

## PROGRAMME OF STUDIES

## 1. Description

<i>Number of semesters:4</i>	<i>Number ECTS points necessary to obtain qualifications:120</i>
<p><i>Prerequisites (particularly for second-level studies):</i></p> <p><b>Graduate at least of first-level studies (bachelor program).</b></p> <p><i>According to internal ordinance no 32/2012 from 30<sup>th</sup> April 2012r.</i></p> <p><a href="http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html">http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html</a></p>	<p><i>Upon completion of studies graduate obtains</i></p> <p><i>professional degree of: Master of Science (magister)</i></p> <p><i>2nd level qualifications</i></p>
<p><i>Possibility of continuing studies: third-level studies, doctoral studies.</i></p>	<p><i>Graduate profile, employability:</i></p> <p>A masters graduate possesses advanced specialist knowledge in the field of management sciences in the following areas: analytical models and methods, integrated information systems and, in particular, contemporary concepts and methods in managing, planning and monitoring the results of the activities of an enterprise, together with the functioning, development and strategical renewal of organizations. A masters graduate is characterized by the ability to think abstractly and a critical approach to theory, which enables him/her to identify, describe, analyze and interpret the complex processes and problems of a firm and its surroundings. He/she is in possession of the ability to integrate knowledge from various disciplines (economics, psychology, law) and apply computer and mathematical tools to carry out a full diagnosis of a problem and create innovative solutions in the workplace.</p> <p>Such masters graduates are qualified to work as an independent entrepreneur, manager, specialist or consultant due to their advanced</p>

	<p>ability to identify, formulate and solve problems within the framework of a complex and uncertain environment, as well as to select the appropriate methods and tools for analysis.</p> <p>A graduate of this course is able to project the organization of an enterprise at the process level. He/she is able to solve managerial and specialist problems related to the following processes of an enterprise: marketing, the control of quality, operations, logistics and research and development. He/she understands appropriate methods and techniques for diagnosing, analyzing and assessing the current solutions used in an enterprise, as well as methods and techniques of designing and implementing new solutions. He/she possesses highly developed analytical and decision making skills (including decision problems beyond his/her given function or process, particularly in crisis situations). He/she can work as a team member, as well as create and manage teams. These skills qualify him/her to carry out skilled work in all forms of enterprise, including international high technology firms and he/she is also qualified to fulfill management roles in small and medium-sized enterprises.</p>
<p><i>Indicate connection with University's mission and its development strategy:</i></p> <p>Courses in Management are carried out within the Faculty of Computer Science and Management at Wrocław University of Technology. Although, such a subject lies in the field of social science, it lies directly within the mission and development strategy of a technical university.</p>	

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

The educational program in Management is coherent with the mission of Wrocław University of Technology in the following areas:

- Developing creative, critical and tolerant graduates, as studying a course in management develops these traits;
- Aiming to provide high quality courses and providing the students of Management and lecturers of the Institute of Organization and Management with conditions enabling open discussion and constructive criticism;
- Developing the values and tradition of higher education, wide-ranging cooperation with other universities via students taking part in the Erasmus program and with employers via practical learning, carried out in the form of projects in specific organizations;
- Aiming to make an impact on the national and international scene in the area of educating specialists in the field of management.

The development plan of the department is in line with the strategy of the university as a whole. In particular, the department "...connects theoretical, research and specialist abilities with educational and teaching skills. The department is a leading research and teaching center in Poland and an important center on the international scene. Its teaching and research profile, together with the quality of the courses and research carried out in economics and technical science, ensures it an appropriately high position in national and international rankings". Teaching courses in management is one of the long standing elements in the department's development strategy. In accordance with the decisions made at Wrocław University of Technology, our courses in management have an interdisciplinary nature. The program satisfies all the conditions stipulated in current legislation and is also in accordance with the

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National Educational Plan in the field of social science. In line with the university's strategy, in order to increase the attractiveness of our courses on the educational market, our programs in management have a unique character, since they make use of the natural - in business practice - complementarity of technical science and economics, enriched with the element of computer science. In accordance with the university's strategy and the department's development plan, which indicates the need for interaction with the region and its economy, the institute has created a framework which ensures that students have systematic contact with enterprises and other institutions during their studies.

