PLAN OF STUDIES

FACULTY: Department of Computer Science and Management

MAIN FIELD OF STUDY: Informatics

EDUCATION LEVEL: 1st / 2nd* level, licencjat / inżynier / magister / magister inżynier*

FORM OF STUDIES: full-time / part-time*

PROFILE: general academic /practical*

SPECIALIZATION: Security and Reliability of Information Systems

LANGUAGE OF STUDY: Polish

Faculty Council Resolution of 23.04.2013

In effect since 01.10.2013

*delete as not applicable

Plan of studies structure (optionally)

1) in point layout

	CNPS	ECTS	CNPS	ECTS	CNPS	ECTS	
24							24
23	**900**	**30**	900	30	900	30	23
22	Foreign Language II 30 **1 ECTS**						22
21	Foreign Language I						21
20	**60**	**2 ECTS**					20
19			Cryptography		Advanced information security systems		19
18	Methodology of Empirical Sciences						18
17			**210**	**7 ECTS**	**180**	**6 ECTS**	17
16	90 3 ECTS Decision support systems						16
15			Network and security systems		Optional course II		15
14	**150**	**5 ECTS**			**120**	**4 ECTS**	14
13	Advanced Methods and Techniques of Data Analysis		**210**	**7 ECTS**			13
12					Diploma seminar		12
11			Reliability models of Information systems		**60**	**2 ECTS**	11
10	**180**	**6 ECTS**					10
9	Teletraffic Theory and Engineering		**210**	**7 ECTS**			9
8							8
7	**120**	**4 ECTS**	Safety management systems for IT infrastructure		Master's thesis project		7
6	Information systems		**60**	**2 ECTS**			6
5			Optional course I				5
4	**120**	**4 ECTS**			**540**	**18 ECTS**	4
3	Modeling and Business Analysis		**150**	**5 ECTS**			3
2			Master's thesis project				2
1	**150**	**5 ECTS**	**60**	**2 ECTS**			1
	I		II		III		Total
	22 / 330		19 / 285		19 /285		60 / 900

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

2) in hourly layout

#	I	II	III	#
25				25
24	**CNPS** **ECTS**	**CNPS** **ECTS**	**CNPS** **ECTS**	24
23	**900** **30**	**900** **30**	**900** **30**	23
22	Foreign Language II			22
21	Foreign Language I			21
20				20
19	**03000**	Cryptography	Advanced information security systems	19
18	Methodology of Empirical Sciences **20000**			18
17		**20200 E**	**20200**	17
16	Decision suport systems			16
15	**12000 E**	Network and security systems	Optional course II	15
14				14
13	Advanced Methods and Techniques of Data Analysis	**20200 E**	**10002**	13
12			Diploma seminar	12
11	**20200**	Reliability models of Information systems	**00002**	11
10				10
9	Teletraffic Theory and Engineering	**20002 E**		9
8				8
7	**10020**	Safety management systems for IT infrastructure **10001**	Master's thesis project	7
6	Information systems			6
5	**10002**	Optional course I		5
4			**000(10)0**	4
3	Modeling and Business Analysis	**10200**		3
2		Master's thesis project		2
1	**12000 E**	**00020**		1
	I	II	III	Total
	22 / 330	19 / 285	19 /285	60 / 900

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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

Semester 1

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					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003760 W	Modeling and Business Analysis	1	0	0	0	0	K2INF_W03	15	60	2	1,2	T	E			K	Ob.
2	INZ 003760 L	Modeling and Business Analysis	0	2	0	0	0	K2INF_U06	30	90	3	1,8	T	Z			K	Ob.
3	INZ 003762 W	Information Systems	1	0	0	0	0	K2INF_W04	15	60	2	1,2	T	Z			K	Ob.
4	INZ 003762 S	Information Systems	0	0	0	0	2	K2INF_W04	30	60	2	1,2	T	Z			K	Ob.
5	INZ 003761 W	Decision Support Systems	1	0	0	0	0	K2INF_W02	15	60	2	1,2	T	E			K	Ob.
6	INZ 003761 L	Decision Support Systems	0	1	0	0	0	K2INF_U05	15	30	1	0,6	T	Z			K	Ob.
7	INZ 003761 P	Decision Support Systems	0	0	0	1	0	K2INF_U05	15	60	2	1,2	T	Z		P	K.	Ob.
8	INZ 003759 W	Teletraffic theory and engineering	1	0	0	0	0	K2INF_W04	15	30	1	0,6	T	Z			K	Ob.
9	INZ 003759 P	Teletraffic theory and engineering	0	0	0	2	0	K2INF_U05	30	90	3	1,8	T	Z		P	K	Ob.

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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

No.	Course/group of courses code	Name of course/group of courses	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes	Form	Way	university-wide	practical	kind	type
10	INZ 003758 W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF _W01 K2INF _W05	30	60	2	1,2	T	Z			PD	Ob.
11	INZ 003758 L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF _U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

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

No.	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1		Foreign language I	0	3	0	0	0	K2INF _U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF _U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

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[1]
lec	cl	lab	pr	sem				
8	7	2	3	2	330	900	30	18

[1]BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

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[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

[5]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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[7] Optional – enter W, obligatory – enter Ob

Semester 2

Obligatory courses number of ECTS points …25….

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003822WL	Network and security systems	2	0	2	0	0	K2INF_W01, K2INF_W05,K2INF_U06-K2INF_U07,K2INF_U09	60	210	7	4,2	T	E		P(3)	S	W
2	INZ 003821WL	Cryptography	2	0	2	0	0	K2INF_W01, K2INF_W05	60	210	7	4,2	T	E		P(3)	S	W
3	INZ 003823WS	Reliability models of information systems	2	0	0	0	2	K2INF_W01- K2INF_W02	60	210	7	4,2	T	E			S	W
4	INZ 003818P	Master's thesis project (sem II)	0	0	0	2	0	K2INF_W05, K2INF_W01	30	60	2	1,2	T	Z		P(2)	K	W
5	INZ 003829WS	Safety management systems for IT infrastructure	1	0	0	0	1	K2INF_W01,K2INF_W03- K2INF_W04	30	60	2	1,2	T	Z			S	W
		Total	7	0	4	2	3		240	750	25	15				P(8)		

Optional courses (minimum 45 hours in semester, 5 ECTS points)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003825WL	Diagnostic of information systems	1	0	2	0	0	K2INF_W02-K2INF_W05, K2INF_U06-K2INF_07	45	150	5	3,0	T	Z		P(2)	S	W
2	INZ 003824WL	Programming secure applications	1	0	2	0	0	K2INF_W02-K2INF_W05, K2INF_U06-K2INF_07,K2INF_U09	45	150	5	3,0	T	Z		P(2)	S	W
		Total	1	0	2	0	0		45	150	5	3,0				P(4)		

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

[5]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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[7] 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[1]
lec	cl	lab	pr	sem				
8	0	6	2	3	285	900	30	18

Semester 3

Obligatory courses number of ECTS points …26….

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003826WL	Advanced information security systems	2	0	2	0	0	K2INF_W03, K2INF_U05	60	180	6	3,6	T	Z		P(3)	S	W
2	INZ 003819D	Master's thesis project (sem III)	0	0	0	10	0	K2INF_W05, K2INF_W01	150	540	18	10,8	T	Z		P(18)	K	W
3	INZ 003820S	Diploma seminar	0	0	0	0	2	K2INF_W05,	30	60	2	1,2	T	Z			K	W
		Total	2	0	2	10	2		240	780	26	15,6				P(21)		

Optional courses (minimum 45 hours in semester, 4 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					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 002643WS	Quantum cryptographic systems	1	0	0	0	2	K2INF_W01, K2INF_W02, K2INF_U03	45	120	4	2,4	T	Z		S(2)	S	W
2	INZ 02644WS	Testing and reliability of computer systems	1	0	0	0	2	K2INF_W01, K2INF_W02, K2INF_U03	45	120	4	2,4	T	Z		S(2)	S	W
		Razem	1	0	0	0	2		45	120	4	2,48				S(4)		

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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] 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[1]
lec	cl	lab	pr	sem				
3	0	2	10	4	285	900	30	18

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

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2. Set of examinations in semester arrangement

Course code	Names of courses ending with examination	Semester
	1. Modeling and Business Analysis 2. Decision Support Systems	1
INZ003821W INZ003822W INZ003823W	1. Cryptography 2. Network and security systems 3. Reliability models of information systems	2

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8
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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PLAN OF STUDIES

FACULTY Computer Science and Management

MAIN FIELD OF STUDY: Computer Science

EDUCATION LEVEL: ~~1st~~ / 2nd * level, ~~licencjat~~ / ~~inżynier~~ / ~~magister~~ / magister inżynier*

FORM OF STUDIES: full-time / part-time*

PROFILE: general academic /practical *

SPECIALIZATION: Software Engineering

LANGUAGE OF STUDY: ………..……………..

……………………………………….. Faculty Council Resolution of ....

In effect since ………………….........................

