

PLAN OF STUDIES

FACULTY: FACULTY OF ENVIRONMENTAL ENGINEERING

MAIN FIELD OF STUDY: ENVIROMENTAL ENGINEERING

EDUCATION LEVEL: second-level studies

FORM OF STUDIES: full-time studies

PROFILE: general academic

SPECIALIZATION: ENVIRONMENTAL QUALITY MANAGEMENT (EQM)

LANGUAGE OF STUDY: English

Resolution no. 747/32/2016-2020 of 16 May 2019 of the Senate of Wrocław
University of Science and Technology

In effect since 1st October 2019

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

Semester 1

Obligatory courses/groups of courses

Number of ECTS points 15

N o.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Learning effect symbol	Number of hours		Number of ECTS points			Form ² of course/group of courses	Way ³ of creditin g	Course/group of courses			
			l e c	c l	l a b	p r	s e m		ZZU	CNPS	total	BK classe ¹	BU classe ^{1a}			universiy -wide ⁴	practic al ⁵	kind ⁶	type ⁷
1	FLH071121 W	Ethics of new and emerging technologies	1					K2IS_W03, K2IS_W04, K2IS_W09, K2IS_K02	15	60	2	0.5	1.0	T	Z	O		KO	Ob.
2	ZMZ000155	Strategic management	2					K2IS_W03, S2EQM_W08	30	90	3	1.0	2.0	T	Z	O		KO	Ob.
3	ISS005006	Engineering applications of mathematical statistics	1					K2IS_W01	15	60	2	0.5	1.0	T	Z			PD	Ob.
4	ISS005006	Engineering applications of mathematical statistics		1				K2IS_U01, K2IS_K01	15	30	1	0.5	0.7	T	Z		P	PD	Ob.
5	ISS105051	Environmental chemistry	2					K2IS_W01, K2IS_W09, S2EQM_W01, S2EQM_W02, K2IS_K02	30	90	3	1.0	2.0	T	Z			PD	Ob.
6	ISS105051	Environmental chemistry			1			K2IS_U06,	15	60	2	0.5	1.0	T	Z		P	PD	Ob.

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⁴University-wide courses / group of courses – enter O

⁵Practical 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_U02, S2EQM_U04											
7	ISS105052	Automation in environmental engineering			1		K2IS_U02	15	60	2	0.5	1.0	T	Z		P	K	Ob.
Total			6	1	2			135	450	15	4.5	8.7						

Optional courses/group of 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 GK)	Weekly number of hours					Learning effect symbol	Number of hours		Number of ECTS points			Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹	BU classes ^{1a}			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	JZL100709BK	Polish language A1 or English Language C1+		1				K2IS_U05	15	30	1	0.5	1.0	T	Z	O	P	KO	W.
2	ISS200002BK	Elective subject	1						15	30	1	0.5	1.0	T	Z			K	W
Total			1	1					30	60	2	1.0	2.0						

Optional courses/group of courses (specialization EQM) (minimum 180 hours in semester, 13 ECTS points)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Learning effect symbol	Number of hours		Number of ECTS points			Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹	BU classes ^{1a}			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	ISS105014	Water quality management	2					K2IS_W09, S2EQM_W02	30	90	3	1.0	2.0	T	E			S	Ob.
2	ISS105024	Raw materials management	1					S2EQM_W03, S2EQM_W05, K2IS_K02	15	30	1	0.5	0.7	T	Z			S	Ob
3	ISS105024	Raw materials management					1	S2EQM_U01, K2IS_K03, K2IS_K02	15	30	1	0.5	0.7	T	Z		P	S	Ob
4	ISS105053	Water treatment technology	2					K2IS_W09, S2EQM_W	30	60	2	1,0	1,0	T	E			S	Ob

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

⁵Practical 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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							02											
5	ISS105053	Water treatment technology			1		K2IS_U06, S2EQM_U0 2, K2IS_K01	15	30	1	0.5	0.7	T	Z		P	S	Ob
6	ISS105054	Sanitary biology	1				K2IS_W09, S2EQM_W 05, K2IS_K02	15	30	1	0.5	0.7	T	E			S	Ob
7	ISS105054	Sanitary biology			1		K2IS_U06, S2EQM_U0 2, K2IS_K02	15	30	1	0.5	0.7	T	Z		P	S	Ob
8	ISS105055	AutoCad			1		S2EQM_U0 3, K2IS_K03	15	30	1	0.5	0.7	T	Z		P	S	Ob
9	ISS105028	Water supply systems	1				K2IS_W09, S2EQM_W 07, K2IS_K02	15	30	1	0.5	0.7	T	Z			S	Ob
10	ISS105028	Water supply systems				1	K2IS_K02, K2IS_U02, K2IS_U05, K2IS_U06, S2EQM_U0 5	15	30	1	0.5	0.7	T	Z		P	S	Ob
Total			7		3	1	1	180	390	13	6.0	8.6						

Altogether in semester

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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 ¹	Number of ECTS points for BU classes ^{1a}
lec	cl	lab	pr	sem					
14	2	5	1	1	345	900	30	11.5	19.3

Semester 2

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⁴University-wide courses / group of courses – enter O

⁵Practical 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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Obligatory courses/group of courses
Number of ECTS points 7

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Learning effect symbol	Number of hours		Number of ECTS points			Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classe ¹	BU classe ^{1a}			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	ISS005007	Environmental management	2					K2IS_W03, K2IS_W09, K2IS_K02	30	90	3	1.0	2.0	T	Z			K	Ob.
2	GPA105723	Spatial planning	1					K2IS_W02, K2IS_W09, K2IS_K01, K2IS_K02	15	60	2	0.5	1.0	T	Z			K	Ob
3	ISS105029	Reliability of engineering systems	1					K2IS_W06, K2IS_W09	15	60	2	0.5	1.0	T	Z			K	Ob
Total			4						60	210	7	2.0	4.0						

