF STUDY: ENVIROMENTAL ENGINEERING**

**EDUCATION LEVEL: 2nd level, Master of Science**

**FORM OF STUDIES: full-time**

**PROFILE: general academic**

**SPECIALIZATION: Environmental Quality Management (EQM)**

**LANGUAGE OF STUDY: English**

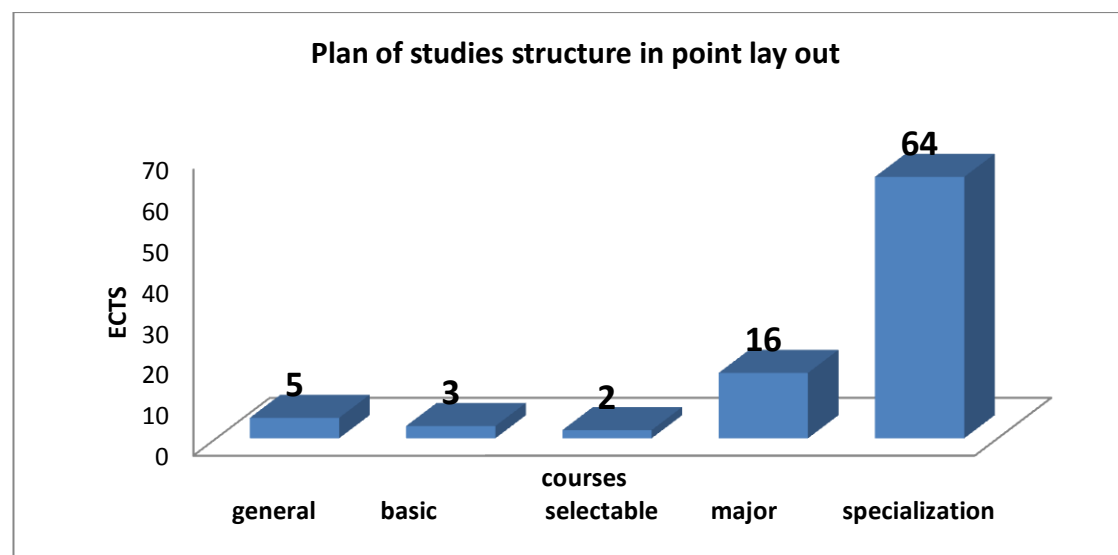
Faculty of Environmental Engineering Council Resolution of **25.09.2012**

In effect since **01.10.2012**

### Plan of studies structure (optionally)

1) in point layout

*(space for scheme of plan)*



<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)

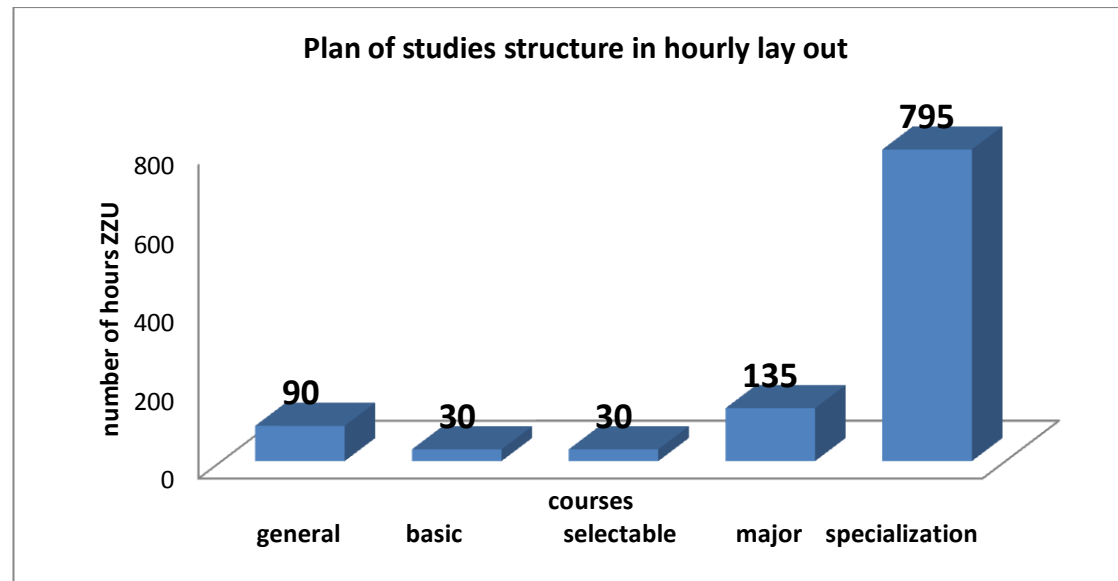
<sup>4</sup>University-wide course /group of courses – enter O