*delete as applicable

Plan of studies structure (optionally)
1) in point layout
(space for scheme of plan)

	CNPS	ECTS	CNPS	ECTS	CNPS	ECTS	
25							25
24	**900**	**30**	900	30	900	30	24
23							23
22	Teletraffic Theory and Engineering						22
21							21
20	120	4 ECTS					20
19	Modeling and Business Analysis		Elective course I (e.g. Agile Software Development)		Elective course II (e.g. Programming on Windows Azure Platform)		19
18							18
17	150	5 ECTS	120	4 ECTS	120	4 ECTS	17
16	Decision Support Systems		Management of Development & Integration of Information Systems		Management of Development & Integration of Information Systems II 2 ECTS		16
15					Modeling and implementation of business data		15
14	150	5 ECTS	120	5 ECTS			14
13	Methodology of Empirical Sciences 3 ECTS		Architecture and Technologies of Web Services		120	4 ECTS	13
12					Master seminar		12
11	Advanced Methods and Techniques of Data Analysis				60	2 ECTS	11
10			180	6 ECTS			10
9			Predictive Models and Metrics in Software Engineering				9
8	180	6 ECTS					8
7	Information Systems				Master Thesis II		7
6			240	7 ECTS	540	18 ECTS	6
5	120	4 ECTS	Software System Design				5
4	Foreign Language I		180	6 ECTS			4

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3	60			3
2	60 2 ECTS	Master Thesis		2
1	Foreign Language II	60 2 ECTS		1
	30 1 ECTS			
	I	II	III	Razem
	22 / 330	19 / 285	19 /285	60 / 900

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

	CNPS ECTS	CNPS ECTS	CNPS ECTS	
25				25
24	900 30	900 30	900 30	24
23				23
22	Teletraffic Theory and Engineering			22
21				21
20	10020			20
19	Modeling and Business Analysis	Elective course I (e.g. Agile Software Development)	Elective course II (e.g. Programming on Windows Azure Platform)	19
18				18
17	12000E	3h	3h	17
16	Decision Support Systems	Management of Development & Integration of Information Systems	Management of Development & Integration of Information Sys. II 00010	16
15			Modeling and implementation of business data	15
14	11010E	20001		14
13	Methodology of Empirical Sciences	Architecture and Technologies of Web Services	10200	13
12	20000		Master seminar	12
11	Advanced Methods and	20200	00002	11

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10	Techniques of Data Analysis			10
9		Predictive Models and Metrics in Software Engineering **10021E**		9
8	**20200**			8
7	Information Systems			7
6			Master Thesis II **000(10)0**	6
5	**10002**			5
4	Foreign Language I	Software System Design **10020E**		4
3				3
2	**03000**	Master Thesis **00020**		2
1	Foreign Language II 01000			1
	I	**II**	**III**	**Razem**
	22 / 330	**19 / 285**	**19 /285**	**60 / 900**

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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 28

No..	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003760 W	Modeling and Business Analysis	1	0	0	0	0	K2INF_W03	15	60	2	1,2	T	E			K	Ob.
2	INZ 003760 L	Modeling and Business Analysis	0	2	0	0	0	K2INF_U06	30	90	3	1,8	T	Z			K	Ob.
3	INZ 003762 W	Information Systems	1	0	0	0	0	K2INF_W04	15	60	2	1,2	T	Z			K	Ob.
4	INZ 003762 S	Information Systems	0	0	0	0	2	K2INF_W04	30	60	2	1,2	T	Z			K	Ob.
5	INZ 003761 W	Decision Support Systems	1	0	0	0	0	K2INF_W02	15	60	2	1,2	T	E			K	Ob.
6	INZ 003761 L	Decision Support Systems	0	1	0	0	0	K2INF_U05	15	30	1	0,6	T	Z			K	Ob.
7	INZ 003761 P	Decision Support Systems	0	0	0	1	0	K2INF_U05	15	60	2	1,2	T	Z		P	K.	Ob.
8	INZ 003759 W	Teletraffic theory and engineering	1	0	0	0	0	K2INF_W04	15	30	1	0,6	T	Z			K	Ob.
9	INZ W	Teletraffic theory and engineering	0	0	0	2	0	K2INF_	30	90	3	1,8	T	Z		P	K	Ob.

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[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

No.	Course/ group of courses code	Name of course/group of courses	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes	Form	Way	university-wide	practical	kind	type
	003759 P							U05										
10	INZ 003758 W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF _W01 K2INF _W05	30	60	2	1,2	T	Z			PD	Ob.
11	INZ 003758 L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF _U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

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

No.	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes [1]	Form [2] of course/ group of courses	Way [3] of crediting	university-wide [4]	practical [5]	kind [6]	type [7]
															Course/group of courses			
1		Foreign language I	0	3	0	0	0	K2INF _U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF _U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

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 [1]
lec	cl	lab	pr	sem				
8	7	2	3	2	330	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Semester 2

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003765W	Architecture and Technologies of Web Services	2	0	0	0	0	K2INF_W06	30	60	2	1,2	T	Z			S	W
2	INZ 003765L	Architecture and Technologies of Web Services	0	0	2	0	0	K2INF_U07 K2INF_U08	30	120	4	2,4	T	Z		P	S	W
3	INZ 003766W	Predictive Models and Metrics in Software Engineering	1	0	0	0	0	K2INF_W06	15	60	2	1,2	T	E			S	W
4	INZ 003766P	Predictive Models and Metrics in Software Engineering	0	0	0	2	0	K2INF_U08	30	150	5	3	T	Z		P	S	W
5	INZ 003766S	Predictive Models and Metrics in Software Engineering	0	0	0	0	1	K2INF_U01 K2INF_U08	15	30	1	0,6	T	Z			S	W
6	INZ 003767W	Software System Design	1	0	0	0	0	K2INF_W06	15	60	2	1,2	T	E			S	W
7	INZ 003767P	Software System Design	0	0	0	2	0	K2INF_U07 K2INF_U08	30	120	4	2,4	T	Z		P	S	W
8	INZ	Management of Development and Integration of Information Systems	2	0	0	0	0	K2INF_W06	30	60	2	1,2	T	Z			S	W

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[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**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
9	INZ 003764W 003764S	Management of Development and Integration of Information Systems	0	0	0	0	1	K2INF _U01 K2INF_U08	15	60	2	1,2	T	Z			S	W
10	INZ 003818P	Master Thesis	0	0	0	2	0	K2INF _U01	30	60	2	1,2	T	Z			S	W
		Total	6	0	2	6	2		240	780	26	15,6						

Groups of optional courses (minimum 3 hours in semester, 4 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					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ003813Wc	Theoretical Foundations of Distributed Processes (GK)	2	1	0	0	0	K2INF_W06 K2INF _U06	45	120	4	2,4	T	Z			S	W
2	INZ003814Wps	Agile Software Development (GK)	1	0	0	1	1	K2INF_W06 K2INF_U08	45	120	4	2,4	T	Z		P	S	W
		Total							45	120	4	2,4						

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] 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[1]
lec	cl	lab	pr	sem				
7/8	0/1	2	6/7	2/3	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Semester 3

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003776L	Modeling and implementation of business data	0	0	2	0	0	K2INF_U06	30	60	2	1,2	T	Z		P	S	W
2	INZ 003776W	Modeling and implementation of business data	1	0	0	0	0	K2INF _W05	15	60	2	1,2	T	Z			S	W
3	INZ 003769P	Management of Development and Integration of Information Systems II	0	0	0	1	0	K2INF_U08	15	60	2	1,2	T	Z		P	S	W
4	INZ 003819D	Master Thesis II	0	0	0	10	0	K2INF _U03	150	540	18	10,8	T	Z			S	W
5	INZ 003820S	Master Seminar	0	0	0	0	2	K2INF_U01 K2INF_U02	30	60	2	1,2	T	Z			S	W
		Total	1	0	2	11	2		240	780	26	15,6						

Groups of optional courses (e.g. name of specialization) (minimum 3 hours in semester, 4 ECTS points)

No..	Course/group of courses	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

	code						educational effect symbol					of courses						
1	INZ 003816Wls	IT services design in organization (GK)	1		1		1	K2INF_W06 K2INF_U03 K2INF _ U06	45	120	4	2,4		Z		P	S	W
2	INZ 003817Wls	Writing papers using LaTeX (GK)	1		1		1	K2INF_W06 K2INF _ U01 K2INF_U03 K2INF_U08	45	120	4	2,4		Z		P	S	W
3	INZ 003815Wl	Programming on Windows Azure Platform	1	0	2	0	0	K2INF_W06 K2INF _ U07 K2INF_U08	45	120	4	2,4		Z		P	S	W
		Total	1		1		1		45	120	4	2,4						

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]

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

lec	cl	lab	pr	sem				
2	0	3/4	11	2/3	285	900	30	18

2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
	1. Modeling and Business Analysis 2 Decision Support Systems	1
	1.Predictive Models and Metrics in Software Engineering 2. Software System Design	2
		3

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8
3	0

Opinion of student government legislative body

....

Date Name and surname, signature of student representative

....

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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

PLAN OF STUDIES

FACULTY:... Computer Science and Management ....

MAIN FIELD OF STUDY: ...... Computer Science ....

EDUCATION LEVEL: ~~1st /~~ 2nd * level, ~~licencjat / inżynier /~~ magister ~~/ magister inżynier~~*

FORM OF STUDIES: full-time / ~~part-time~~*

PROFILE: general academic /practical *

SPECIALIZATION:..... Intelligent Information Systems ....

LANGUAGE OF STUDY: ……Polish…………………..

…………………………………………….. Faculty Council Resolution of ....

In effect since ………………….........................

