PROGRAMME OF STUDIES

1. Description

Number of semesters: 4	Number ECTS points necessary to obtain qualifications: 120
Prerequisites:	Upon completion of studies graduate obtains
• completed undergraduate degree in Electrical Engineering at universities in Poland or	professional degree of: master of science, engineer
abroad,	2nd level qualifications
• completed undergraduate degree in related field of study, verified by the Qualification	
Comission,	
• knowledge of the English language at a level equivalent to B2 certificate.	
Possibility of continuing studies: 3rd level studies (PhD)	Graduate profile, employability:
	A graduate of English-language specialty of the second cycle in the energy control (Control
	in Electrical Power Engineering) has an advanced and well-established knowledge of the
	techniques of control and protection of power systems. He has also the ability to use tools
	for analysis of the distribution systems and the design of control systems. He is capable of
	creative work and to make decisions and lead teams labor. He is prepared to continue his education in on third degree studies (PhD) in domestic and foreign universities.
	education in on third degree studies (Fild) in domestic and joreign diliversities.
Indicate connection with University's mission and its development strategy:	
The knowledge gained during studies should not only lead to success in the future	
careers of the graduate, but also shape a creative man with a sense of entrepreneurs,	
open to new challenges.	

2. Fields of science and scientific disciplines to which educational effects apply: sicence field: technical sciences, science discipline: Electrical Engineering

3. Concise analysis of consistency between assumed educational effects and labour market needs:

Learning outcomes refer not only to the large sense of electrical engineering, in particular to automation and control in power systems, but - due to the demands of modern techniques and technologies currently used in power generation and industry – but also to the electronics, power electronics and microprocessor technology, computer science and management techniques and marketing. Obtaining the intended learning outcomes will enable graduates to find attractive and interesting work in the energy sector of the national economy, particularly in units where are designed and manufactured systems and control systems for the power industry. It is also ready to start a business in the electrical industry. Work on learning outcomes were refereed and discussed at the meetings of the Convention of the Faculty of Electrical Engineering, which includes, among others, representatives of industrial enterprises of the Polish territory, with particular consideration to Lower Silesia and the neighbouring provinces. The Convention also includes foreign members. At these meetings were presented and explained the needs of the labour market.

4. List of education modules:4.1. List of obligatory modules4.1.1. List of general education modules

4.1.1.1. Liberal-managerial subjects module

			We	ekly n	numbe	er of ho	urs		Number	of hours	Number o	of ECTS points	 6		Cours	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK	Way of crediting	university- wide	practical	kind	type

4.1.1.2. Foreign languages module

			We	eekly r	numb	er of ho	ours	Field of study advertiseral offers	Number	of hours	Number o	of ECTS points	 \A/= =£		Cours	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK	Way of crediting	university- wide	practical	kind	type

4.1.1.3. Sporting classes module

			We	ekly n	numbe	er of ho	ours	5: 11-6 - 1 - 1 - 1 - 1 - 1 - 1	Number	of hours	Number (of ECTS points	-			Cours	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK		Way of crediting	university- wide	practical	kind	type

4.1.1.4. Information technologies module

			W	eekly r	numbe	r of ho	urs	Field of about advantional office	Number	of hours	Number o	of ECTS points	5	\A/= = f		Cours	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK	-	Way of crediting	university- wide	practical	kind	type

Altogether for general education modules

	Total n	umbe	r of hou		Total number of	Total number	number	Numb er of
lec	cl	lab	pr	sem	ZZU hours	hours	noints	points
0	0	0	0	0	0	0	0	0

4.1.2. List of basic sciences modules

4.1.2.1. Mathematics module

				W	eekly r	numbe	r of ho	ours	Field of study adversaries of effect	Number	of hours	Number o	of ECTS points		\\/		Cour	se	
١	No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes		Way of crediting	university- wide	practical	kind	type
	1	ELR031330W	Numerical and Optimization Methods	1					K2ETK_W02	15	60	2	1,4	Т	Z			PD	ОВ
	2	ELR031330L	Numerical and Optimization Methods			1			K2ETK_U02 S2CPE_K01	15	30	1	0,7	Т	Z		Р	PD	ОВ
			Total	1	0	1	0	0		30	90	3	2,1						