In line with the university's development strategy, the quality of our courses is being improved in all aspects. This is achieved through the development of our lecturers' research and teaching skills, as well as systematic refurbishment of the department's infrastructure, including modernization of lecture theaters, audio-visual equipment and computer laboratories.

The program of masters studies in management develops the theoretical knowledge and practical skills of students, enabling graduates to be highly competitiveness on the employment market. Graduates are able to undertake doctoral studies and carry out their own research. They also are conscious of the need for constant self-development in cooperation with their alma mater.

## 2. Fields of science and scientific disciplines to which educational effects apply:

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

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Area of Knowledge / Education: **SOCIAL SCIENCES**  
Area of science: **ECONOMIC SCIENCES**  
Scientific disciplines: **MANAGEMENT SCIENCE, FINANCE**

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

The educational goals of our masters studies satisfy the following needs of employers on the job market:

- The need for employees to understand the functioning of an enterprise from a strategical perspective and, in particular, to assess and improve a firm's competitive and value (medium-sized and large enterprises);
- The ability to work independently, as well as to play various roles in a team including diagnosing problems, designing and implementing solutions in various functional areas of an enterprise - as appropriate to the graduate's speciality (medium-sized and large enterprises);
- Seeing the need for innovative methods and techniques for management and computer tools, as well as designing or choosing and implementing them;
- The ability to learn and share knowledge with others, as well as creativeness and openness to innovations.

The specific goals of this program answer the need for specialists/managers in the field of solving specialist and managerial problems related to chosen processes within a firm, e.g.: marketing, control of quality, operations, logistics or research and development.

Graduates are able to apply appropriate methods and techniques to diagnosing and analyzing the solutions used in a firm, as well as the methods and techniques of designing and implementing novel solutions in various types of firm - including international high technology firms and those operating within a network of enterprises.

The masters level course programs in management, together with the long standing experience of the teaching staff, create the conditions for students to achieve the set goals and to meet the demands of employers.

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## 4. List of education modules:

### 4.1. List of obligatory modules:

#### 4.1.1 List of general education modules

##### 4.1.1.1 Liberal-managerial subjects module (min. .... 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 <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

##### 4.1.1.2 Foreign languages module (min. 3 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 <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
1	JZL	Foreign language B2+		1				K2_ZARZ_U15 K2_ZARZ_U16	15	30	1	0,50	T	Z	O	P	KO		
2	JZL	Foreign language A1 or A2		3				K2_ZARZ_U21 K2_ZARZ_U19 K2_ZARZ_U20	45	60	2	1,50	T	Z	O	P	KO		
		Total	0	4	0	0	0		60	90	3	2,0							

##### 4.1.1.3 Sporting classes module (min. .... ECTS points):

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

#### 4.1.1.4 Information technologies module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

#### Altogether for general education modules

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
0	4	0	0	0	60	90	3	2,0

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

## 4.1.2 List of basic sciences modules

### 4.1.2.1 Mathematics module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MAZ1129W	Operations Research	1					K2_ZARZ_W13	15	90	3	0,50	T	E			PD	Ob
2	MAZ1129L	Operations Research			2			K2_ZARZ_U10 K2_ZARZ_U18	30	60	2	1,00	T	Z		P	PD	Ob
3	MAZ1137W	Econometric Modelling and Forecasting	1					K2_ZARZ_W13	15	60	2	0,50	T	Z			PD	Ob
4	MAZ1137P	Econometric Modelling and Forecasting				1		K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_U14 K2_ZARZ_U17 K2_ZARZ_K06	15	60	2	0,50	T	Z		P	PD	Ob
5	MAZ1128W	Statistics and ekonometrics	2					K2_ZARZ_W13	30	90	3	1,00	T	Z			PD	Ob
6	MAZ1128L	Statistics and ekonometrics			1			K2_ZARZ_U12 K2_ZARZ_U14	15	60	2	0,50	T	Z		P	PD	Ob
Total			4	0	3	1	0		120	420	14	4,0						