*delete as applicable

Plan of studies structure (optionally)
1) in point layout

#	CNPS	ECTS	CNPS	ECTS	CNPS	ECTS	#
24	**CNPS**	**ECTS**	**CNPS**	**ECTS**	**CNPS**	**ECTS**	24
23	**900**	**30**	**900**	**30**	**900..........**	**30**	23
22	Foreign Language II **30** **1 ECTS**						22
21	Foreign Language I						21
20							20
19	**60** **2 ECTS**				New trends in neural computations		19
18	Information Systems		Soft computing - methods and application		**120** **4 ECTS**		18
17			**180** **6 ECTS**				17
16	**120** **4 ECTS**				Knowledge discovery from data		16
15	Advanced Methods and Techniques of Data Analysis				**120** **4 ECTS**		15
14			Machine learning		Stimulation techniques of creative thinking		14
13			**180** **6 ECTS**		**60** **2 ECTS**		13
12	**180** **6 ECTS**				Diploma seminar		12
11	Methodology of Empirical Sciences 90 3 ECTS		Vision systems		**60** **2 ECTS**		11
10			**180** **6 ECTS**				10
9	Decision Support Systems						9
8			Natural language engineering		Diploma Thesis		8
7	**150** **5 ECTS**		**180** **6 ECTS**		**540** **18 ECTS**		7
6	Modeling and Business						6
5			Parallel and Distributed				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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

4	Analysis	Processing **120** 4 **ECTS**		4
3	Teletraffic Theory and Engineering			3
2		Diploma Thesis		2
1	**120** 4 **ECTS**	**60** **2 ECTS**		1
	I	**II**	**III**	**Total**
	22 / 330	**19 / 285**	**19 /285**	**60 / 900**

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

2) in hourly layout

	CNPS	ECTS	CNPS	ECTS	CNPS	ECTS	
24							24
23	**900**	**30**	**900**	**30**	**900.........**	**30**	23
22	Foreign Language II 01000						22
21	Foreign Language I						21
20							20
19	03000		Soft computing - methods and application 20020E		New trends in neural computations 10020		19
18	Information Systems						18
17							17
16	10002				Knowledge discovery from data 00002		16
15	Advanced Methods and Techniques of Data Analysis		Machine learning 20200E				15
14					Stimulation techniques of creative thinking 00002		14
13							13
12	20200				Diploma seminar		12
11	Methodology of Empirical Sciences 20000		Vision systems 10020		00002		11
10							10
9	Decision Support Systems						9
8			Natural language engineering 10020				8
7	11010E				Diploma Thesis 000(10)0		7
6	Modeling and Business Analysis						6
5			Parallel and Distributed Processing 10020				5
4	12000E						4
3	Teletraffic Theory and Engineering						3
2			Diploma Thesis				2
1	10020		00020				1

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

	I	II	III	Total
	22 / 330	**19 / 285**	**19 /285**	**60 / 900**

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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

Semester 1

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					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003760 W	Modeling and Business Analysis	1	0	0	0	0	K2INF_W03	15	60	2	1,2	T	E			K	Ob.
2	INZ 003760 L	Modeling and Business Analysis	0	2	0	0	0	K2INF_U06	30	90	3	1,8	T	Z			K	Ob.
3	INZ 003762 W	Information Systems	1	0	0	0	0	K2INF_W04	15	60	2	1,2	T	Z			K	Ob.
4	INZ 003762 S	Information Systems	0	0	0	0	2	K2INF_W04	30	60	2	1,2	T	Z			K	Ob.
5	INZ 003761 W	Decision Support Systems	1	0	0	0	0	K2INF_W02	15	60	2	1,2	T	E			K	Ob.
6	INZ 003761 L	Decision Support Systems	0	1	0	0	0	K2INF_U05	15	30	1	0,6	T	Z			K	Ob.
7	INZ 003761 P	Decision Support Systems	0	0	0	1	0	K2INF_U05	15	60	2	1,2	T	Z		P	K.	Ob.
8	INZ 003759 W	Teletraffic theory and engineering	1	0	0	0	0	K2INF_W04	15	30	1	0,6	T	Z			K	Ob.
9	INZ W	Teletraffic theory and engineering	0	0	0	2	0	K2INF_	30	90	3	1,8	T	Z		P	K	Ob.

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

No.	Course/ group of courses code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes	Form	Way			kind	type
	003759 P							U05										
10	INZ 003758 W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF _W01 K2INF _W05	30	60	2	1,2	T	Z			PD	Ob.
11	INZ 003758 L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF _U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

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

No.	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/ group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
															Course/group of courses			
1		Foreign language I	0	3	0	0	0	K2INF _U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF _U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

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[1]
lec	cl	lab	pr	sem				
8	7	2	3	2	330	900	30	18

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

Semester 2

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003818P	Diploma thesis I	0	0	0	2	0	K2INF_U03	30	60	2	1,2	T	Z		P	K	W
2	INZ 003782WP	Natural language engineering	1	0	0	2	0	K2INF_W09 K2INF_U13	45	180	6	3,6	T	Z		P	S	W
3	INZ 003778WP	Soft computing - methods and application	2	0	0	2	0	K2INF_W07 K2INF_U10	60	180	6	3,6	T	E		P	S	W
4	INZ 003783WL	Parallel and Distributed Processing	1	0	2	0	0	K2INF_W04 K2INF_U07	45	120	4	2,4	T	Z		P	S	W
5	INZ 003779WL	Machine learning	2	0	2	0	0	K2INF_W06 K2INF_U08	60	180	6	3,6	T	E		P	S	W
6	INZ 003781WP	Vision systems	1	0	0	2	0	K2INF_W08 K2INF_U12	45	180	6	3,6	T	Z		P	S	W
		Total	7	0	4	8	0		285	900	30	18						

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]
lec	cl	lab	pr	sem				
7	0	4	8	0	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Semester 3

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003819D	Diploma Theis II	0	0	0	10	0	K2INF_U03	150	540	18	10,8	T	Z			K	W
2	INZ 003820S	Diploma seminar	0	0	0	0	2	K2INF_U01 K2INF_U02	30	60	2	1,2	T	Z			K	W
3	INZ 003784WP	New trends in neural computations	1	0	0	2	0	K2INF_W06 K2INF_U11	45	120	4	2,4	T	Z		P	S	W
4	INZ 003785S	Knowledge discovery from data	0	0	0	0	2	K2INF_W10 K2INF_U17	30	120	4	2,4	T	Z			S	W
5	INZ 003786S	Stimulation techniques of creative thinking	0	0	0	0	2	K2INF_W01 K2INF_U05	30	60	2	1,2	T	Z			S	W
		Total	1	0	0	12	6		285	900	30	18						

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]
lec	cl	lab	pr	sem				
1	0	0	12	6	285	900	30	18

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
	1 Modeling and Business Analysis 2 Decision Support Systems	1
	1. Soft computing - methods and application 2. Machine learning	2

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8
3	0

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

Opinion of student government legislative body

....

Date Name and surname, signature of student representative

....

Date Dean's signature

PLAN OF STUDIES

FACULTY: Computer Science and Management

MAIN FIELD OF STUDY: Informatics

EDUCATION LEVEL: 1st / 2nd-* level, licencjat / inżynier / magister / magister inżynier*

FORM OF STUDIES: full-time / part-time*

PROFILE: general academic /practical *

SPECIALIZATION: Web and Mobile Technologies (ITM)

LANGUAGE OF STUDY: English

………………………………………….. Faculty Council Resolution of ....

In effect since ………………….........................

*delete as applicable

1

Plan of studies structure   1) in point layout

#	CNPS	ECTS	CNPS	ECTS	CNPS	ECTS	#
24	**CNPS**	**ECTS**	**CNPS**	**ECTS**	**CNPS**	**ECTS**	24
23	**900**	**30**	**900**	**30**	**900**	**30**	23
22	Teletraffic Theory and Engineering						22
21							21
20	120	4 ECTS					20
19	Modeling and Business Analysis		Modeling and Analysis of Web Systems		Parallel and Distributed Programming		19
18							18
17	150	5 ECTS	**150**	**5 ECTS**	**180**	**6 ECTS**	17
16	Decision Support Systems		Team Project		Monographic Subject		16
15							15
14	150	5 ECTS	**240**	**8 ECTS**	**120**	**4 ECTS**	14
13	Methodology of Empirical Sciences		Internet Infrastructure and Research				13
12	90 3 ECTS				Diploma Seminar		12
11	Advanced Methods and Techniques of Data Analysis				**60**	**2 ECTS**	11
10							10
9	180	6 ECTS	**270**	**9 ECTS**			9
8							8
7							7
6	Information Systems				Diploma Thesis		6
5	120	4 ECTS	Mobile Systems and Multimedia		**540**	**18 ECTS**	5
4			**180**	**6 ECTS**			4
3	Foreign Language I						3
2	60	2 ECTS	Diploma Thesis				2
1	Foreign Language II 30/1 ECTS		**60**	**2 ECTS**			1
	I		**II**		**III**		**Total**
	22 / 345		**19 / 285**		**19 /285**		**60 / 915**

2) in hourly layout

	CNPS ECTS	CNPS ECTS	CNPS ECTS	
24				24
23	**900** **30**	**900** **30**	**900** **30**	23
22	Teletraffic Theory and Engineering **10020**			22
21				21
20				20
19	Modeling and Business Analysis **12000E**	Modeling and Analysis of Web Systems **20100 E**	Parallel and Distributed Programming **20200**	19
18				18
17				17
16	Decision Support Systems **11010E**	Team Project **00030**	Monographic Subject **10200**	16
15				15
14				14
13	Methodology of Empirical Sciences **20000**	Internet Infrastructure and Research **30202 E**		13
12			Diploma Seminar **00002**	12
11	Advanced Methods and Techniques of Data Analysis **20200**			11
10			Diploma Thesis **000(10)0**	10
9				9
8				8
7	Information Systems **10002**			7
6		Mobile Systems and Multimedia **10300**		6
5				5
4	Foreign Language I **03000**			4
3				3
2		Diploma Thesis **00020**		2
1	Foreign Language II **01000**			1
	I	**II**	**III**	**Total**
	22 / 300	**19 / 300**	**19 /300**	**60 / 900**

3

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

Semester 1

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					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003760 W	Modeling and Business Analysis	1	0	0	0	0	K2INF _W03	15	60	2	1,2	T	E			K	Ob.
2	INZ 003760 L	Modeling and Business Analysis	0	2	0	0	0	K2INF _U06	30	90	3	1,8	T	Z			K	Ob.
3	INZ 003762 W	Information Systems	1	0	0	0	0	K2INF _W04	15	60	2	1,2	T	Z			K	Ob.
4	INZ 003762 S	Information Systems	0	0	0	0	2	K2INF _W04	30	60	2	1,2	T	Z			K	Ob.
5	INZ 003761 W	Decision Support Systems	1	0	0	0	0	K2INF _W02	15	60	2	1,2	T	E			K	Ob.
6	INZ 003761 L	Decision Support Systems	0	1	0	0	0	K2INF _U05	15	30	1	0,6	T	Z			K	Ob.
7	INZ 003761 P	Decision Support Systems	0	0	0	1	0	K2INF _U05	15	60	2	1,2	T	Z		P	K.	Ob.
8	INZ 003759 W	Teletraffic theory and engineering	1	0	0	0	0	K2INF _W04	15	30	1	0,6	T	Z			K	Ob.
9	INZ 003759	Teletraffic theory and engineering	0	0	0	2	0	K2INF_ U05	30	90	3	1,8	T	Z		P	K	Ob.