4.1.2.2. Physics module

				W	eekly r	numbe	r of ho	urs	5: 11.6	Number	of hours	Number o	of ECTS points	-			Cour	se	
N	No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	RK		Way of crediting	university- wide	practical	kind	type
	1	ELR033312W	Advanced Measurement in Electrical Power Engineering	2					K2ETK_W05 S2CPE_W12	30	60	2	1,4	Т	Z			PD	ОВ
	2	ELR033312L	Advanced Measurement in Electrical Power Engineering			2			K2ETK_U04 S2CPE_K02	30	60	2	1,4	Т	Z		Р	PD	ОВ
			Total	2	0	2	0	0		60	120	4	2,8						

4.1.2.3. Chemistry module

Γ				We	ekly n	numbe	r of ho	urs		Number	of hours	Number o	of ECTS points	14 / f		Cours	ie .	
	No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	RK	Way of crediting	university- wide	practical	kind	type

Altogether for basic sciences modules

 						Total Total Numb number number of CNPS of ECTS ECTS hours noints 210 7 4,9		
_					Total	Total	Total	Numb
1	otal n	umbe	r of hou	rs	number of	number	number	er of
						of CNPS	of FCTS	FCTS
lec	cl	lab	pr	sem	ZZU hours	b		
			•			nours	points	points
3	0	3	0	0	90	210	7	4,9

4.1.3. List of main-field-of-study modules

4.1.3.1. Obligatory main-field-of-study module

			W	eekly r	umbe	r of ho	urs		Number	of hours	Number	of ECTS points		6		Cour	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes		Way of crediting	university- wide	practical	kind	type
1	ELR031332W	Circuits and Systems	2					K2ETK_W01	30	60	2	1,4	Т	E			K	ОВ
2	ELR031332C	Circuits and Systems		1				K2ETK_U01 K2ETK_K01	15	30	1	0,7	Т	Z		Р	K	ОВ
3	ELR032131W	Power System Faults	2					K2ETK_W03 K2ETK_K01	30	120	4	2,8	Т	Е			K	ОВ
4	ELR033225W	Dynamics and Control of AC and DC Drives	2					K2ETK_W04	30	120	4	2,8	Т	Е			K	ОВ
5	ELR033225L	Dynamics and Control of AC and DC Drives			1			K2ETK_U03 K2ETK_K02 S2CPE_K01	15	30	1	0,7	Т	Z		Р	K	ОВ
6	ELR033225P	Dynamics and Control of AC and DC Drives				1		K2ETK_U03 K2ETK_K02 S2CPE_K01	15	30	1	0,7	Т	Z		Р	K	ОВ
		Total	6	1	1	1	0		135	390	13	9,1						

Altogether for main-field-of-study modules

7	Гotal n	umbe	r of hou		Total number of	Total number	number	Numb er of
lec	cl	lab	pr	sem	ZZU hours	hours	points	points
6	1	1	1	0	135	390	13	9,1

4.1.4. List of specialization modules

4.1.4.1. Obligatory specialization subjects module

			We	eekly r	numbe	r of ho	urs	51 11 of at all and and at a first	Number	of hours	Number o	f ECTS points	-			Cour	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes	Form of course	Way of crediting	university wide	practical	kind	type
1	ELR031120W	Advanced High Voltage Technology	2					S2CPE_W07 S2CPE_K02	30	90	3	2,1	Т	Е			S	ОВ
2	ELR031120L	Advanced High Voltage Technology			2			S2CPE_K02 S2CPE_U08 S2CPE_U09	30	60	2	1,4	Т	Z		Р	S	ОВ
3	ELR031331W	Power Quality Assessment	2					S2CPE_W13 K2ETK_K01 K2ETK_K02	30	60	2	1,4	Т	Z			S	ОВ
4	ELR031331L	Power Quality Assessment			1			S2CPE_U12 S2CPE_U14 K2ETK_K01 K2ETK_K02	15	30	1	0,7	T	Z		Р	S	ОВ
5	ELR032132W	Digital Control Techniques	2					S2CPE_W01 K2ETK_K02 S2CPE_K01 S2CPE_K02	30	90	3	2,1	Т	Z			S	ОВ
6	ELR032132L	Digital Control Techniques			1			S2CPE_U01 K2ETK_K02 S2CPE_K01 S2CPE_K02	15	30	1	0,7	Т	Z		Р	S	ОВ
7	ELR032133W	Simulation and Analysis of Power System Transients	1					S2CPE_W01 S2CPE_W05	15	30	1	0,7	Т	Z			S	ОВ
8	ELR032133L	Simulation and Analysis of Power System Transients			2			S2CPE_U02 S2CPE_U15 S2CPE_K01 S2CPE_K02	30	60	2	1,4	T	Z		Р	S	ОВ
9	ELR032134W	Digital Signal Processing for Protection and Control	2					S2CPE_W02	30	60	2	1,4	Т	E			S	ОВ
10	ELR032134P	Digital Signal Processing for Protection and Control				2		S2CPE_U03 K2ETK_K02	30	60	2	1,4	Т	Z		Р	S	ОВ
11	ELR032135W	Artificial Intelligence Techniques	2					S2CPE_W08	30	60	2	1,4	Т	Z			S	ОВ
12	ELR032135P	Artificial Intelligence Techniques				1		K2ETK_K02 K2ETK_U02 S2CPE_K01	15	30	1	0,7	Т	Z		Р	S	ОВ
13	ELR032139P	Fault Calculations				2		K2ETK_U02 S2CPE_U15 K2ETK_K02	30	60	2	1,4	Т	Z		Р	S	ОВ