### 4.1.2.2 Physics module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
Total																		

### 4.1.2.3 Chemistry module

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob



No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

### Altogether for basic sciences modules:

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
4	0	3	1	0	120	420	14	4,0

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

### 4.1.3.1 *Obligatory main-field-of-study modules*

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
1	ZMZ1237W	Management concepts	2					K2_ZARZ_W04 K2_ZARZ_W08 K2_ZARZ_W05	30	90	3	1,0	T	E				K	Ob

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

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2	ZMZ1237P	Management concepts				1	K2_ZARZ_U18 K2_ZARZ_U06 K2_ZARZ_U16 K2_ZARZ_K02 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	K	Ob
3	ZMZ1237S	Management concepts				1	K2_ZARZ_U18 K2_ZARZ_U06 K2_ZARZ_U16 K2_ZARZ_K02 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
4	ZMZ1238W	Controlling	1				K2_ZARZ_W09 K2_ZARZ_W06 K2_ZARZ_W07	15	60	2	0,5	T	Z			K	Ob
5	ZMZ1238P	Controlling				1	K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_K06 K2_ZARZ_U02	15	60	2	0,5	T	Z		P	K	Ob
6	IEZ1147W	Simulation modeling	1				K2_ZARZ_W13	15	60	2	0,5	T	Z			K	Ob
7	IEZ1147L	Simulation modeling			1		K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_K06 K2_ZARZ_U14 K2_ZARZ_U17	15	60	2	0,5	T	Z		P	K	Ob
8	PSZ1118W	Psychology in Management	1				K2_ZARZ_W11 K2_ZARZ_W10 K2_ZARZ_W12	15	30	1	0,5	T	Z			K	Ob
9	PSZ1118S	Psychology in Management				1	K2_ZARZ_K08 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06 K2_ZARZ_K04 K2_ZARZ_K03 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	K	Ob
10	FBZ4201W	Managerial Accounting	1				K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07	15	30	1	0,5	T	Z			K	Ob
11	FBZ4201C	Managerial Accounting		1			K2_ZARZ_U02 K2_ZARZ_U06 K2_ZARZ_U03 K2_ZARZ_U08	15	60	2	0,5	T	Z		P	K	Ob
12	FBZ1149W	Value Based Management	1				K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07 K2_ZARZ_W08	15	90	3	0,5	T	E			K	Ob

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

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

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13	FBZ1149P	Value Based Management				1		K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_K06 K2_ZARZ_U02	15	60	2	0,5	T	Z		P	K	Ob
14	IEZ4201W	Integrated Management Information Systems	2					K2_ZARZ_W14 K2_ZARZ_W09	30	60	2	1,0	T	Z			K	Ob
15	IEZ4201L	Integrated Management Information Systems			1			K2_ZARZ_U13	15	30	1	0,5	T	Z		P	K	Ob
Total			9	1	2	3	2		255	810	27	8,5						

### Altogether (for main-field-of-study modules):

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
9	1	2	3	2	255	810	27	8,5

## 4.2 List of optional modules

### 4.2.1 List of general education modules

#### 4.2.1.1 Liberal-managerial subjects modules (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
Total																			

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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**4.2.1.2 Foreign languages module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.1.3 Sporting classes module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.1.4 Information technologies module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

**Altogether for general education modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

**4.2.2 List of basic sciences modules**

**4.2.2.1 Mathematics module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.2.2 Physics module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

#### 4.2.2.3 Chemistry module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

#### Altogether for basic sciences modules:

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

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

#### 4.2.3.1 Strategic management module.... (min. .7... pkt ECTS)

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Legal-economic module	2	0	0	1	1		60	210	7	2,0							
1	ZMZ4205W	Strategic Management	2					K2_ZARZ_W03 K2_ZARZ_W06 K2_ZARZ_W07 K2_ZARZ_W05 K2_ZARZ_W02	30	120	4	1,0	T	E				K	Ob
2	ZMZ4205P	Strategic Management				1		K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08	15	60	2	0,5	T	Z		P		K	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

								K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06										
3	ZMZ4205S	Strategic Management					1	K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
4	ZMZ4207W	Strategic Management	2					K2_ZARZ_W03 K2_ZARZ_W06 K2_ZARZ_W07 K2_ZARZ_W05 K2_ZARZ_W02	30	120	4	1,0	T	E			K	Ob
5	ZMZ4207P	Strategic Management				1		K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	K	Ob
6	ZMZ4207S	Strategic Management					1	K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
Total																		