<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

2) in hourly layout  
(space for scheme of plan)



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

## Semester 1

### Obligatory courses number of ECTS points 30

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			
			l e c	l a b	l a b	p r	s e m		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		Polish language A1		1				T1A_K01, T1A_U01, T1A_U02, T1A_U05	15	30	1	0,5	T	Z	O	P	KO	Ob.
2	ZMZ001498W	Contemporary Management	1					K2IS_W03, S2EQM_W08, K2IS_K01	15	30	1	0,5	T	Z	O		KO	Ob.
3	FLC024004W	Philosophy of science and technology	1					T2A_W07, T2A_W08, T2A_K01	15	30	1	0,5	T	Z	O		KO	Ob.
4	ISS005006	Engineering applications of mathematical statistics	1					K2IS_W01	15	60	2	0,5	T	Z			PD	Ob.
5	ISS005006	Engineering applications of mathematical statistics		1				K2IS_U01	15	30	1	0,5	T	Z		P	PD	Ob.
6	ISS105023	Automation In environmental engineering	1					S2EQM_W07	15	60	2	0,5	T	Z			K	Ob.
7	ISS105023	Automation In environmental engineering			1			S1ZWS_U03	15	30	1	0,5	T	Z		P	K	Ob.
8	ISS105050	Environmental Chemistry	2					S2EQM_W01, S2EQM_W02, K2IS_K02	30	90	3	1	T	E			S	Ob.
9	ISS105050	Environmental Chemistry			2			S2EQM_U02,	30	60	2	1	T	Z		P	S	Ob.

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<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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								S2EQM_U04,										
10	ISS105014	Water quality management	2					K2IS_W09,S2EQM_W02	30	90	3	1	T	E			S	Ob.
11	ISS105024	Raw materials management	1					S2EQM_W03, S2EQM_W05, K2IS_K02	15	30	1	0,5	T	Z			S	Ob
12	ISS105024	Raw materials management					1	S2EQM_U01, K2IS_K03, K2IS_K02	15	30	1	0,5	T	Z		P	S	Ob
13	ISS105025	Water treatment technology	2					K2IS_W09,S2ZWS_W02	30	60	2	1	T	E			S	Ob
14	ISS105025	Water treatment technology				1		K2IS_U06,S2ZWS_U02,K2IS_K01	15	60	2	0,5	T	Z		P	S	Ob
15	ISS105026	Sanitary biology	1					K1IS_W03, K2IS_K02	15	60	2	0,5	T	Z			S	Ob
16	ISS105026	Sanitary biology				1		S2EQM_U02, K2IS_U04,K1IS_U02,K1IS_U05,K2IS_U01	15	30	1	0,5	T	Z		P	S	Ob
17	ISS105027	AutoCad				2		S1ZWS_W03,S1ZWS_U05,S1ZWS_U01	30	60	2	1	T	Z		P	S	Ob
18	ISS105028	Water supply systems	1					K2IS_W09,S2EQM_W07, K2IS_K0	15	30	1	0,5	T	Z			S	Ob

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19	ISS105028	Water supply systems					1		2	15	30	1	0,5	T	Z		P	S	Ob
		Total	1	2	7	1	1			360	900	30	12						

### Groups of obligatory courses number of 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>	
		Total																	

### Optional courses (minimum ..... hours in semester, ..... 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>	

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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)

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## Semester 2

### Obligatory courses number of ECTS points ..30..

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 education al effect symbol	Number of hours		Number of ECTS points		Form <sup>3</sup> of course/ group of courses	Way <sup>3</sup> of creditin g	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			universi- ty- wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1		Polish language A2		3				T1A_U01,T1A_U02,T1A_U05,T1A_K01	45	60	2	1,5	T	Z	O	P	KO	Ob
2	ISS005007	Environmental management	2						30	90	3	1	T	Z			K	
3	GPA10572 3W	Spatial planning	1					K2IS_W02,K2IS_W03,K2IS_K01,K2IS_K03	15	60	2	0,5	T	Z			K	Ob
4	ISS105029	Reliability of eng.syst.	1					S2EQM_W07	15	60	2	0,5	T	Z			K	Ob
5	ISS105015	Biodegradable materials	2					S2EQM_W03,S2EQM_W04	30	60	2	1	T	Z			S	Ob
6	ISS105016	Waste water treatment technology	2					K2IS_W03,K2IS_W09,S2EQM_W02,	30	60	2	1	T	E			S	Ob
7	ISS105016	Waste water treatment technology			1			K2IS_K01,K2IS_U06,S2EQM_U02	15	30	1	0,5	T	Z		P	S	Ob
8	ISS105030	Solid waste management	2					S2EQM_W03,S2EQM_W04,S2EQM_W05,	30	60	2	1	T	E			S	Ob