14	ELR032231W	Power System Protection	2					S2CPE_W03 S2CPE_K01	30	90	3	2,1	Т	E		S	ОВ
15	ELR032231L	Power System Protection			2			S2CPE_U04 S2CPE_K01	30	60	2	1,4	Т	Z	Р	S	ОВ
16	ELR032232W	Fiber Optics Communications and Sensors	2					S2CPE_W04 S2CPE_K01	30	60	2	1,4	Т	Z		S	ОВ
17	ELR032232L	Fiber Optics Communications and Sensors			1			S2CPE_U05 S2CPE_K01	15	30	1	0,7	Т	Z	Р	S	ОВ
18	ELR032233W	Power System Automation and Security	2					S2CPE_W03 S2CPE_W09 S2CPE_K01	30	90	3	2,1	Т	E		S	ОВ
19	ELR032233S	Power System Automation and Security					1	S2CPE_U04 S2CPE_K01	15	30	1	0,7	Т	Z	Р	S	ОВ
20	ELR032331W	Renewable Energy Sources	2					S2CPE_W05 S2CPE_K01	30	60	2	1,4	Т	Z		S	ОВ
21	ELR032331S	Renewable Energy Sources					1	S2CPE_U06 S2CPE_K01	15	30	1	0,7	Т	Z	Р	S	ОВ
22	ELR032531W	Electric Power System Operation and Control	2					S2CPE_W06	30	60	2	1,4	Т	Z		S	ОВ
23	ELR032531S	Electric Power System Operation and Control					1	S2CPE_K02 S2CPE_U07 S2CPE_U10	15	30	1	0,7	Т	Z	Р	S	ОВ
24	ELR032532W	Electrical Power Systems Management	1					S2CPE_W10 S2CPE_K02	15	30	1	0,7	Т	Z		S	ОВ
25	ELR032532S	Electrical Power Systems Management					1	S2CPE_U07 S2CPE_U11 S2CPE_K02	15	30	1	0,7	Т	Z	Р	S	ОВ
26	ELR033311W	Electromagnetic Compatibility	2					S2CPE_W11 S2CPE_K02	30	60	2	1,4	Т	Z		S	ОВ
27	ELR033311L	Electromagnetic Compatibility			1			S2CPE_K02 S2CPE_U12 S2CPE_U13	15	30	1	0,7	Т	Z	Р	S	ОВ
28	ESN001501W	Advanced Technology in Electrical Power Generation	2					S2CPE_W05 S2CPE_W14	30	90	3	2,1	Т	Z		S	ОВ
29	ESN001501C	Advanced Technology in Electrical Power Generation		1				K2ETK_K03 S2CPE_U06 S2CPE_U16	15	30	1	0,7	Т	Z	Р	S	ОВ
		Total	26	1	10	5	4		690	1530	51	35,7		_			

Altogether for specialization modules

-	Total n	umbe	r of hou		Total number of	Total number	number	Numb er of
lec	cl	lab	pr	sem	ZZU hours	hours	points	points
26	1	10	5	4	690	1530	51	35,7