**Altogether for main-field-of-study modules:**

Total number of hours	Total number of ZZU	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
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<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

					hours			
lec	cl	lab	pr	sem				
2	0	0	1	1	60	210	7	2,0

## 4.2.4 List of specialization modules

### 4.2.4.1 Specialization subjects (e.g. whole specialization) modules (min. .. 61.. 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 <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	ZMZ1284W	International management	1					S2_ZPP_W01 S2_ZPP_W02 S2_ZPP_W10	15	60	2	0,50	T	Z			S	Ob
2	ZMZ1239P	Master thesis I					2	K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06 K2_ZARZ_K09 K2_ZARZ_U14 S2_ZPP_W01 S2_ZPP_W02	30	180	6	0,00	T	Z		P	S	Ob
3	ZMZ1240D	Master thesis II					2	K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U14 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06 S2_ZPP_W01 S2_ZPP_W02 S2_ZPP_W11 S2_ZPP_U01 S2_ZPP_U09 S2_ZPP_U06	30	540	18	0,00	T	Z		P	S	Ob
4	ZMZ1290W	Small bussiness designing	1					S2_ZPP_W01 S2_ZPP_W02	15	30	1	0,50	T	Z			S	Ob
5	ZMZ1290P	Small bussiness designing					1	S2_ZPP_U01 S2_ZPP_U07 S2_ZPP_U08	15	30	1	0,50	T	Z		P	S	Ob
6	ZMZ4203S	Diploma seminar I					1	K2_ZARZ_U04 K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U16	15	30	1	0,50	T	Z		P	S	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob



7	ZMZ5202S	Diploma seminar II					1	K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U15 K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06 K2_ZARZ_U05	15	60	2	0,50	T	Z		P	S	Ob
8	ZMZ1300W	Process Management I - process design methodology and tools	2					S2_ZPP_W04 S2_ZPP_W01 S2_ZPP_W02	30	90	3	1,00	T	E			S	Ob
9	ZMZ1300C	Process Management I - process design methodology and tools		1				S2_ZPP_U01 S2_ZPP_U07	15	30	1	0,50	T	Z		P	S	Ob
10	ZMZ1300L	Process Management I - process design methodology and tools			1			S2_ZPP_U01 S2_ZPP_U07	15	30	1	0,50	T	Z		P	S	Ob
11	ZMZ1397W	Process Management II - R&D Processes	1					S2_ZPP_W07 S2_ZPP_W01	15	30	1	0,50	T	Z			S	Ob
12	ZMZ1397C	Process Management II - R&D Processes		1				S2_ZPP_U01 S2_ZPP_U07	15	30	1	0,50	T	Z		P	S	Ob
13	ZMZ1399W	Process Management III – CRM and Marketing Strategy	2					S2_ZPP_W03 S2_ZPP_W02 S2_ZPP_W01	30	60	2	1,00	T	Z			S	Ob
14	ZMZ1399P	Process Management III – CRM and Marketing Strategy				1		S2_ZPP_U02	15	30	1	0,50	T	Z		P	S	Ob
15	ZMZ1399S	Process Management III – CRM and Marketing Strategy					1	S2_ZPP_U02	15	30	1	0,50	T	Z		P	S	Ob
16	ZMZ1606W	Process management IV – Logistics Processes	2					S2_ZPP_W04 S2_ZPP_W05 S2_ZPP_W01	30	120	4	1,00	T	E			S	Ob
17	ZMZ1606L	Process management IV – Logistics Processes			1			S2_ZPP_U03	15	30	1	0,50	T	Z		P	S	Ob
18	ZMZ1606P	Process management IV – Logistics Processes				1		S2_ZPP_U03	15	30	1	0,50	T	Z		P	S	Ob
19	ZMZ1408W	Process Management V - efficiency and effectiveness evaluation	1					S2_ZPP_W11 S2_ZPP_W01	15	30	1	0,50	T	Z			S	Ob
20	ZMZ1408C	Process Management V - efficiency and effectiveness evaluation		1				S2_ZPP_U07 S2_ZPP_U09	15	30	1	0,50	T	Z		P	S	Ob
21	ZMZ1408P	Process Management V - efficiency and effectiveness evaluation				1		S2_ZPP_U07 S2_ZPP_U09	15	60	2	0,50	T	Z		P	S	Ob
22	ZMZ1410W	Process Management VI - improving the quality of processes	2					S2_ZPP_W06 S2_ZPP_W01	30	60	2	1,00	T	Z			S	Ob
23	ZMZ1410C	Process Management VI - improving the quality of processes		1				S2_ZPP_U04 S2_ZPP_U07	15	60	2	0,50	T	Z		P	S	Ob
24	ZMZ1410P	Process Management VI - improving the quality of processes				1		S2_ZPP_U04 S2_ZPP_U07	15	60	2	0,50	T	Z		P	S	Ob
25	ZMZ1605W	Change and project management	2					S2_ZPP_W09 S2_ZPP_W08	30	60	2	1,00	T	Z			S	Ob
26	ZMZ1605P	Change and project management				1		S2_ZPP_U05 S2_ZPP_U06 S2_ZPP_U08	15	30	1	0,50	T	Z		P	S	Ob
Total			14	4	2	10	3		495	1800	61	14,5	14	4				