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study symbol	ZZU	CNPS	total	BK classes	Form	Way	university-wide	practical	kind	type
	P																	
10	INZ 003758 W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF _W01 K2INF _W05	30	60	2	1,2	T	Z			PD	Ob.
11	INZ 003758 L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF _U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

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

No.	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/ group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1		Foreign language I	0	3	0	0	0	K2INF _U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF _U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

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[1]
lec	cl	lab	pr	sem				
8	7	2	3	2	330	900	30	18

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

Semester 2

Optional courses (minimum 285 hours in semester, 30 ECTS points)

No..	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course /group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003771 W	Internet Infrastructure and Research	3	0	0	0	0	K2INF_ W06	45	120	4	2,4	T	E			S	W
2	INZ 003771 L	Internet Infrastructure and Research	0	0	2	0	0	K2INF_ U08	30	90	3	1,8	T	Z		P	S	W.
3	INZ 003771 S	Internet Infrastructure and Research	0	0	0	0	2	K2INF_ U08	30	60	2	1,2	T	Z			S	W
4	INZ 003769 W	Modeling and Analysis of Web Systems	2	0	0	0	0	K2INF_ W06	30	90	3	1,8	T	E			S	W
5	INZ 003769 L	Modeling and Analysis of Web Systems	0	0	1	0	0	K2INF_ U08	15	60	2	1,2	T	Z		P	S	W
6	INZ 003770 P	Team Project	0	0	0	3	0	K2INF_ U08	45	240	8	4,8	T	Z		P	S	W
7	INZ 003772 W	Mobile Systems and Multimedia	1	0	0	0	0	K2INF_ W06	15	45	2	1,2	T	Z			S	W
8	INZ 003772 L	Mobile Systems and Multimedia	0	0	3	0	0	K2INF_ U08	45	135	4	2,4	T	Z		P	S	W
9	INZ003 818P	Diploma Thesis I						K2INF_ U08	30	60	2	0,6	T	Z		P	S	W

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

	lec	cl	lab	pr	sem		ZZU	CNPS	ECTS	BK
Total	6	0	6	3	2		285	900	30	17,4						

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]
lec	cl	lab	pr	sem				
6		6	3	2	285	900	30	17,4

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

Semester 3

Optional courses (minimum 285 hours in semester, 30 ECTS points)

No..	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course /group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003774 W	Parallel and Distributed Programming	2	0	0	0	0	K2INF_W06	30	90	3	1,8	T	Z			S	W
2	INZ 003774 L	Parallel and Distributed Programming	0	0	2	0	0	K2INF_U08	30	90	3	1,8	T	Z		P	S	W
3	INZ 003775 W	Monographic Subject	1	0	0	0	0	K2INF_W06	15	60	1	0,6	T	Z			S	W
4	INZ 003775 L	Monographic Subject	0	0	2	0	0	K2INF_U08	30	60	3	1,8	T	Z		P	S	W
5	INZ 003819 D	Diploma Thesis II	0	0	0	10	0	K2INF_U08	150	540	18	6	T	Z		P	S	W
6	INZ 003820 S	Diploma Seminar	0	0	0	0	2	K2INF_U08	30	60	2	1,2	T	Z			S	W
	Total		3	0	4	10	2		285	900	30	13,2						

Altogether in semester

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

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]
le c	c l	la b	pr	se m				
3		4	10	2	285	900	30	13,2

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
	1. Modeling and Business Analysis 2. Decision Support Systems	1
	1. Modeling and Analysis of Web Systems 2. Internet Infrastructure and Research	2

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8

Opinion of student government legislative body

....

Date Name and surname, signature of student representative

....

Date Dean's signature

PLAN OF STUDIES

FACULTY: Computer Science and Management

MAIN FIELD OF STUDY: Computer Science

EDUCATION LEVEL: ~~1st~~ / 2nd-* level, ~~licencjat~~ / ~~inżynier~~ / magister / ~~magister inżynier~~*

FORM OF STUDIES: full-time / ~~part-time~~*

PROFILE: general academic /~~practical~~ *

SPECIALIZATION: **Designing IT Systems**

LANGUAGE OF STUDY: Englisha

……………………………………….. Faculty Council Resolution of ....

In effect since ………………….........................

*delete as applicable

Plan of studies structure   1) in point layout

#	CNPS	ECTS	CNPS	ECTS	CNPS	ECTS	#
24	**CNPS**	**ECTS**	**CNPS**	**ECTS**	**CNPS**	**ECTS**	24
23	**900**	**30**	**900**	**30**	**900**	**30**	23
22	Teletraffic Theory and Engineering						22
21							21
20	120	4 ECTS					20
19	Modeling and Business Analysis				Computational Intelligence Methods		19
18							18
17	150	5 ECTS			**180**	**6 ECTS**	17
16	Decision Support Systems						16
15			Implementation Techniques for Information Systems		Integration of Information Systems		15
14	150	5 ECTS			**120**	**4 ECTS**	14
13	Methodology of Empirical Sciences						13
12	90	3 ECTS	**180**	**6 ECTS**	Diploma Seminar		12
11	Advanced Methods and Techniques of Data Analysis		Human-Computer Interaction		**60**	**2 ECTS**	11
10			**180**	**6 ECTS**			10
9	180	6 ECTS					9
8			Software Project Management				8
7			**210**	**7 ECTS**			7
6	Information Systems				Diploma Thesis		6
5	120	4 ECTS	Semantic Web		**540**	**18 ECTS**	5
4			**270**	**9 ECTS**			4
3	Foreign Language I						3
2	60	2 ECTS	Diploma Thesis				2
1	Foreign Language II 30/1 ECTS		**60**	**2 ECTS**			1
	I		**II**		**III**		**Total**
	22 / 345		**19 / 285**		**19 /285**		**60 / 915**

2) in hourly layout

Hr	CNPS / ECTS (I)	CNPS / ECTS (II)	CNPS / ECTS (III)	Hr
24	**CNPS** **ECTS**	**CNPS** **ECTS**	**CNPS** **ECTS**	24
23	**900** **30**	**900** **30**	**900** **30**	23
22	Teletraffic Theory and Engineering **10020**			22
21				21
20				20
19	Modeling and Business Analysis **12000E**		Computational Intelligence Methods **20200**	19
18				18
17				17
16	Decision Support Systems **11010E**			16
15		Implementation Techniques for Information Systems **20200**	Integration of Information Systems **20001**	15
14				14
13	Methodology of Empirical Sciences **20000**			13
12			Diploma Seminar **00002**	12
11	Advanced Methods and Techniques of Data Analysis **20200**	Human-Computer Interaction **20200**		11
10				10
9				9
8		Software Project Management **20020**		8
7	Information Systems **10002**			7
6		Semantic Web **20201 E**	Diploma Thesis **000(10)0**	6
5				5
4	Foreign Language I **03000**			4
3				3
2		Diploma Thesis **00020**		2
1	Foreign Language II **01000**			1
	I	**II**	**III**	**Total**
	22 / 300	**19 / 300**	**19 /300**	**60 / 900**

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

Semester 1

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					Field- of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003763W	Methodology of Empirical Sciences	2	0	0	0	0	K2INF _W05	30	90	3	1,8	T	Z			K	Ob.
2	INZ 003760 W	Modeling and Business Analysis	1	0	0	0	0	K2INF _W03	15	60	2	1,2	T	E			K	Ob.
3	INZ 003760 L	Modeling and Business Analysis	0	2	0	0	0	K2INF _U06	30	90	3	1,8	T	Z			K	Ob.
4	INZ 003762 W	Information Systems	1	0	0	0	0	K2INF _W04	15	60	2	1,2	T	Z			K	Ob.
5	INZ 003762 S	Information Systems	0	0	0	0	2	K2INF _W04	30	60	2	1,2	T	Z			K	Ob.
6	INZ 003761 W	Decision Support Systems	1	0	0	0	0	K2INF _W02	15	60	2	1,2	T	E			K	Ob.
7	INZ 003761 L	Decision Support Systems	0	1	0	0	0	K2INF _U05	15	30	1	0,6	T	Z			K	Ob.
8	INZ 003761 P	Decision Support Systems	0	0	0	1	0	K2INF _U05	15	60	2	1,2	T	Z		P	K.	Ob.
9	INZ 003759	Teletraffic theory and engineering	1	0	0	0	0	K2INF _W04	15	30	1	0,6	T	Z			K	Ob.