4.2. List of optional modules

4.2.1. List of general education modules

4.2.1.1. Liberal-managerial subjects module

			We	eekly r	numbe	er of ho	urs	5111-6-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	Number	of hours	Number o	of ECTS points	-			Cour	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes	Form of course		university wide	practical	kind	type
1	FLH051721S	Ethics in bussiness					1	K2ETK_U07 K2ETK_K07	15	60	2	1,4	Т	Z	0	Р	ко	W
2	PKH053721S	The art of public speaking					1	K2ETK_U07 K2ETK_K07	15	60	2	1,4	Т	Z	0	Р	КО	W
3	PKH053821S	Social communication					1	K2ETK_U07 K2ETK_K07	15	60	2	1,4	Т	Z	0	Р	ко	W
4	PRR031231W	Intellectual property rights in the world	1					K2ETK_W07 K2ETK_K03 K2ETK_K05	15	30	1	0,7	Т	Z	0		ко	W
5	PRR031232W	Inventions and patents	1					K2ETK_W07 K2ETK_K03 K2ETK_K05	15	30	1	0,7	Т	Z	0		КО	W
6	PRR031233W	Industrial property and copyright for engineers	1					K2ETK_W07 K2ETK_K03 K2ETK_K05	15	30	1	0,7	Т	Z	0		КО	W
7	PRZ001007W	Protection of Intellectual Property	1					K2ETK_W07 K2ETK_K03 K2ETK_K05	15	30	1	0,7	Т	Z	0		КО	W
8	PRZ001008W	International Law	1					K2ETK_W07 K2ETK_K03 K2ETK_K05	15	30	1	0,7	Т	Z	0		КО	W
9	ZMR032538W	Market Mechanisms in Power Systems with Distributed Energy	1					K2ETK_W06 K2ETK_K03 K2ETK_K07	15	60	2	1,4	Т	Z	0		КО	W
10	ZMZ001499W	Fundamentals of Management	1					K2ETK_W06 K2ETK_K03 K2ETK_K07	15	60	2	1,4	Т	Z	0		ко	W
		Total	2	0	0	0	1		45	150	5	3,5						

4.2.1.2. Foreign languages module

			We	eekly r	numbe	r of ho	urs	5:11.6.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	Number	of hours	Number o	of ECTS points	-			Cour	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes	Form of course	Way of crediting	university- wide	practical	kind	type
1	JZL100709BKC	Foreign language B2+ or C1+		1				K2ETK_U05 K2ETK_K01	15	30	1	0,7	Т	Z	0	Р	ко	w
2	JZL100710BKC	Foreign language A1 or A2		3				K2ETK_U06 K2ETK_K01	45	60	2	1,4	Т	Z	0	Р	ко	W
	-	Total	0	4	0	0	0		60	90	3	2,1						

4.2.1.3. Sporting classes module

				W	eekly n	iumbe	er of ho	urs		Number	of hours	Number o	of ECTS points		\\/		Cour	se	
N	lo.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	RK		Way of crediting	university- wide	practical	kind	type
	1	WFW010000BKC	Sporting classes		1				K2ETK_K06	15	15	1	0,7	Т	Z	0	Р	ко	w
			Total	0	1	0	0	0		15	15	1	0,7						

4.2.1.4. Information technologies module

			We	eekly i	numb	er of ho	ours	5: 11 - 6 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Number	of hours	Number o	f ECTS points				Cours	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	DV.	Form of course	. , .	university- wide	practical	kind	type

Altogether for general education modules

Total number of hours								
					Total	Total	Total	Numb
1	rotal n	umbe	r of hou	rs	number of	number	number	er of
					ZZU hours	of CNPS	of ECTS	ECTS
lec	cl	lab	pr	sem	220 110013	hours	points	points
2	5	0	0	1	120	255	9	6,3

4.2.2. List of basic sciences modules

4.2.2.1. Mathematics module

			We	eekly i	numb	er of h	ours	5:11-6-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	Number	of hours	Number o	of ECTS points	-	W		Cours	e	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	RK		Way of crediting	university- wide	practical	kind	type

4.2.2.2. Physics module

			We	ekly r	numbe	er of ho	urs	5:11-6-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	Number	of hours	Number o	of ECTS points	-		Cours	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK	Form of course	university- wide	practical	kind	type

4.2.2.3. Chemistry module

			We	eekly n	iumbe	er of ho	ours	5: 11 - 6 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Number	of hours	Number o	of ECTS points	- () A/		Cours	se	
No	. Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK		Way of crediting	university- wide	practical	kind	type

Altogether for basic sciences modules

-		-							
						Total	Total	Total	Numb
	1	rotal n	umbe	r of hou			number	number	er of
						ZZU hours	of CNPS	of ECTS	FCTS
	lec	cl	lab	pr	sem	ZZU hours	hours	points	points
	0	0	0	0	0	0	0	0	0

