

INFORMATION SCIENCES, speciality: Engineering of IT Systems

Educational profile: general academic

from 2017/18

Form of studies: part-time

Level of qualification: first degree studies

Qualifications gained: first degree studies

Area of education: in science and technological sciences

No.	Name of subject/ module	sem.	ECTS	exam in sem.	Hours in semester									
					lect.	exerc.	lab.	others	self-study	lect.+exerc	contact	practical	together	status
General requirements														
1	Ergonomics	1	0,25	zal.	2			0	3	2	2	0	5	o
2	Intellectual property protection	1	0,25	zal.	2			0	3	2	2	0	5	o
3	Etiquette	1	0,5	zal.	4			0	6	4	4	0	10	o
4	Safety and hygiene at work	1	0,5	zal.	4			4	6	4	8	0	14	o
5	Patent information	5	0,5	zal.	4			4	6	4	8	0	14	o
6	Humanity course 1	1	2	zal_O	16			1	30	16	17	0	47	f
7	Humanity course 2	2	2	zal_O	16			1	30	16	17	0	47	f
9	Foreign language 1	2	2	zal_O		30		1	30	30	31	30	61	f
10	Foreign language 2	3	2	zal_O		30		1	30	30	31	30	61	f
11	Foreign language 3	4	2	zal_O		30		1	30	30	31	30	61	f
12	Foreign language 4	5	2	Egz.		30		1	30	30	31	30	61	f
Basic subjects														
1	Foundations of logic and set theory	1	5	Egz.	20	20		3	80	40	43	30	123	o
2	Repetitory course of elementary mathematics	1	2	zal_O		20		0	38	20	20	45	58	o
3	Support applications	1	3	zal_O			45	1	30	45	46	45	76	o
4	Mathematical analysis	2	6	Egz.	20	30		5	85	50	55	30	140	o
5	Physics	3	6	Egz.	20		30	5	95	50	55	45	150	o
6	Probability methods and statistics	3	5	Egz.	30	30		5	60	60	65	30	125	o
7	Statistical packages	3	1	zal_O			10	2	15	10	12	15	27	o
8	Foundations of electronics and electrical engineering	4	5	zal_O	20		20	5	82	40	45	30	127	o

9	Subject to be chosen 1	5	5	zal_O	20		20	5	82	40	45	30	127	f
	Electronic measuring ^													
	Internet of things ^													
	Sensorics ^													
	Subjects for field of study													
1	Introduction to programming	1	5	Egz.	20		20	5	80	40	45	30	125	o
2	Data bases	1	5,5	Egz.	20		30	5	95	50	55	45	150	o
3	Structured programming	2	6	Egz.	20		30	5	95	50	55	45	150	o
4	Data visualization	2	5	Egz.	20		30	5	80	50	55	45	135	o
5	CAD computer supported designing	2	4	zal_O	10		20	5	60	30	35	30	95	o
6	Algorithms and data structures	3	4,5	Egz.	20		20	5	80	40	45	30	125	o
7	Social and vocational problems of computer science	3	1	zal_O	10			0	20	10	10	0	30	o
8	Object oriented programming	3	6	Egz.	20		30	5	95	50	55	45	150	o
9	Digital engineering	3	4,5	zal_O	20		20	5	82	40	45	30	127	o
10	Computers organization and architecture	4	3	zal_O	30		15	5	30	45	50	15	80	o
11	Computer networks	4	5	Egz.	30		30	5	60	60	65	30	125	o
12	Declarative programming – programming paradigms	4	5	Egz.	20		20	7	80	40	47	30	127	o
13	Operating systems	4	5	Egz.	30		30	5	35	60	65	30	100	o
14	Information system design	4	5	zal_O	20		20	3	82	40	43	30	125	o
15	Subject to be chosen 2	5	4,5	zal_O	20		20	5	80	40	45	30	125	f
	Security of computer systems ^^													
	Elements of intelligent robotics^^													
16	Software engineering	5	5	Egz.	20		20	9	89	40	49	30	138	o
17	Introduction to machine graphics	5	5	Egz.	20		20	5	80	40	45	30	125	o
18	Facultative subject	6	5	Egz.	20		20	5	80	40	45	30	125	f
19	Embedded systems	6	5	Egz.	20		20	5	80	40	45	30	125	o
20	Subject to be chosen 4	7	5	Egz.	20		20	5	80	40	45	30	125	f
	Needs of job market ^^^													
	Control systems ^^^													
	Game designing based on Unity engine ^^^													
	Software testing ^^^													
	Subjects for speciality													
1	Linear algebra and analytical geometry	1	6	Egz.	20	30		5	95	50	55	45	150	o