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

**Legal-economic module (min. .4... pkt ECTS):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	EKZ1136W	Institutional and economic tools to support enterprise	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03	15	30	1	0,50	T	Z			S	W
2	EKZ1136C	Institutional and economic tools to support enterprise		1				K2_ZARZ_U01 S2_ZPP_W01 S2_ZPP_W02	15	30	1	0,50	T	Z		P	S	W
3	EKZ1138W	Internationalization of Company Activities	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	15	30	1	0,50	T	Z			S	W
4	EKZ1138C	Internationalization of Company Activities		1				K2_ZARZ_U01 S2_ZPP_W02	15	30	1	0,50	T	Z		P	S	W
5	PRZ1124W	Legal and economic aspects of information and knowledge management	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W05 K2_ZARZ_W10	15	30	1	0,50	T	Z			S	W
6	PRZ1124C	Legal and economic aspects of information and knowledge management		1				K2_ZARZ_U01	15	30	1	0,50	T	Z		P	S	W
7	PRZ1125W	LEGAL AND ECONOMIC CIRCUMSTANCES OF MAKING A BUSINESS	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	15	30	1	0,50	T	Z			S	W
8	PRZ1125C	LEGAL AND ECONOMIC CIRCUMSTANCES OF MAKING A BUSINESS		1				K2_ZARZ_U01	15	30	1	0,50	T	Z		P	S	W

**Psychological-sociological module (min. .2... pkt ECTS):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	PSZ1126W	Organizational communication	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
2	PSZ1126S	Organizational communication					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04	15	30	1	0,50	T	Z		P	S	W

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

									K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09										
3	PSZ1127W	Psychology of decision and risk	1						K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
4	PSZ1127S	Psychology of decision and risk					1		K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
5	PSZ1128W	Economic psychology	1						K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
6	PSZ1128S	Economic psychology					1		K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
7	PSZ1129W	Cognitive psychology	1						K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
8	PSZ1129S	Cognitive psychology					1		K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
9	PSZ1131W	Resolving conflicts in the organizations	1						K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
10	PSZ1131S	Resolving conflicts in the organizations					1		K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
11	PSZ1132W	Team management	1						K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

12	PSZ1132S	Team management						1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
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**Lecture to choose from module (min. .3... pkt ECTS):**

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 <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
1	ZMZ1416W	Innovative management methods	2					S2_ZPP_W01 S2_ZPP_W10	30	90	3	1,00	T	Z				S	W
2	PSZ1133W	Creativity and entrepreneurship psychology	2					K2_ZARZ_W11 K2_ZARZ_W12	30	90	3	1,00	T	Z				S	W

**Altogether for specialization modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
19	6	2	10	4	615	2070	69	18,5

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

<b>Name of training</b>			
<b>Number of ECTS points</b>	<b>Number of ECTS points for BK classes<sup>1</sup></b>	<b>Training crediting mode</b>	<b>Code</b>
<b>Training duration</b>		<b>Training objective</b>	