4.2.3. List of main-field-of-study modules

4.2.3.1. Optional main-field-of-study subjects module

				We	ekly n	numbe	r of ho	urs		Number	of hours	Number o	of ECTS points	F	\A/= =f		Cours	se	
١	No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	RK	Form of course		university- wide	practical	kind	type

4.2.3.2. Training module

			We	eekly n	numbe	er of ho	urs	5:11-6:1-1-1:1-1-1:1-1-1:1-1	Number	of hours	Number o	of ECTS points	-) A/ f		Cour	se	
No	. Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	RK		Way of crediting	university- wide	practical	kind	type
1	ELR035105Q	Diploma placement 4 weeks				40		S2CPE_U19 S2CPE_K01	160	120	4	2,8	Т	Z		Р	S	W
		Total	0	0	0	40	0		160	120	4	2,8						

4.2.3.3. Diploma dissertation module

			W	eekly r	numbe	r of ho	urs	5:11:6:11:6:1	Number	of hours	Number o	of ECTS points		M		Cour	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK		Way of crediting	university- wide	practical	kind	type
1	ELR035108S	Diploma seminar					2	S2CPE_U21 S2CPE_K01	30	90	3	2,1	Т	Z		Р	S	W
2	ELR035117P ELR035127P ELR035137P	Diploma Project				8		S2CPE_U20 K2ETK_K07	120	240	8	5,6	Т	Z		Р	S	W
3	ELR035119D ELR035129D ELR035139D	Master's thesis				12		S2CPE_U22 K2ETK_K04 S2CPE_K01	180	540	18	12,6	Т	Z		Р	S	w
		Total	0	0	0	20	2		330	870	29	20,3						

Altogether for main-field-of-study modules

7	Total n	umbe	r of hou		Total number of	Total number	Total number	Numb er of
lec	cl	lab	pr	sem	ZZU hours	hours	points	points
0	0	0	60	2	490	990	33	23,1

4.2.4. List of specialization modules

4.2.4.1. Specialization subjects module

			W	eekly n	umbe	r of ho	urs	51 11 - Cor. 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Number	of hours	Number o	of ECTS points	-	,		Cour	se	
No.	Course code	Name of course	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes	Form of course	Way of crediting	university wide	practical	kind	type
1	ELR031230W	Visual Engineering Environments and Graphical Languages	1					S2CPE_W15	15	30	1	0,7	Т	Е			S	W
2	ELR031230L	Visual Engineering Environments and Graphical Languages			2			K2ETK_K02 S2CPE_U17	30	90	3	2,1	Т	Z		Р	S	W
3	ELR031334W	Signal and Systems	2					K2ETK_W01 S2CPE_W15	30	90	3	2,1	Т	Е			S	W
4	ELR031334C	Signal and Systems		1				K2ETK_U01 S2CPE_U17 K2ETK_K01	15	30	1	0,7	Т	Z		Р	S	W
5	ELR031335W	Advanced Signal Processing Methods	2					S2CPE_W15	30	90	3	2,1	Т	Е			S	W
6	ELR031335C	Advanced Signal Processing Methods		1				S2CPE_U17 S2CPE_K01	15	30	1	0,7	Т	Z		Р	S	W
7	ELR032136W	Design of logic circuits	1					S2CPE_W16	15	60	2	1,4	Т	Z			S	W
8	ELR032136L	Design of logic circuits			1			K2ETK_K01 K2ETK_K02 S2CPE_K02 S2CPE_U18	15	30	1	0,7	Т	Z		Р	S	W
9	ELR032234W	PLC and Wireless Communications for Monitoring and Metering	2					S2CPE_K01 S2CPE_W15	30	90	3	2,1	Т	Е			S	W
10	ELR032234S	PLC and Wireless Communications for Monitoring and Metering					1	S2CPE_K01 S2CPE_U17	15	30	1	0,7	Т	Z		Р	S	W
11	ELR032335W	Advanced Substations and Electrical Equipment	2					S2CPE_W15	30	90	3	2,1	Т	Е			S	W
12	ELR032335P	Advanced Substations and Electrical Equipment				1		S2CPE_K01 S2CPE_U17	15	30	1	0,7	Т	Z		Р	S	W
13	ELR032534W	Power System Modelling	2					S2CPE_W15	30	90	3	2,1	Т	Е			S	W
14	ELR032534P	Power System Modelling				1		S2CPE_U17 S2CPE_K01	15	30	1	0,7	Т	Z		Р	S	W
15	ELR032535W	Computer Control of Power System	2					S2CPE_W15	30	90	3	2,1	Т	Е			S	W
16	ELR032535S	Computer Control of Power System					1	S2CPE_K01 S2CPE_U17	15	30	1	0,7	Т	Z		Р	S	W
17	ELR033226W	Fuzzy Logic Control	1					S2CPE_W16	15	60	2	1,4	Т	Z			S	W
18	ELR033226L	Fuzzy Logic Control			1			S2CPE_U18 S2CPE_K01	15	30	1	0,7	Т	Z		Р	S	W
19	ELR033227W	Control of Power Electronic Converters	1					S2CPE_W16 S2CPE_K01	15	60	2	1,4	Т	Z			S	W
20	ELR033227L	Control of Power Electronic Converters			1			S2CPE_U18 S2CPE_K01	15	30	1	0,7	Т	Z		Р	S	W
		Total	3	1	1	0	0		75	210	7	4,9						