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

No.	Course/group of courses code	Name of course/group of courses	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes	Form	Way	university-wide	practical	kind	type
	W																	
10	INZ 003759 P	Teletraffic theory and engineering	0	0	0	2	0	K2INF_U05	30	90	3	1,8	T	Z		P	K	Ob.
11	INZ 003758 W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF_W01 K2INF_W05	30	60	2	1,2	T	Z			PD	Ob.
12	INZ 003758 L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF_U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

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

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1		Foreign language I	0	3	0	0	0	K2INF_U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF_U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

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[1]
lec	cl	lab	pr	sem				
8	7	2	3	2	330	900	30	18

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

Semester 2

Optional courses (minimum 285 hours in semester, 30 ECTS points)

No..	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course /group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
											Number of ECTS points							
1	INZ 003791W	Semantic Web	2					S2PSI_W07, S2PSI_W08, S2PSI_W09	30	120	4	2,4	T	E			S	W
2	INZ 003791L	Semantic Web			2			S2PSI_U10, S2PSI_U11	30	90	3	1,8	T	Z		P	S	W.
3	INZ 003791S	Semantic Web					1	S2PSI_W07, S2PSI_W08, S2PSI_W09	15	60	2	1,2	T	Z			S	W
4	INZ 003790W	Human-Computer Interaction	2					S2PSI_W09, S2PSI_W10	30	90	3	1,8	T	Z			S	W
5	INZ 003790L	Human-Computer Interaction			2			S2PSI_U13, S2PSI_U14, S2PSI_U16	30	90	3	1,8	T	Z		P	S	W

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

6	INZ 003827W	Software Project Management	2				S2PSI_W06	30	120	4	2,4	T	E			S	W
7	INZ 003827P	Software Project Management			2		S2PSI_U17, S2PSI_U08, S2PSI_U09	30	90	3	1,8	T	Z		P	S	W
8	INZ 003789W	Implementation Techniques for Information Systems	2				S2PSI_W11, S2PSI_W08, S2PSI_W09	30	90	3	1,8	T	Z			S	W
9	INZ 003789L	Implementation Techniques for Information Systems			2		S2PSI_U15, S2PSI_U17	30	90	3	1,8	T	Z		P	S	W
10	INZ 003818P	MSc Thesis			2		K2INF_U03	30	60	2	1,2	T	Z			K	
		Razem	8		6	2 1		285	900	30	18						

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]
lec	cl	lab	pr	sem				
8	0	6	2	1	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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Semester 3

Optional courses (minimum 285 hours in semester, 30 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					Field-of-study educatio nal effect symbol	Number of hours		Number of ECTS points		Form[2] of course /group of courses	Way[3] of crediti ng	Course/group of courses			
			l e c	c l	l a b	pr	s e m		ZZU	CNPS	total	BK classe s[1]			univer sity-wide[4]	practic al[5]	kind[6]	type[7]
1	INZ 003795W	Computational Intelligence Methods	2					S2PSI_W10, S2PSI_W07, S2PSI_W08, S2PSI_W09	30	90	3	1,8	T	Z			S	W
2	INZ 003795L	Computational Intelligence Methods			2			S2PSI_U12	30	90	3	1,8	T	Z		P	S	W
3	INZ 003794W	Integration of Information Systems	2					S2PSI_W06, S2PSI_W07, S2PSI_W08, S2PSI_W10, S2PSI_W11	30	60	2	1.2	T	Z			S	W
4	INZ 003794S	Integration of Information Systems					1	S2PSI_W06, S2PSI_W07, S2PSI_W08, S2PSI_	15	60	2	1,2	T	Z			S	W

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

			lec	cl	lab	pr	sem		ZZU	CNPS	ECTS	BK	[2]	[3]	[4]	[5]	[6]	[7]
								W10, S2PSI_5W11										
5	INZ 003819 D	MSc Thesis II	0	0	0	10	0	K2INF_U08	150	540	18	6	T	Z		P	S	W
6	INZ 003820 S	Diploma Seminar	0	0	0	0	2	K2INF_U08	30	60	2	1,2	T	Z			S	W
		Total	4		2	10	3		285	900	30	18						

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]
lec	cl	lab	pr	sem				
4		2	10	3	285	900	30	18

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

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2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
INZ003760	Modelling and Business Analysis	1
INZ003761	Decision Support Systems	
INZ003791	Semantic Web	2
INZ003827	Software Project Management	

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8

Opinion of student government legislative body

....

Date Name and surname, signature of student representative

....

Date of 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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

PLAN OF STUDIES

FACULTY: Computer Science and Management

MAIN FIELD OF STUDY: Computer Science

EDUCATION LEVEL: ~~1st~~ / 2nd * level, ~~licencjat / inżynier / magister / magister inżynier~~*

FORM OF STUDIES: full-time / ~~part-time~~*

PROFILE: general academic /~~practical~~ *

SPECIALIZATION: Database systems

LANGUAGE OF STUDY: Polish

…………………………………………….. Faculty Council Resolution of ....

In effect since ……………….........................

*delete as applicable

Plan of studies structure (optionally)

1) in point layout

	I	II	III	
27	CNPS ECTS	CNPS ECTS	CNPS ECTS	27
26	**900** **30**	**900** **30**	**900** **30**	26
22	Foreign Language II 30 1 ECTS			22
21	Foreign Language I			21
20				20
19	**60** **2 ECTS**	Diploma thesis		19
18	Information systems			18
17		60 2 ECTS Information retrieval systems		17
16	**120** **4 ECTS**			16
15		120 4 ECTS	Diploma thesis	15
14	Advanced methods and techniques of data analysis	Deductive databases		14
13	**180** **6 ECTS**	**240** **8 ECTS**	**540** **18 ECTS**	13
12				12
11	Methodology Empirical SSciences			11
10		Database Security		10
9	90 3 ECTS Decision Support Systems		Diploma seminar	9
8		**180** **6 ECTS**		8
7	**150** **5 ECTS**	Implementation of Database Systems	60 2 ECTS	7
6	Modeling and Business Analysis		Multimedia Databases	6
5	**150** **5 ECTS**	**120** **4 ECTS**	**120** **4 ECTS**	5
4		New database technologies		4
3	Teletraffic theory and engineering		Advanced database systems	3
2				2
1	**120** **4 ECTS**	**180** **6 ECTS**	**180** **6 ECTS**	1
	I	**II**	**III**	**Total**
	22 / 330	**19 / 285**	**19 / 285**	**60/900**

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

2) in hourly layout

	CNPS ECTS	CNPS ECTS	CNPS ECTS	
27				27
26	**900** **30**	**900** **30**	**900** **30**	26
22	Foreign Language II **0100**			22
21	Foreign Language I			21
20				20
19	**0300**	Diploma thesis		19
18	Information systems	**00020**		18
17		Information retrieval systems		17
16	**10002**	**10020**		16
15			Diploma thesis	15
14	Advanced methods and techniques of data analysis	Deductive databases		14
13	**20200**	**20020 E**	**000(10)0**	13
12				12
11	Methodology Empirical SSciences			11
10	**20000**	Database Security		10
9	Decision Support Systems	**20010 E**	Diploma seminar	9
8	**11010 E**		**00020**	8
7		Implementation of Database Systems		7
6	Modeling and Business Analysis		Multimedia Databases	6
5	**12000 E**	**20010**	**10020**	5
4		New database technologies		4
3	Teletraffic theory and engineering		Advanced database systems	3
2				2
1	**10020**	**10201**	**20020**	1
	I	**II**	**III**	**Total**
	22 / 330	**19 / 285**	**19 / 285**	**60/900**

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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 **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course /group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003760 W	Modeling and Business Analysis	1	0	0	0	0	K2INF _W03	15	60	2	1,2	T	E			K	Ob.
2	INZ 003760 L	Modeling and Business Analysis	0	2	0	0	0	K2INF _U06	30	90	3	1,8	T	Z			K	Ob.
3	INZ 003762 W	Information Systems	1	0	0	0	0	K2INF _W04	15	60	2	1,2	T	Z			K	Ob.
4	INZ 003762 S	Information Systems	0	0	0	0	2	K2INF _W04	30	60	2	1,2	T	Z			K	Ob.
5	INZ 003761 W	Decision Support Systems	1	0	0	0	0	K2INF _W02	15	60	2	1,2	T	E			K	Ob.
6	INZ 003761 L	Decision Support Systems	0	1	0	0	0	K2INF _U05	15	30	1	0,6	T	Z			K	Ob.
7	INZ 003761 P	Decision Support Systems	0	0	0	1	0	K2INF _U05	15	60	2	1,2	T	Z		P	K.	Ob.
8	INZ 003759 W	Teletraffic theory and engineering	1	0	0	0	0	K2INF _W04	15	30	1	0,6	T	Z			K	Ob.
9	INZ 003759 P	Teletraffic theory and engineering	0	0	0	2	0	K2INF_ U05	30	90	3	1,8	T	Z		P	K	Ob.