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

#### 4.4 Diploma dissertation module

Type of diploma dissertation	magisterska	
Number of diploma dissertation semesters	Number of ECTS points	Code
3	1	ZMZ4203S - Diploma seminar I
	2	ZMZ5202S Diploma seminar II
	6	ZMZ1239P Master thesis I
	18	ZMZ1240D Master thesis II
<b>Character of diploma dissertation</b>		
Literature survey, project, computer program, etc.		
Number of BK <sup>1</sup> ECTS points	27	

#### 5. Ways of verifying assumed educational effects

Type of classes	Ways of verifying assumed educational effects
lecture	Examination or test - multiple choice questions with single or multiple answers; open questions
problems classes	Test (multiple choice and/or open questions); written reports in the form of presentations - literature and case studies, diagnostic and/or project reports - empirical research in real organizations, presenting the opinions of representatives of such organizations; spoken presentations using modern presentation technology
laboratory	Technical report or test
project	Written report documenting the diagnosis and solution of a problem, spoken presentation of the project with questions.
seminar	Choice and formulation of a problem/theme; activeness in discussions, written report in an academic style, essay, “mini”-monograph. Spoken presentations using modern presentation technology

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

work placement	Written report on the work practice given by the student's placement supervisor, confirmation of the completion and nature of the work placement by the employer
diploma thesis	Written report satisfying the current regulations for diploma theses, assessed by the supervisor and a reviewer using an appropriate form.
diploma examination	Spoken presentation of the results of the diploma thesis, answers to questions given by the examination committee, spoken answers to randomly chosen questions from the set appearing in the program of studies.

**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<sup>1</sup>)**

**96 ECTS**

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

Number of ECTS points for obligatory subjects .....	<b>14</b>
Number of ECTS points for optional subjects ....	<b>0</b>
Total number of ECTS points	<b>14</b>

**8. Total number of ECTS points, which student has to obtain from practical classes, including laboratory classes (enter total number of ECTS points for courses/group of courses denoted with code P)**

Number of ECTS points for obligatory subjects .....	<b>68</b>
Number of ECTS points for optional subjects ....	<b>3</b>
Total number of ECTS points	<b>71</b>

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

**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 study** (enter number of ECTS points for courses/groups of courses denoted with code OG)

3 ECTS points

**10. Total number of ECTS points, which student may obtain doing optional modules (min. 30% of total number of ECTS points)**

72 ECTS points

**11. Range of diploma dissertation**

Symbol of Learning Outcome	Exam question
K2_ZARZ_W01	1. Theories of regulation and their relationship to classical schools / economic trends. 2. Determinants of economic growth and development in the Keynesian and neo-liberal thinking.
K2_ZARZ_W02	1. Impact of competition policy and industrial policy measures in the EU market companies. 2. Pan-European organizational and legal forms of doing business. 3. Tools of economic and legal consequences of de-monopolization of markets.
K2_ZARZ_W03	1. Methods for the strategic analysis of environment and the potential of the organization. 2. The essence of strategic management. Schools and trends in strategic management. 3. Institutional and financial instruments to support the competitiveness and innovation of enterprises in the European Union. 4. Forms of internationalization of the company.
K2_ZARZ_W04	1. Models of growth and development of the organization. 2. Smart organization features.
K2_ZARZ_W05	1. Knowledge management in organizations - the objectives, functions, models and instruments - examples. 2. Strategies for knowledge management in an organization. 3. Institutional and non-institutional forms of intellectual property protection.
K2_ZARZ_W06	1. Methods for calculating the costs and scope of their application. 2. Methods for determining the value of the company. 3. Instruments of strategic and operational controlling.