Altogether for specialization modules

7	Гotal n	umbe	r of hou			Total number of CNPS	number	Numb er of
lec	cl	lab	pr	sem	ZZU hours	hours		points
3	1	1	0	0	75	210	7	4,9

4.3 Training module (Faculty Council resolution on principles of crediting training – attachment no.2)

Name of training:		Diploma placement 4 weeks	
Number of ECTS points	Number of ECTS points for BK classes	Training crediting mode	Code
4	2,8	report from training	ELR035105Q
Training duration		Training objective	
4 weeks	with the real demands of the employed technical equipment and technology of facility, in particular: • extends the knowledge gained durin • familiarize themselves with the spector of samples specific professional skills di • shapes the skills of effective community of self states and the functioning in an organizar powers, procedures, work planning, continuous improves the ability of self organization tasks, • improves the ability to use a foreign by free choice of the place of practice from the faculty list, students can pursue.	rectly related to the place of practice, inication in an organization, ational structure, the principles of the organization of ontrol, tion, teamwork, effective time management, diligence	ience, take note of the basic higher technical inspection work and the division of e, responsibility for assigned ce of units and facilities of some connection with the

4.4. Diploma dissertation module

Type of diploma dissertation:	magist	er
Number of diploma dissertation semesters	Number of ECTS points	Code
		ELR035108S
		ELR035117P
1	29	ELR035127P
		ELR035137P
		ELR035119D
·	Character of diploma dissertation	

Master's thesis has a computational, theoretical caracter, or may contain a description and analysis of the performed experimental studies. In each case it contains a section in which the author alone interpret and draw conclusions from their research. Intellectual contributions of private study should be clearly visible.

Number of BK ECTS points:	20,3

5. Ways of verifying assumed educational effects

Type of classes	Ways of verifying assumed educational effects
lecture	examination, progress/final test
class	progress/final test
laboratory	pretest, report from laboratory
project	project defence
seminar	participation in discussion, topic presentation, essay
training	report from training
diploma dissertation	prepared diploma dissertation

6. Total number of ECTS points, which student has to obtain from classes requiring direct academic teacher-student contact (enter total of ECTS points for courses/groups of courses denoted with code BK)

84 ECTS

7. Total number of ECTS points, which student has to obtain from basic sciences classes

Number of ECTS points for obligatory subjects	7
Number of ECTS points for optional subjects	0
Total number of ECTS points	7

8. Total number of ECTS points, which student has to obtain from practical classes, including laboratory classes

Number of ECTS points for obligatory subjects	26
Number of ECTS points for optional subjects	41
Total number of ECTS points	67

study					
9	ECTS				
	mber of ECTS points, w ECTS	hich student may obtain do	ing optional modules (min. 30% of total i	number of ECTS points	
11. Range of	diploma dissertation				
		The diploma exa	amination problems are available on the Faculty website	e.	
12. Requirer	ments concerning dead	lines for crediting courses/g	roups of courses for all courses in partic	ular modules	
	Course code	Name of course	Crediting by deadline of (number of semester)		
1					
2					
3					
<u>4</u> 5				_	
6				_	
7					
8					
9					
10					
	tudies (attachment no.				
Date Name and surname, signature of student representative					
Date		Dean's signature			

9. Minimum number of ECTS points, which student has to obtain doing education modules offered as part of university-wide classes or other main field of