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

No	Course/group of courses code	Name of course/group of courses	lec	cl	lab	pr	sem	Field-of-study education al effect symbol	ZZU	CNPS	total	BK classes	Form of course/group of courses	Way of crediting	university-wide	practical	kind	type
10	INZ 003758 W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF _W01 K2INF _W05	30	60	2	1,2	T	Z			PD	Ob.
11	INZ 003758 L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF _U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

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

No.	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study education al effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/ group of courses	Way[3] of crediting	university-ty-wide[4]	practical[5]	kind[6]	type[7]
1		Foreign language I	0	3	0	0	0	K2INF _U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF _U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

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[1]
lec	cl	lab	pr	sem				
8	7	2	3	2	330	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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 **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1.	INZ 003818P	Diploma thesis	0	0	0	2	0	K2INF_U03	30	60	2	1,2	T	Z			S	W
2.	INZ 003780W	Information retrieval systems	1	0	0	0	0	K2INF_W06	15	60	2	1,2	T	Z			S	W
3.	INZ 003780P	Information retrieval systems	0	0	0	2	0	K2INF_U08	30	60	2	1,2	T	Z		P	S	W
4.	INZ 003787W	Deductive databases	2	0	0	0	0	K2INF_W06	30	120	4	2,4	T	E			S	W
5.	INZ 003787P	Deductive databases	0	0	0	2	0	K2INF_U08	30	120	4	2,4	T	Z		P	S	W
6.	INZ 003788W	Database Security	2	0	0	0	0	K2INF_W06	30	120	4	2,4	T	E			S	W
7.	INZ 003788P	Database Security	0	0	0	1	0	K2INF_U08	15	60	2	1,2	T	Z		P	S	W
8.	INZ 003792W	Implementation of Database Systems	2	0	0	0	0	K2INF_W06	30	90	3	1,8	T	Z			S	W
9.	INZ 003792P	Implementation of Database Systems	0	0	0	1	0	K2INF_U08	15	30	1	0,6	T	Z		P	S	W
10.	INZ 003796W	New database technologies	1	0	0	0	0	K2INF_W06	15	60	2	1,2	T	Z			S	W
11.	INZ 003796L	New database technologies	0	0	2	0	0	K2INF_U08	30	90	3	1,8	T	Z		P	S	W
12.	INZ 003796S	New database technologies	0	0	0	0	1	K2INF_U08	15	30	1	0,6	T	Z			S	W
		Total	8	0	2	8	1		285	900	30	18						

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] 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[1]
lec	cl	lab	pr	sem				
8	0	2	8	1	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Semester 3

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 **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1.	INZ 003819D	Diploma thesis	0	0	0	10	0	K2INF_U03	150	540	18	10,8	T	Z			S	W
2.	INZ 003820S	Diploma seminar	0	0	0	2	0	K2INF_U01 K2INF_U02	30	60	2	1,2	T	Z			S	W
3.	INZ 003793W	Multimedia Databases	1	0	0	0	0	K2INF_W06	15	60	2	1,2	T	Z			S	W
4.	INZ 003793P	Multimedia Databases	0	0	0	2	0	K2INF_U08	30	60	2	1,2	T	Z		P	S	W
5.	INZ 003800W	Advanced database systems	2	0	0	0	0	K2INF_W06	30	90	3	1,8	T	Z			S	W
6.	INZ 003800P	Advanced database systems	0	0	0	2	0	K2INF_U08	30	90	3	1,8	T	Z		P	S	W
		Total	3	0	0	16	0		285	900	30	18						

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]
lec	cl	lab	pr	sem				
3	0	0	16	0	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
	1 Modeling and Business Analysis 2 Decision Support Systems	1
	1. Deductive databases 2. Database Security	2

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8
3	0

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Opinion of student government legislative body

....

Date Name and surname, signature of student representative

....

Date Dean's signature

PLAN OF STUDIES

FACULTY: Faculty of Computer Science and Management

MAIN FIELD OF STUDY: Computer Science

EDUCATION LEVEL: ~~1st~~ / 2nd * level, ~~licencjat~~ / ~~inżynier~~ / magister / ~~magister inżynier~~*

FORM OF STUDIES: full-time / ~~part-time~~*

PROFILE: general academic /~~practical~~ *

SPECIALIZATION: Information Systems

LANGUAGE OF STUDY: Polish

……………………………………….. Faculty Council Resolution of 23. 04. 2013

In effect since 01. 10. 2013

*delete as applicable

Plan of studies structure (optionally)

1) in point layout

	CNPS	ECTS	CNPS	ECTS	CNPS	ECTS	
24							24
23	**900**	**30**	**900**	**30**	**900**	**30**	23
22	Foreign Language II **30**	**1 ECTS**					22
21	Foreign Language I						21
20							20
19	**90**	**3 ECTS**	Optional Course I		Optional Course II		19
18	Methodology of Empirical Sciences **90**	**3CTS**	**120**	**4 ECTS**	**120**	**4 ECTS**	18
17							17
16	Advanced Methods and Techniques of Data Analysis		Designing and Management of Information Systems		Business Information Systems		16
15							15
14							14
13	**180**	**6 ECTS**	**240**	**8 ECTS**	**180**	**6 ECTS**	13
12	Decision Support Systems		Prospective of Information Systems Development		Diploma Seminar		12
11			**90**	**3 ECTS**	**60**	**2 ECTS**	11
10	**150**	**5 ECTS**	Integracja systemów informacyjnych				10
9	Teletraffic Theory and Engineering						9
I8							8
7	**120**	**4 ECTS**	**210**	**7 ECTS**			7
6	Information Systems		Advanced Multimedia Technologies in Information Systems		Diploma Thesis II		6
5	**120**	**4 ECTS**			**540**	**18 ECTS**	5
4							4
3	Modeling and Business Analysis		**180**	**6 ECTS**			3
2			Diploma Thesis I I				2
1	**150**	**5 ECTS**	**60**	**2 ECTS**			1
	I		**II**		**III**		**Razem**
	22 / 330		**19 / 285**		**19 /285**		**60 / 900**

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

2) in hourly layout

	CNPS ECTS	CNPS ECTS	CNPS ECTS	
24	**CNPS** **ECTS**	CNPS ECTS	CNPS ECTS	24
23	**900** **30**	900 30	900 30	23
22	Foreign Language II 01000			22
21	Foreign Language I			21
20				20
19	**03000**	Optional Course I	Optional Course II	19
18	Methodology of Empirical Sciences 2**0000**			18
17		**20001**	**20100**	17
16	Advanced Methods and Techniques of Data Analysis	Designing and Management of Information Systems	Business Information Systems	16
15				15
14				14
13	**20200**	**20020 E**	**20020**	13
12	Decision Support Systems	Prospective of Information Systems Development **00002**	Diploma Seminar **00002**	12
11				11
10	**11010 E**	Integracja systemów informacyjnych		10
9	Teletraffic Theory and Engineering			9
8		**20020 E**		8
7	**10020**			7
6	Information Systems	Advanced Multimedia Technologies in Information Systems	Diploma Thesis II **000(10)0**	6
5	**10002**			5
4				4
3	Modeling and Business Analysis	**20200**		3
2		Diploma Thesis I		2
1	**12000 E**	**00020**		1

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

	I	II	III	Razem
	22 / 330	19 / 285	19 /285	60 / 900

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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

Semester 1

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					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003760 W	Modeling and Business Analysis	1	0	0	0	0	K2INF _W03	15	60	2	1,2	T	E			K	Ob.
2	INZ 003760 L	Modeling and Business Analysis	0	2	0	0	0	K2INF _U06	30	90	3	1,8	T	Z			K	Ob.
3	INZ 003762 W	Information Systems	1	0	0	0	0	K2INF _W04	15	60	2	1,2	T	Z			K	Ob.
4	INZ 003762 S	Information Systems	0	0	0	0	2	K2INF _W04	30	60	2	1,2	T	Z			K	Ob.
5	INZ 003761 W	Decision Support Systems	1	0	0	0	0	K2INF _W02	15	60	2	1,2	T	E			K	Ob.
6	INZ 003761 L	Decision Support Systems	0	1	0	0	0	K2INF _U05	15	30	1	0,6	T	Z			K	Ob.
7	INZ 003761 P	Decision Support Systems	0	0	0	1	0	K2INF _U05	15	60	2	1,2	T	Z		P	K.	Ob.
8	INZ 003759 W	Teletraffic theory and engineering	1	0	0	0	0	K2INF _W04	15	30	1	0,6	T	Z			K	Ob.
9	INZ	Teletraffic theory and engineering	0	0	0	2	0	K2INF_	30	90	3	1,8	T	Z		P	K	Ob.

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

No.	Course code	Name	lec	cl	lab	pr	sem	Field-of-study effect symbol	ZZU	CNPS	total	BK classes	Form	Way	university-wide	practical	kind	type
	003759 P							U05										
10	INZ 003758 W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF_W01 K2INF_W05	30	60	2	1,2	T	Z			PD	Ob.
11	INZ 003758 L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF_U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

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

No.	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes [1]	Form [2] of course/ group of courses	Way [3] of crediting	university-wide [4]	practical [5]	kind [6]	type [7]
1		Foreign language I	0	3	0	0	0	K2INF_U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF_U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

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 [1]
lec	cl	lab	pr	sem				
8	7	2	3	2	330	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Semester 2

Obligatory courses number of ECTS points 26

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003818P	Diploma Thesis I				2		K2INF_U01	30	60	2	1,2	T	Z		P	S	W
2	INZ 003797W	Designing and Management of Information Systems	2					K2INF_W03 K2INF_W04 K2INF_W06	30	120	4	2,4	T	E			S	W
3	INZ 003797P	Designing and Management of Information Systems				2		K2INF_U05 K2INF_U08	30	120	4	2,4	T	Z		P	S	W
4	INZ 003799W	Integration of Information Systems	2					K2INF_W06	30	120	4	2,4	T	E			S	W
5	INZ 003799P	Integration of Information Systems				2		K2INF_U08	30	90	3	1,8	T	Z		P	S	W
6	INZ 003798S	Prospective of Information Systems Development					2	K2INF_W06 K2INF_U01 K2INF_U02 K2INF_U03	30	90	3	1,8	T	Z			S	W
7	INZ 003801W	Advanced Multimedia Technologies in Information Systems	2					K2INF_W05 K2INF_W06	30	90	3	1,8	T	Z			S	W
8	INZ 003801L	Advanced Multimedia Technologies in Information Systems			2			K2INF_U05 K2INF_U08	30	90	3	1,8	T	Z		P	S	W
		Total	6	0	2	6	2		240	780	26	15,6						

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Optional courses (minimum 45 hours in semester, 4 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					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003809W	Advanced Internet Information Search	2	0	0	0	0	K2INF_W06	30	90	3	1,8	T	Z			S	W
2	INZ 003809S	Advanced Internet Information Search	0	0	0	0	1	K2INF_W06 K2INF_U01 K2INF_U02 K2INF_U03	15	30	1	0,6		Z			S	W
3	INZ 003810W	Social Media	2	0	0	0	0	K2INF_W06	30	90	3	1,8	T	Z			S	W
4	INZ 003810S	Social Media	0	0	0	0	1	K2INF_W06 K2INF_U01 K2INF_U02 K2INF_U03	15	30	1	0,6	T	Z			S	W
		Total	4	0	0	0	2		45	120	4	2,4						