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<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

K2_ZARZ_W07	<ol style="list-style-type: none"> <li>1. Integrated scorecard as a method of monitoring the achievement of strategic objectives.</li> <li>2. The roles and tasks of the budget process.</li> <li>3. Characterises the creation of value-added measures.</li> <li>4. Methods for measuring and evaluating the achievements of the organization as a whole and for its individual parts (responsibility centers).</li> </ol>
K2_ZARZ_W08	<ol style="list-style-type: none"> <li>1. Management by Objectives (MbO) – idea, concept, procedures and applications.</li> <li>2. Contemporary and classic structural solutions for management concept - similarities and differences.</li> <li>3. Essence, concepts and organizational procedures of controlling.</li> <li>4. VBM Value Based Management.</li> </ol>
K2_ZARZ_W10	<ol style="list-style-type: none"> <li>1. Psychological contract as a determinant of organizational culture.</li> <li>2. Range of objective and subjective prohibited commercial practices.</li> <li>3. The role of a good practice in consumer – economic organization relationship.</li> </ol>
K2_ZARZ_W11	<ol style="list-style-type: none"> <li>1. The essence of leadership in the organization. Concepts and leadership styles.</li> <li>2. Conflict management, the concept of conflict, the sources and types of conflict in the organization, methods of solving interpersonal and intergroup conflict.</li> <li>3. The decision making process, individual and situational factors.</li> <li>4. Influence of motivation on human behavior in the aspect of achieving individual and common goals.</li> </ol>
K2_ZARZ_W12	<ol style="list-style-type: none"> <li>1. Instruments for creating intra-entrepreneurship in organization.</li> <li>2. Psychological aspects of resistance to change and methods of overcoming them.</li> <li>3. Inhibitors and stimulants of the process of creative thinking. Techniques for creative approach in problem solving.</li> </ol>
K2_ZARZ_W13	<ol style="list-style-type: none"> <li>1. Methods of Operations Research - the purpose and scope of application in management - examples.</li> <li>2. The role of the significance level in statistical hypothesis testing.</li> <li>3. The components of the time series. Forecasting methods based on time series.</li> <li>4. Simulation methods. The process simulation. Objectives of simulation - examples of applications..</li> </ol>
K2_ZARZ_W14	<ol style="list-style-type: none"> <li>1. Common strategies for support management by IT techniques in industrial enterprises.</li> </ol>

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<sup>7</sup> Optional – enter W, obligatory – enter Ob



S2_ZPP_W01	<ol style="list-style-type: none"> <li>1. Large international companies - the distinguishing features, organizational and legal forms and specific of activity.</li> <li>2. High-tech companies and network companies - types, characteristics and functioning principles in the global economy.</li> <li>3. Forms of economic activity and the characteristic for small businesses elements of a business plan.</li> </ol>
S2_ZPP_W02	<ol style="list-style-type: none"> <li>1. Objectives, methods and scope of the analysis conditions for the operation of large, small and medium enterprises, - similarities and differences.</li> <li>2. Determinants of the global economy influencing on the functioning of international companies, high technology and networking.</li> <li>3. Legal and social (including cultural) factors that influence the company's internationalization.</li> </ol>
S2_ZPP_W03	<ol style="list-style-type: none"> <li>1. The importance of marketing orientation and customer relationship management (CRM) in the term of contemporary challenges for marketing activity of companies.</li> <li>2. Concepts, processes, methods and decisions relevant to the customer relationship management (CRM) and marketing strategy.</li> </ol>
S2_ZPP_W04	1. Rationale of process approach to enterprise management. The essence of the concepts: the organization of the process and process management. Methods and techniques of process management.
S2_ZPP_W05	<ol style="list-style-type: none"> <li>1. Measures of logistics customer service - objectives and types.</li> <li>2. MRP, DRP and LRP in the logistics supply, production and distribution - the objectives and functions.</li> </ol>
S2_ZPP_W06	<ol style="list-style-type: none"> <li>1. Process approach in the design of quality management systems.</li> <li>2. Validation of process – purposes and implementation. Situations in which validation of process is judged - examples.</li> </ol>
S2_ZPP_W07	1. The objectives and runs of R&D processes in different types of enterprises and their impact on operational activity.
S2_ZPP_W08	1. Interventional models of change management - the types and conditions of application.
S2_ZPP_W09	1. Project management methodology. The role of the project manager.

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S2_ZPP_W10	1. Features of proficient teams and the rules of their organization and operation. 2. Innovative human resource management.
S2_ZPP_W11	1. The idea and application range of activity based costing. 2. Methods for assessment the effectiveness of processes.