2	Discrete mathematics for IT	2	5	Egz.	30	30		5	80	60	65	30	145	o
3	Programming of WWW applications	5	4	zal_O	10		30	5	70	40	45	45	115	o
4	Methods of knowledge engineering	6	5	Egz.	20		20	5	80	40	45	30	125	o
5	Subject to be chosen 3	5	4	zal_O	20		20	5	65	30	35	30	100	f
	Administration of computer networks ^^^^													
	Programming of internet services ^^^^													
6	Subject to be chosen 5	7	4	zal_O			30	5	65	30	35	30	100	f
	Information design management ^^^^^													
	Diagnosing and servicing of computer devices and systems^^^^^													
Specialising														
1	Specialized lecture 1	6	2,5	zal_O	20			3	43	20	23	0	66	f
2	Graduation computer laboratory 1	6	2,5	zal_O			20	8	47	20	28	30	75	f
3	Team design	6	4	zal_O			30	5	65	30	35	50	100	f
4	Specialized lecture 2	7	2,5	zal_O	20			3	43	20	23	0	66	f
5	Graduation computer laboratory 2	7	3,5	zal_O			30	7	67	30	37	45	104	f
Others														
1	Professional practice	6	6	zal_O				52	108	0	52	160	160	f
2	Diploma Thesis	7	15					75	300	0	75	125	375	f

Together:		ECTS	exams	lec.	exer.	lab.	others	self-study	lec.+ex.	contact.	pract.	summary
semester 1	1	30	4	108	70	95	24	466	273	297	240	763
semester 2	2	30	4	116	90	80	27	460	286	313	210	773
semester 3	3	30	4	120	60	110	28	477	290	318	225	795
semester 4	4	30	3	150	30	135	31	399	315	346	195	745
semester 5	5	30	3	114	30	130	39	502	264	303	225	805
semester 6	6	30	3	80	0	110	83	503	190	273	330	776
semester 7	7	30	1	40	0	80	95	555	120	215	230	770
Number of exams/ ECTS		210	22	728	280	740	327	3362	1738	2065	1655	5427

I	ECTS: summary	Punkty ECTS		Godziny	
		Liczba godzin	%	Liczba	%
	Together in plan of studies	210	100%	5427	100%
1	requiring the direct contact with an academic teacher*	79,9	38,1%	2065	38,1%
2	in basic sciences	38	18,1%	953	17,6%
3	of practical nature (laboratories, projects, workshops)	64,0	30,5%	1655	30,5%
4	general academic to be realized with another field of study	14	6,7%	386	7,1%
5	Humanity and social subjects	10	4,8%	244	4,5%
6	subjects to be chosen - at least 30% of ECTS	75,5	36,0%	1986	36,6%
7	Professional practice	6	2,9%	160	2,9%

II	Percentage of ECTS for each field of study in ECTS	%
	field of study	
1	technological sciences	83,3%
2	science	16,7%
	Together % of ECTS	

INFORMATION SCIENCES, speciality: General Information Sciences

Educational profile: general academic

from 2017/18

Form of studies: part-time

Level of qualification: first degree studies

Qualifications gained: first degree studies

Area of education: in science and technological sciences

No.	Name of subject/ module	sem.	ECTS	exam in sem.	Hours in semester									
					lect.	exerc.	lab.	others	self-study	lect.+exerc	contact	practical	together	status
General requirements														
1	Ergonomics	1	0,25	zal.	2			0	3	2	2	0	5	o
2	Intellectual property protection	1	0,25	zal.	2			0	3	2	2	0	5	o
3	Etiquette	1	0,5	zal.	4			0	6	4	4	0	10	o
4	Safety and hygiene at work	1	0,5	zal.	4			4	6	4	8	0	14	o
5	Patent information	5	0,5	zal.	4			4	6	4	8	0	14	o
6	Humanity course 1	1	2	zal_O	16			1	30	16	17	0	47	f
7	Humanity course 2	2	2	zal_O	16			1	30	16	17	0	47	f
9	Foreign language 1	2	2	zal_O		30		1	30	30	31	30	61	f
10	Foreign language 2	3	2	zal_O		30		1	30	30	31	30	61	f
11	Foreign language 3	4	2	zal_O		30		1	30	30	31	30	61	f
12	Foreign language 4	5	2	Egz.		30		1	30	30	31	30	61	f
Basic subjects														
1	Foundations of logic and set theory	1	5	Egz.	20	20		3	80	40	43	30	123	o
2	Repetitory course of elementary mathematics	1	2	zal_O		20		0	38	20	20	45	58	o
3	Support applications	1	3	zal_O			45	1	30	45	46	45	76	o
4	Mathematical analysis	2	6	Egz.	20	30		5	85	50	55	30	140	o
5	Physics	3	6	Egz.	20		30	5	95	50	55	45	150	o
6	Probability methods and statistics	3	5	Egz.	30	30		5	60	60	65	30	125	o
7	Statistical packages	3	1	zal_O			10	2	15	10	12	15	27	o
8	Foundations of electronics and electrical engineering	4	5	zal_O	20		20	5	82	40	45	30	127	o