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]
lec	cl	lab	pr	sem				
10	0	2	6	4	285	900	30	18

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

Semester 3

Obligatory courses number of ECTS points 26

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003819D	Diploma Thesis II	0	0	0	10	0	K2INF_U08	150	540	18	10,8	T	Z		P	K	W
2	INZ 003820S	Diploma seminar	0	0	0	0	2	K2INF_U08	30	60	2	1,2	T	Z			K	W
3	INZ 003802W	Business Information Systems	2	0	0	0	0	K2INF_W06	30	90	3	1,8	T	Z			S	W
4	INZ 003802P	Business Information Systems	0	0	0	2	0	K2INF_U08	30	90	3	1,8	T	Z		P	S	W
		Total	2	0	0	12	2		240	780	26	15,6						

Optional courses (minimum 45 hours in semester, 4 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					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003811W	Digital Image and Video Processing	2	0	0	0	0	K2INF_W06	30	90	3	1,8	T	Z			S	W
2	INZ 003811L	Digital Image and Video Processing	0	0	1	0	0	K2INF_U08	15	30	1	0,6	T	Z		P	S	W
3	INZ 003812W	Speech Recognition and Synthesis	2	0	0	0	0	K2INF_W06	30	90	3	1,8	T	Z			S	W
4	INZ 003812L	Speech Recognition and Synthesis	0	0	1	0	0	K2INF_U08	15	30	1	0,6	T	Z		P	S	W

[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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

								45	120	4	2,4					
Total	4	0	2	0	0			45	120	4	2,4					

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]
lec	cl	lab	pr	sem				
6	0	2	12	2	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
	1. Modeling and Business Analysis 2.Decision Support Systems	1
	1. Designing and Management of Information Systems 2. Integration of Information Systems.	2

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8
3	0

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Opinion of student government legislative body

....

Date Name and surname, signature of student representative

....

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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

PLAN OF STUDIES

FACULTY: Computer Science and Managemant

MAIN FIELD OF STUDY: Computer Science

EDUCATION LEVEL: ~~1st~~ / 2nd * level, ~~licencjat / inżynier / magister / magister inżynier~~ Master of Science*

FORM OF STUDIES: full-time / ~~part-time~~*

PROFILE: general academic /~~practical~~ *

SPECIALIZATION: Decision Support Systems

LANGUAGE OF STUDY: Polish

…………………………………………….. Faculty Council Resolution of ....

In effect since …………………........................

*delete as applicable

Plan of studies structure (optionally)

1) in point layout

#	CNPS / ECTS	CNPS / ECTS	CNPS / ECTS	#
24	**CNPS ECTS**	**CNPS ECTS**	**CNPS ECTS**	24
23	**900 30**	**900 30**	**900.......... 30**	23
22	Foreign Language II **30 1 ECTS**			22
21	Foreign Language I			21
20	**60 2 ECTS**			20
19		System Identification and Pattern Recognition Techniques in Computer Science **300 10 ECTS**	Implementation of Decision Support Systems **180 6 ECTS**	19
18	Information Systems **120 4 ECTS**			18
17				17
16				16
15	Advanced Methods and Techniques of Data Analysis **180 6 ECTS**		Control of Computer Systems **120 4 ECTS**	15
14				14
13		Intelligent Decision Support Systems **270 9 ECTS**		13
12			Diploma Seminar **60 2 ECTS**	12
11	Methodology of Empirical Sciences **90 3 ECTS**			11
10			Diploma Thesis **540 18 ECTS**	10
9	Decision Support Systems **150 5 ECTS**			9
8				8
7		Decision Making in Operation Systems **270 9 ECTS**		7
6	Modeling and Business Analysis **150 5 ECTS**			6
5				5
4				4
3	Teletraffic Theory and			3

2	Engineering	Diploma Thesis		2
1	**120** **4 ECTS**	**60** **2 ECTS**		1
	I	**II**	**III**	**Total**
	22 / 330	**19 / 285**	**19 /285**	**60 / 900**

2) in hourly layout

24	**CNPS** **ECTS**	**CNPS** **ECTS**	**CNPS** **ECTS**	24
23	**900** **30**	**900** **30**	**900.........** **30**	23
22	Foreign Language II 01000			22
21	Foreign Language I			21
20	03000			20
19		System Identification and Pattern Recognition Techniques in Computer Science	Implementation of Decision Support Systems	19
18	Information Systems			18
17	10002		10120	17
16				16
15	Advanced Methods and Techniques of Data Analysis	22200 E	Control of Computer Systems	15
14				14
13	20200	Intelligent Decision Support Systems	20010	13
12			Diploma Seminar	12
11	Methodology of Empirical Sciences	21120	00002	11

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

	I		II		III	
10	20000					10
9	Decision Support Systems					9
8						8
7	11010E		Decision Making in Operation Systems	Diploma Thesis		7
6	Modeling and Business Analysis					6
5				000(10)0		5
4	12000E					4
3	Teletraffic Theory and Engineering		20012 E			3
2			Diploma Thesis			2
1	10020					1
	I		**II**	**III**		**Total**
	22 / 330		**19 / 285**	**19 /285**		**60 / 900**

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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

Semester 1

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**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course /group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ003 760W	Modeling and Business Analysis	1	0	0	0	0	K2INF_W03	15	60	2	1,2	T	E			K	Ob.
2	INZ003 760L	Modeling and Business Analysis	0	2	0	0	0	K2INF_U06	30	90	3	1,8	T	Z			K	Ob.
3	INZ003 762W	Information Systems	1	0	0	0	0	K2INF_W04	15	60	2	1,2	T	Z			K	Ob.
4	INZ003 762S	Information Systems	0	0	0	0	2	K2INF_W04	30	60	2	1,2	T	Z			K	Ob.
5	INZ003 761W	Decision Support Systems	1	0	0	0	0	K2INF_W02	15	60	2	1,2	T	E			K	Ob.
6	INZ003 761L	Decision Support Systems	0	1	0	0	0	K2INF_U05	15	30	1	0,6	T	Z			K	Ob.
7	INZ003 761P	Decision Support Systems	0	0	0	1	0	K2INF_U05	15	60	2	1,2	T	Z		P	K.	Ob.
8	INZ003 759W	Teletraffic theory and engineering	1	0	0	0	0	K2INF_W04	15	30	1	0,6	T	Z			K	Ob.
9	INZ003 759P	Teletraffic theory and engineering	0	0	0	2	0	K2INF_U05	30	90	3	1,8	T	Z		P	K	Ob.
10	INZ003 758W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF_W01 K2INF_W05	30	60	2	1,2	T	Z			PD	Ob.
11	INZ003 758L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF_U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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

No.	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/ group of courses	Way[3] of crediting	universi ty-wide[4]	practical[5]	kind[6]	type[7]
1		Foreign language I	0	3	0	0	0	K2INF_U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF_U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

Altogether in semester

Total number of hours					Total number of ZZUhours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes[1]
lec	cl	lab	pr	sem				
8	7	2	3	2	330	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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 **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003818P	Diploma Thesia I				2		K2INF_U08	30	60	2	1,2	T	Z			S	W
2	INZ 003773W	Decision Making in Operation Systems	2	0	0	0	0	K2INF_W06	30	109	4	2,4	T	E			S	W
3	INZ 003773P	Decision Making in Operation Systems	0	0	0	1	0	K2INF_U08	15	109	3	1,8	T	Z		P	S	W
4	INZ 003773S	Decision Making in Operation Systems	0	0	0	0	2	K2INF_U08	30	52	2	1,2	T	Z			S	W
5	INZ 003828W	Intelligent Decision Support Systems	2	0	0	0	0	K2INF_W06	30	40	1	0,6	T	Z			S	W
6	INZ 003828C	Intelligent Decision Support Systems	0	1	0	0	0	K2INF_U08	15	60	2	1,2	T	Z			S	W
7	INZ 003828L	Intelligent Decision Support Systems	0	0	1	0	0	K2INF_U08	15	60	2	1,2	T	Z		P	S	W
8	INZ	Intelligent Decision Support	0	0	0	2	0	K2INF_U08	30	110	4	2,4	T	Z		P	S	W

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

No.	Code	Name	lec	cl	lab	pr	sem		ZZU	CNPS	ECTS	BK						
	003828P	Systems																
9	INZ 003768W	System Identification and Pattern Recognition Techniques in Computer Science	2	0	0	0	0	K2INF_W06	30	120	4	2,4	T	E			S	W
10	INZ 003768C	System Identification and Pattern Recognition Techniques in Computer Science	0	2	0	0	0	K2INF_U08	30	90	3	1,8	T	Z			S	W
11	INZ 003768L	System Identification and Pattern Recognition Techniques in Computer Science	0	0	2	0	0	K2INF_U08	30	90	3	1,8	T	Z	P		S	W
		Total	6	3	3	5	2		285	900	30	18						

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]
lec	cl	lab	pr	sem				
6	3	3	5	2	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Semester 3

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 **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ 003819D	Diploma Thesis II	0	0	0	10	0	K2INF_U08	150	540	18	10,8	T	Z			S	W
2	INZ 003820S	Diploma Seminar	0	0	0	0	2	K2INF_U08	30	60	2	1,2	T	Z			S	W
3	INZ 003831W	Control of Computer Systems	2	0	0	0	0	K2INF_W06	30	50	2	1,2	T	Z			S	W
4	INZ 003831P	Control of Computer Systems	0	0	0	1	0	K2INF_U08	15	70	2	1,2	T	Z		P	S	W
5	INZ 003830W	Implementation of Decision Support Systems	1	0	0	0	0	K2INF_W06	15	60	2	1,2	T	Z			S	W
6	INZ 003830L	Implementation of Decision Support Systems	0	0	1	0	0	K2INF_U08	15	30	1	0,6	T	Z		P	S	W
7	INZ 003830P	Implementation of Decision Support Systems	0	0	0	2	0	K2INF_U08	30	90	3	1,8	T	Z		P	S	w
		Total	3	0	1	13	2		285	900	30	18						

Altogether in semester

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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]
lec	cl	lab	pr	sem				
3	0	1	13	2	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
INZ 003760W	1. Modeling and Business Analysis	1
INZ 003761W	2. Decision Support Systems	
INZ 003773W	1. Decision Making in Operation Systems	2
INZ 003768W	2. System Identification and Pattern Recognition Techniques in Computer Science	

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8
3	0

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Opinion of student government legislative body

....