Optional courses/group of courses (minimum 45 hours in semester, 2 ECTS points)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Learning effect symbol	Number of hours			Number of ECTS points			Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹	BU classes ^{1a}	university-wide ⁴			practical ⁵	kind ⁶	type ⁷	
1	JZL100710BK	Polish language (or another language)		3				K2IS_U04	45	60	2	1.5	2.0	T	Z	O	P	KO	W	
Total				3					45	60	2	1.5	2.0							

Optional courses/group of courses (specialization EQM) (minimum 285 hours in semester, 21 ECTS points)

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

⁵Practical 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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⁷ Optional – enter W, obligatory – enter Ob

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Learning effect symbol	Number of hours		Number of ECTS points			Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹	BU classes ^{1a}			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	ISS105015	Biodegradable materials	2					K2IS_W09, S2EQM_W03, K2IS_K03	30	60	2	1.0	1.0	T	Z			S	1
2	ISS105016	Waste water treatment technology	2					K2IS_W09, S2EQM_W02	30	60	2	1.0	1.0	T	E			S	2
3	ISS105016	Waste water treatment technology			1			K2IS_U06, S2EQM_U02, K2IS_K01	15	30	1	0.5	0.7	T	Z		P	S	3
4	ISS105030	Solid waste management	2					S2EQM_W04	30	60	2	1.0	1.0	T	E			S	4
5	ISS105030	Solid waste management			1			S2EQM_U02, S2EQM_U04, K2IS_K02	15	30	1	0.5	0.7	T	Z		P	S	5
6	ISS105019	Waste gases purification	2					K2IS_W09, S2EQM_W06	30	60	2	1.0	1.0	T	E			S	6
7	ISS105019	Waste gases purification		1				S2EQM_U04, K2IS_K01	15	30	1	0.5	0.7	T	Z		P	S	7
8	ISS105057	Environmental toxicology	1					K2IS_W09, S2EQM_W05, K2IS_K02	15	30	1	0.5	0.7	T	Z			S	8
9	ISS105057	Environmental toxicology			1			K2IS_U06, S2EQM_U02, K2IS_K02	15	30	1	0.5	0.7	T	Z		P	S	Ob
10	ISS105032	Environmental health hazards	2					K2IS_W09, S2EQM_W05	30	60	2	1.0	1.0	T	Z			S	Ob
11	ISS105033	Sewage systems	1					K2IS_W09,	15	60	2	0.5	1.0	T	Z			S	Ob.

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								S2EQM_W07, K2IS_K02											
12	ISS105033	Sewage systems				1		K2IS_U02, K2IS_U05, S2EQM_U03, S2EQM_U05, K2IS_K02	15	30	1	0.5	0.7	T	Z		P	S	Ob.
13	ISS105049	Membrane separation processes in environmental protection	1					K2IS_W09, S2EQM_W02	15	60	2	0.5	1.0	T	Z			S	Ob.
14	ISS105049	Membrane separation processes in environmental protection			1			K2IS_U06, S2EQM_U02, K2IS_K01	15	30	1	0.5	0.7	T	Z		P	S	Ob.
Total			13	1	4	1			285	630	21	9.5	11.9						

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 ¹	Number of ECTS points for BU classes ^{1a}
lec	cl	lab	pr	sem					
17	4	4	1		390	900	30	13	17.9

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

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⁷ Optional – enter W, obligatory – enter Ob

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 GK)	Weekly number of hours					Learning effect symbol	Number of hours		Number of ECTS points			Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹	BU classes ^{1a}			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	ISS105036	Organization of construction works	1					K2IS_W02, K2IS_W08	15	60	2	0.5	1.0	T	Z			K	Ob
2	ISS105058	Buildings regulations	2					K2IS_W02	30	60	2	1.0	1.0	T	Z			K	Ob
3	ISS105038	Renewable energy systems	1					K2IS_W07, K2IS_W09	15	60	2	0.5	1.0	T	Z			K	Ob
Total			4						60	180	6	2.0	3.0						

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 GK)	Weekly number of hours					Learning effect symbol	Number of hours		Number of ECTS points			Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹	BU classes ^{1a}			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	ISS50007BK	Elective subject	1						15	30	1	0.5	1.0	T	Z				W
2	ISS50007BK	Elective subject			1				15	30	1	0.5	1.0	T	Z		P		W
Total			1		1				30	60	2	1.0	2.0						

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Optional courses/group of courses (specialization EQM) (minimum 255 hours in semester, 22 ECTS points)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Learning effect symbol	Number of hours		Number of ECTS points			Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹	BU classes ^{1a}			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	ISS105035	Diploma seminar					2	K2IS_U06, S2EQM_U01, S2EQM_U06, K2IS_K01, K2IS_K03	30	60	2	1.0	1.0	T	Z		P	S	Ob
2	ISS105034	Diploma project (master thesis)					15	K2IS_U06, S2EQM_U01, S2EQM_U07, K2IS_K01, K2IS_K03	225	600	20	7.5	3.5	T	Z		P	S	Ob
Total							15	2	255	660	22	8.5	4.5						

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 ¹	Number of ECTS points for BU classes ^{1a}
lec	cl	lab	pr	sem					
5		1	15	2	345	900	30	11.5	9.5

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2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
ISS105014 ISS105053 ISS105054	1. Water quality management 2. Water treatment technology 3. Sanitary biology	1
ISS105030 ISS105019	1. Solid waste management 2. Waste gases purification	2

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

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

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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

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⁵Practical 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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