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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

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									S2EQM_W06										
9	ISS105030	Solid waste management			1				S2EQM_U02,S2EQM_W04,S2EQM_W05,K1OS_K03	15	30	1	0,5	T	Z		P	S	Ob
10	ISS105019	Waste gases purification	2							30	60	2	1	T	E			S	Ob
11	ISS105019	Waste gases purification		1					S2EQM_U04	15	30	1	0,5	T	Z		P	S	Ob
12	ISS105031	Toxicology	1						K1IS_W03,K2IS_W01,K2IS_K02	15	30	1	0,5	T	Z			S	Ob
13	ISS105031	Toxicology			1				K2IS_U01,K2IS_U04,K1IS_U02	15	30	1	0,5	T	Z		P	S	Ob
14	ISS105032	Environmental health hazards	2							30	60	2	1	T	Z			S	Ob
15	ISS105033	Sewage systems	1						K2IS_W09,S2EQM_W07,K2IS_K02	15	60	2	0,5	T	Z			S	Ob.
16	ISS105033	Sewage systems				1			K2IS_U06,S2EQM_U03,K2IS_U02,K2IS_U05,S2EQM_U05,K2IS_K02	15	30	1	0,5	T	Z		P	S	Ob.
17	ISS105049	Membrane separation processes in environmental protection	1						K2IS_W03,K2IS_W09,S2EQM_W0	15	60	2	0,5	T	Z			S	Ob.

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18	ISS105049	Membrane separation processes in environmental protection				1			2 K2IS_U0 6,S2EQ M_U02, K2IS_K0 1	15	30	1	0,5	T	Z			S	Ob.
Total			1 7	4	4	1				390	900	30	13						

### Groups of obligatory courses number of 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>	
Total																			

### Optional courses (minimum ..... hours in semester, ..... 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>	

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## Semester 3

### 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>3</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 <sub>1</sub>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	ISS105034	Diploma project (master thesis)				15		K2IS_U04,S2EQM_U01,S2EQM_U02,S2EQM_U03,S2EQM_U04,S2EQM_U05,S2EQM_U07,K2IS_K01,K2IS_K03	225	600	20	7,5	T	Z		P	S	Ob
2	ISS105035	Diploma seminar					2	K2IS_U04,S2EQM_U01,S2EQM_U03,S2EQM_U06,S2EQM_U07,K2IS_K01,K2IS_K03	30	60	2	1	T	Z		P	S	Ob
3	ISS105036	Organization of construction works	1					S2EQM_W07	15	60	2	0,5	T	Z			K	Ob
4	ISS105037	Buildings regulations	1					K2IS_W02,K2IS_K02	15	60	2	0,5	T	Z			K	Ob
5	ISS105038	Renewable energy systems	1					K2IS_W03,K2IS_	15	60	2	0,5	T	Z			K	Ob

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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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									W09,S2E QM_W0 1,S2EQ M_W03										
Total										3			1 5	2		300	840	28	10

### Groups of obligatory courses number of 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>	
Total																			

### Optional courses (minimum ...30... hours in semester, ...2.... 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		Elective subject	1					15	30	1	0,5	T	Z						W
2		Elective subject			1			15	30	1	0,5	T	Z		P				W
Total			1		1														

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<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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**Groups of optional courses (e.g. name of specialization) (minimum ..... hours in semester, ..... 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>	
		Total																	

**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				
4	0	1	15	2	330	900	30	11

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<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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## 2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
	1. Environmental Chemistry 2. Water quality management 3. Water treatment technology	1
	1. Waste water treatment technology 2. Solid waste management 3. Waste gases purification	2

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

Semester	Allowable deficit of ECTS points after semester
1	10
2	10
3	0

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Opinion of student government legislative body

.....

Date Name and surname, signature of student representative

.....

Date Dean's signature

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