Date Name and surname, signature of student representative

....

Date Dean's signature

PLAN OF STUDIES

FACULTY: Computer Science and Management

MAIN FIELD OF STUDY: Computer science

EDUCATION LEVEL: 2nd level, magister

FORM OF STUDIES: full-time

PROFILE: general academic

SPECIALIZATION: Information and communication technologies (teleinformatics)

LANGUAGE OF STUDY: English

……………………………………….. Faculty Council Resolution of ....

In effect since ………………........................

*delete as applicable

Plan of studies structure (optionally)

1) in point layout

	CNPS ECTS	CNPS ECTS	CNPS ECTS	
27				27
26	**900** **30**	**900** **30**	**900** **30**	26
22	Foreign Language II **30** **1 ECTS**			22
21	Foreign Language I			21
20	**60** **2 ECTS**			20
19		Master thesis		19
18	Information Systems			18
17		**60** **3 ECTS** Methods of knowledge integration		17
16	**120** **4 ECTS**			16
15		**120** **4 ECTS** Intelligent information systems – services and application	Master thesis	15
14	Advanced Methods and Technics of Data Analysis		**540** **18 ECTS**	14
13	**180** **6 ECTS**			13
12		**180** **6 ECTS**		12
11	Methodology of Empirical Sciences			11
10		ICT project management		10
9	**90** **3 ECTS** Decision Support Systems		Master degree seminar	9
8		**180** **6 ECTS**		8
7	**150** **5 ECTS**		**60** **2 ECTS**	7
6	Modeling and Business Analysis	Integrated management systems	Systems security and safety	6
5		**150** **5 ECTS**		5
4	**150** **5 ECTS**		**150** **5 ECTS**	4
3	Teletraffic Theory and Engineering	Infrastructure of intelligent building **180** **6 ECTS**	Computer communication and telecommunication	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
[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
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

2	**120**	**4 ECTS**		systems	2
1					1
	I		**II**	**III**	**Razem**
				150	5 ECTS
	I		**II**	**III**	**Razem**
	22 / 330		**19 / 285**	**19 / 285**	**60/900**

2) in hourly layout

	CNPS	ECTS	CNPS	ECTS	CNPS	ECTS	
27							27
26	**900**	**30**	**900**	**30**	**900**	**30**	26
22	Foreign language II **0100**						22
21	Foreign language I						21
20							20
19	**03000**		Master thesis				19
18	Information systems		**00020**				18
17			Methods of knowledge integration				17
16	**10002**		**20000**		Master thesis		16
15			Intelligent information systems – services and application				15
14	Advanced Methods and Technics of Data Analysis				**000(10)0**		14
13							13
12	**20200**		**20200 E**				12
11	Methodology of Empirical Sciences		ICT project management				11

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

	I	II	III	
10	**20000**	**20020 E**		10
9	Decision Support Systems		Master degree seminar	9
8	**11010 E**		**00020**	8
7		Integrated management systems	Systems security and safety	7
6	Modeling and Business Analysis			6
5	**12000 E**	**20100**	**20020**	5
4				4
3	Teletraffic Theory and Engineering	Infrastructure of intelligent building	Computer communication and telecommunication systems	3
2		**20020**		2
1	**10020**		**20001**	1
	I	**II**	**III**	**Razem**
	22 / 330	**19 / 285**	**19 / 285**	**60/900**

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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

Semester 1

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**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course /group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ003 760W	Modeling and Business Analysis	1	0	0	0	0	K2INF_W03	15	60	2	1,2	T	E			K	Ob.
2	INZ003 760L	Modeling and Business Analysis	0	2	0	0	0	K2INF_U06	30	90	3	1,8	T	Z			K	Ob.
3	INZ003 762W	Information Systems	1	0	0	0	0	K2INF_W04	15	60	2	1,2	T	Z			K	Ob.
4	INZ003 762S	Information Systems	0	0	0	0	2	K2INF_W04	30	60	2	1,2	T	Z			K	Ob.
5	INZ003 761W	Decision Support Systems	1	0	0	0	0	K2INF_W02	15	60	2	1,2	T	E			K	Ob.
6	INZ003 761L	Decision Support Systems	0	1	0	0	0	K2INF_U05	15	30	1	0,6	T	Z			K	Ob.
7	INZ003 761P	Decision Support Systems	0	0	0	1	0	K2INF_U05	15	60	2	1,2	T	Z		P	K.	Ob.
8	INZ003 759W	Teletraffic theory and engineering	1	0	0	0	0	K2INF_W04	15	30	1	0,6	T	Z			K	Ob.
9	INZ003 759P	Teletraffic theory and engineering	0	0	0	2	0	K2INF_U05	30	90	3	1,8	T	Z		P	K	Ob.
10	INZ003 758W	Advanced Methods and Techniques of Data Analysis	2	0	0	0	0	K2INF_W01 K2INF_W05	30	60	2	1,2	T	Z			PD	Ob.
11	INZ003 758L	Advanced Methods and Techniques of Data Analysis	0	0	2	0	0	K2INF_U05	30	120	4	2,4	T	Z		P	PD	Ob.
		Total	8	3	2	3	2		270	810	27	16,2						

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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

No.	Course/ group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/ group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
			Weekly number of hours						Number of hours		Number of ECTS points				Course/group of courses			
1		Foreign language I	0	3	0	0	0	K2INF_U04	45	60	2	1,2	T	Z	O		KO	W
2		Foreign language II	0	1	0	0	0	K2INF_U04	15	30	1	0,6	T	Z	O		KO	W
		Total		4					60	90	3	1,8						

Altogether in semester

lec	cl	lab	pr	sem	Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes[1]
8	7	2	3	2	330	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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 **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ003818P	Master thesis degree	0	0	0	2	0	K2INF_U03	30	60	2	1,2	T	Z		P	S	W
2	INZ003803W	Knowledge integration methods	2	0	0	0	0	K2INF_W05	30	120	4	2,4	T	Z			S	W
3	INZ003832W	Intelligent information systems - services and applications	2	0	0	0	0	K2INF_W04	30	60	3	1,8	T	E			S	W
4	INZ003832W	Intelligent information systems - services and applications	0	0	2	0	0	K2INF_W04	30	120	3	1,8	T	Z		P	S	W
5	INZ003804WP	ICT project management	2	0	0	0	0	K2INF_W03	30	60	2	1,2	T	E			S	W
6	INZ003804WP	ICT project management	0	0	0	2	0	K2INF_W03	30	120	4	2,4	T	Z		P	S	W
7	INZ003805W	Integrated management systems	2	0	0	0	0	K2INF_W03	30	60	3	1,8	T	Z			S	W
8	INZ003805L	Integrated management systems	0	0	1	0	0	K2INF_W03	15	120	3	1,8	T	Z		P	S	W
9	INZ003806W	Infrastructure of intelligent building	2	0	0	0	0	K2INF_W02	30	60	2	1,2	T	Z			S	W
10	INZ003806P	Infrastructure of intelligent building	0	0	0	2	0	K2INF_W02	30	120	4	2,4	T	Z		P	S	W
		Total	10	0	3	6	0		285	900	30	18						

Altogether in semester

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

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]
lec	cl	lab	pr	sem				
10	0	3	6	0	285	900	30	18

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Semester 3

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 **GK**)	Weekly number of hours					Field-of-study educational 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]			university-wide[4]	practical[5]	kind[6]	type[7]
1	INZ003819P	Master degree thesis	0	0	0	10	0	K2INF_U03	150	540	18	10,8	T	Z		P	S	W
2	INZ003820S	Master degree seminar	0	0	0	0	2	K2INF_U01 K2INF_U02	30	60	2	1,2	T	Z		P	S	W
3	INZ003807W	Systems security and safety	2	0	0	0	0	K2INF_W04	30	60	2	1,2	T	Z			S	W
4	INZ003807P	Systems security and safety	0	0	0	2	0	K2INF_W04	30	90	3	1,8	T	Z		P	S	W
5	INZ003808WS	Computer communication and telecommunication systems	2	0	0	0	0	K2INF_W02	30	90	3	1,8	T	Z		P	S	W
6	INZ003808WS	Computer communication and telecommunication systems	0	0	0	0	1	K2INF_W02	15	60	2	1,2	T	Z		P	S	W
		Total	4	0	0	12	3		285	900	30	18						

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]
lec	cl	lab	pr	sem				
4	0	0	12	3	285	900	30	18

[1]BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

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[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)

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[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
	1. Modeling and business analysis 2. Decision making support systems	1
	1.Intelligent information systems – services and applications 2. ICT project management	2

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

Semester	Allowable deficit of ECTS points after semester
1	8
2	8

[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

[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

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

[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

[7] Optional – enter W, obligatory – enter Ob

Opinion of student government legislative body

....

Date Name and surname, signature of student representative

....

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

[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)

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