9	Subject to be chosen 1	5	5	zal_O	20		20	5	82	40	45	30	127	f
	Electronic measuring ^													
	Internet of things ^													
	Sensorics ^													
Subjects for field of study														
1	Introduction to programming	1	5	Egz.	20		20	5	80	40	45	30	125	o
2	Data bases	1	5,5	Egz.	20		30	5	95	50	55	45	150	o
3	Structured programming	2	6	Egz.	20		30	5	95	50	55	45	150	o
4	Data visualization	2	5	Egz.	20		30	5	80	50	55	45	135	o
5	CAD computer supported designing	2	4	zal_O	10		20	5	60	30	35	30	95	o
6	Algorithms and data structures	3	4,5	Egz.	20		20	5	80	40	45	30	125	o
7	Social and vocational problems of computer science	3	1	zal_O	10			0	20	10	10	0	30	o
8	Object oriented programming	3	6	Egz.	20		30	5	95	50	55	45	150	o
9	Digital engineering	3	4,5	zal_O	20		20	5	82	40	45	30	127	o
10	Computers organization and architecture	4	3	zal_O	30		15	5	30	45	50	15	80	o
11	Computer networks	4	5	Egz.	30		30	5	60	60	65	30	125	o
12	Declarative programming – programming paradigms	4	5	Egz.	20		20	7	80	40	47	30	127	o
13	Operating systems	4	5	Egz.	30		30	5	35	60	65	30	100	o
14	Information system design	4	5	zal_O	20		20	3	82	40	43	30	125	o
15	Subject to be chosen 2	5	4,5	zal_O	20		20	5	80	40	45	30	125	f
	Security of computer systems ^^													
	Elements of intelligent robotics^^													
16	Software engineering	5	5	Egz.	20		20	9	89	40	49	30	138	o
17	Introduction to machine graphics	5	5	Egz.	20		20	5	80	40	45	30	125	o
18	Facultative subject	6	5	Egz.	20		20	5	80	40	45	30	125	f
19	Embedded systems	6	5	Egz.	20		20	5	80	40	45	30	125	o
20	Subject to be chosen 4	7	5	Egz.	20		20	5	80	40	45	30	125	f
	Needs of job market ^^^													
	Control systems ^^^													
	Game designing based on Unity engine ^^^													
	Software testing ^^^													
Subjects for speciality														
1	Elements of algebra and analytical geometry	1	6	Egz.	20	30		5	95	50	55	45	150	o

2	Elements of discrete mathematics	2	5	Egz.	30	30		5	80	60	65	30	145	o
3	Operating research	5	4	zal_O	10		20	5	65	30	35	45	100	o
4	Artificial intelligence	6	5	Egz.	20		20	5	80	40	45	30	125	o
5	Subject to be chosen 3	5	4	zal_O	20		20	5	70	40	45	30	115	f
	Elements of numerical methods ^{****}													
	Automats and formal languages ^{****}													
6	Subject to be chosen 5	7	4	zal_O	10		20	5	65	30	35		100	f
	WWW applications ^{****}													
	Computer subassemblies design ^{****}													
Specialising														
1	Specialized lecture 1	6	2,5	zal_O	20			3	43	20	23	0	66	f
2	Graduation computer laboratory 1	6	2,5	zal_O			20	8	47	20	28	30	75	f
3	Team design	6	4	zal_O			30	5	65	30	35	50	100	f
4	Specialized lecture 2	7	2,5	zal_O	20			3	43	20	23	0	66	f
5	Graduation computer laboratory 2	7	3,5	zal_O			30	7	67	30	37	45	104	f
Others														
1	Professional practice	6	6	zal_O				52	108	0	52	160	160	f
2	Diploma Thesis	7	15					75	300	0	75	125	375	f

Together:		ECTS	l. egz.	wyk.	kon.	lab.	inne	amodzieln	w+ćw	kontakt.	prakt	razem	
semester 1	1	30	4	108	70	95	24	466	273	297	240	763	
semester 2	2	30	4	116	90	80	27	460	286	313	210	773	
semester 3	3	30	4	120	60	110	28	477	290	318	225	795	
semester 4	4	30	3	150	30	135	31	399	315	346	195	745	
semester 5	5	30	3	114	30	120	39	502	264	303	225	805	
semester 6	6	30	3	80	0	110	83	503	190	273	330	776	
semester 7	7	30	1	50	0	70	95	555	120	215	200	770	
Number of exams/ ECTS		210	22	738	280	720	327	3362	1738	2065	1625	5427	

I	ECTS: summary	ECTS		Hours	
		Liczba godzin	%	Liczba	%
	Together in plan of studies	210	100%	5427	100%
1	requiring the direct contact with an academic teacher*	79,9	38,1%	2065	38,1%
2	in basic sciences	38	18,1%	953	17,6%
3	of practical nature (laboratories, projects, workshops)	62,9	29,9%	1625	29,9%
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II	Percentage of ECTS for each field of study in ECTS	%
	field of study	
1	technological sciences	83,3%
2	science	16,7%
	Together % of ECTS	

Kieru INFORMATION SCIENCES, speciality: Engineering of IT Systems

Educational profile: general academic

actual from 2017/18

Form of studies: part-time

Level of qualification: first degree studies

Qualifications gained: first degree studies

Area of education: in science and technological sciences

Semestr 1

		ECTS		lect.	exerc.	lab.
1	Ergonomics	0,25	zal.	2		
2	Intellectual property protection	0,25	zal.	2		
3	Etiquette	0,5	zal.	4		
4	Safety and hygiene at work	0,5	zal.	4		
5	Humanity course 1	2	zal_O	16		
6	Foundations of logic and set theory	5	Egz.	20	20	
7	Repetitory course of elementary mathematics	2	zal_O		20	
8	Support applications	3	zal_O			30
9	Introduction to programming	5	Egz.	20		20
10	Data bases	6	Egz.	20		30
11	Linear algebra and analytical geometry	6	Egz.	20	30	

Semestr 2

		ECTS		lect.	exerc.	lab.
1	Humanity course 2	2	zal_O	16		
2	Foreign language 1	2	zal_O		30	
3	Mathematical analysis	6	Egz.	20	30	
4	Structured programming	6	Egz.	20		30
5	Data visualization	5	Egz.	20		30
6	CAD computer supported designing	4	zal_O	10		20
7	Discrete mathematics for IT	5	Egz.	30	30	

Semestr 3

		ECTS		lect.	exerc.	lab.
1	Foreign language 2	2	zal_O		30	
2	Physics	6	Egz.	20		30
3	Probability methods and statistics	5	Egz.	30	30	
4	Statistical packages	1	zal_O			10
5	Algorithms and data structures	4,5	Egz.	20		20
6	Social and vocational problems of computer science	1	zal_O	10		
7	Object oriented programming	6	Egz.	20		30
8	Digital engineering	4,5	zal_O	20		20

Semestr 4

		ECTS		lect.	exerc.	lab.
1	Foreign language 3	2	zal_O		30	
3	Foundations of electronics and electrical engineering	5	zal_O	20		20
4	Computers organization and architecture	3	zal_O	30		15
5	Computer networks	5	Egz.	30		30
6	Declarative programming – programming paradigms	5	Egz.	20		20
7	Operating systems	5	Egz.	30		30
8	Information system design	5	Egz.	20		20

Semestr 5		ECTS		lect.	exerc.	lab.
1	Patent information	0,5	zal.	4		
2	Foreign language 4	2	Egz.		30	
3	Subject to be choosen 1	5	zal_O	20		20
	Electronic measuring ^					
	Internet of things ^					
	Sensorics ^					
4	Subject to be choosen 2	4,5	zal_O	20		20
	Security of computer systems ^^					
	Elements of intelligent robotics^^					
5	Software engineering	5	Egz.	20		20
6	Introduction to machine graphics	5	Egz.	20		20
7	Programming of WWW applications	4	zal_O	10		30
8	Subject to be choosen 3	4	zal_O	20		20
	Administration of computer networks ^^^^					
	Programming of internet services ^^^^					

Semestr 6		ECTS		lect.	exerc.	lab.
1	Facultative subject	5	Egz.	20		20
2	Embedded systems	5	Egz.	20		20
3	Methods of knowledge engineering	5	Egz.	20		20
4	Specialized lecture 1	2,5	zal_O	20		
5	Graduation computer laboratory 1	2,5	zal_O			20
6	Team design	4	zal_O			30
7	Professional practice	6	zal_O			

Semestr 7		ECTS		wyk.	kon.	lab.
1	Subject to be choosen 4	5	Egz.	20		20
	Needs of job market ^^^					
	Control systems ^^^					
	Game designing based on Unity engine ^^					
	Software testing ^^^					
2	Subject to be choosen 5	4	zal_O			30
	Information design management ^^^^					
	Diagnosing and servicing of computer devices and systems^^^^					
3	Specialized lecture 2	2,5	zal_O	20		
4	Graduation computer laboratory 2	3,5	zal_O			30
5	Diploma Thesis	15				

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obowiązuje od 2017/18

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Area of education: in science and technological sciences

Semestr 1

		ECTS		lect.	exerc.	lab.
1	Ergonomics	0,25	zal.	2		
2	Intellectual property protection	0,25	zal.	2		
3	Etiquette	0,5	zal.	4		
4	Safety and hygiene at work	0,5	zal.	4		
5	Humanity course 1	2	zal_O	16		
6	Foundations of logic and set theory	5	Egz.	20	20	
7	Repetitory course of elementary mathematics	2	zal_O		20	
8	Support applications	3	zal_O			30
9	Introduction to programming	5	Egz.	20		20
10	Data bases	6	Egz.	20		30
11	Elements of algebra and analytical geometry	6	Egz.	20	30	

Semestr 2

		ECTS		lect.	exerc.	lab.
1	Humanity course 2	2	zal_O	16		
2	Foreign language 1	2	zal_O		30	
3	Mathematical analysis	6	Egz.	20	30	
4	Structured programming	6	Egz.	20		30
5	Data visualization	5	Egz.	20		30
6	CAD computer supported designing	4	zal_O	10		20
7	Elements of discrete mathematics	5	Egz.	30	30	

Semestr 3

		ECTS		lect.	exerc.	lab.
1	Foreign language 2	2	zal_O		30	
2	Physics	6	Egz.	20		30
3	Probability methods and statistics	5	Egz.	30	30	
4	Statistical packages	1	zal_O			10
5	Algorithms and data structures	4,5	Egz.	20		20
6	Social and vocational problems of computer science	1	zal_O	10		
7	Object oriented programming	6	Egz.	20		30
8	Digital engineering	4,5	zal_O	20		20

Semestr 4

		ECTS		lect.	exerc.	lab.
1	Foreign language 3	2	zal_O		30	
3	Foundations of electronics and electrical engineering	5	zal_O	20		20
4	Computers organization and architecture	3	zal_O	30		15
5	Computer networks	5	Egz.	30		30
6	Declarative programming – programming paradigms	5	Egz.	20		20
7	Operating systems	5	Egz.	20		20
8	Information system design	5	Egz.	20		20

Semestr 5		ECTS		lect.	exerc.	lab.
1	Patent information	0,5	zal.	4		
2	Foreign language 4	2	Egz.		30	
3	Subject to be choosen 1	5	zal_O	20		20
	Electronic measuring ^					
	Internet of things ^					
	Sensorics ^					
4	Subject to be choosen 2	4,5	zal_O	20		20
	Security of computer systems ^^					
	Elements of intelligent robotics^^					
5	Software engineering	5	Egz.	20		20
6	Introduction to machine graphics	5	Egz.	20		20
7	Operating research	4	zal_O	10		20
8	Subject to be choosen 3	4	zal_O	20		20
	Elements of numerical methods^^^^					
	Automats and formal languages ^^^^					

Semestr 6		ECTS		lect.	exerc.	lab.
1	Facultative subject	5	Egz.	20		20
2	Embedded systems	5	Egz.	20		20
3	Artificial intelligence	5	Egz.	20		20
4	Specialized lecture 1	2,5	zal_O	20		
5	Graduation computer laboratory 1	2,5	zal_O			20
6	Team design	4	zal_O			30
7	Professional practice	6	zal_O			

Semestr 7		ECTS		wyk.	kon.	lab.
1	Subject to be choosen 4	5	Egz.	20		20
	Needs of job market ^^^					
	Control systems ^^^					
	Game designing based on Unity engine ^^					
	Software testing ^^^					
2	Subject to be choosen 5	4	zal_O	10		20
	WWW applications^^^^					
	Computer subassemblies design ^^^^^					
3	Specialized lecture 2	2,5	zal_O	20		
4	Graduation computer laboratory 2	3,5	zal_O			30
5	Diploma Thesis	15				