**12. Requirements concerning deadlines for crediting courses/groups of courses for all courses in particular modules [no requirements](#)**

No.	Course code	Name of course	Crediting by deadline of... (number of semester)

**13. Plan of studies (attachment no. [4.....](#))**

Approved by faculty student government legislative body:

.....  
Date, name and surname, signature of student representative

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

.....  
Date, Dean's signature

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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## PROGRAMME OF STUDIES

## 1. Description

<i>Number of semesters:4</i>	<i>Number ECTS points necessary to obtain qualifications:120</i>
<p><i>Prerequisites (particularly for second-level studies):</i></p> <p><b>Graduate at least of first-level studies (bachelor program).</b></p> <p><i>According to internal ordinance no 32/2012 from 30<sup>th</sup> April 2012r.</i></p> <p><a href="http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html">http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html</a></p>	<p><i>Upon completion of studies graduate obtains</i></p> <p><i>professional degree of: Master of Science (magister)</i></p> <p><i>2nd level qualifications</i></p>
<p><i>Possibility of continuing studies: third-level studies, doctoral studies.</i></p>	<p><i>Graduate profile, employability:</i></p> <p>A masters graduate possesses advanced specialist knowledge in the field of management sciences in the following areas: analytical models and methods, integrated information systems and, in particular, contemporary concepts and methods in managing, planning and monitoring the results of the activities of an enterprise, together with the functioning, development and strategic renewal of organizations. A masters graduate is characterized by the ability to think abstractly and a critical approach to theory, which enables him/her to identify, describe, analyze and interpret the complex processes and problems of a firm and its surroundings. He/she is in possession of the ability to integrate knowledge from various disciplines (economics, psychology, law) and apply computer and mathematical tools to carry out a full diagnosis of a problem and create innovative solutions in the workplace.</p> <p>Such masters graduates are qualified to work as an independent entrepreneur, manager, specialist or consultant due to their advanced</p>

	<p>ability to identify, formulate and solve problems within the framework of a complex and uncertain environment, as well as to select the appropriate methods and tools for analysis.</p> <p>A graduate is able to define and describe problems in management in financial language, as well as model and solve them using the appropriate tools and techniques. He/she has the ability to obtain and appropriately present financial information and make use of appropriate means for finding rational solutions in various fields of financial management, in particular: cost management, management of fortunes and investments, liability and capital investment. He/she is able to assess the effectiveness of decisions taking into account the dynamics of change in the environment - uncertainty and risk. These abilities qualify a graduate to carried out a skilled role in the area of finance in any type of organization, as well as carrying out managerial functions in small and medium-sized organizations.</p>
<p><i>Indicate connection with University's mission and its development strategy:</i></p> <p>Courses in Management are carried out within the Faculty of Computer Science and Management at Wrocław University of Technology. Although, such a subject lies in the field of social science, it lies directly within the mission and development strategy of a technical university.</p> <p>The educational program in Management is coherent with the mission of Wrocław University of Technology in the following areas:</p> <ul style="list-style-type: none"> <li>• Developing creative, critical and tolerant graduates, as studying a</li> </ul>	

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

course in management develops these traits;

- Aiming to provide high quality courses and providing the students of Management and lecturers of the Institute of Organization and Management with conditions enabling open discussion and constructive criticism;
- Developing the values and tradition of higher education, wide-ranging cooperation with other universities via students taking part in the Erasmus program and with employers via practical learning, carried out in the form of projects in specific organizations;
- Aiming to make an impact on the national and international scene in the area of educating specialists in the field of management.

The development plan of the department is in line with the strategy of the university as a whole. In particular, the department "...connects theoretical, research and specialist abilities with educational and teaching skills. The department is a leading research and teaching center in Poland and an important center on the international scene. Its teaching and research profile, together with the quality of the courses and research carried out in economics and technical science, ensures it an appropriately high position in national and international rankings". Teaching courses in management is one of the long standing elements in the department's development strategy. In accordance with the decisions made at Wrocław University of Technology, our courses in management have an interdisciplinary nature. The program satisfies all the conditions stipulated in current legislation and is also in accordance with the

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

National Educational Plan in the field of social science. In line with the university's strategy, in order to increase the attractiveness of our courses on the educational market, our programs in management have a unique character, since they make use of the natural - in business practice - complementarity of technical science and economics, enriched with the element of computer science. In accordance with the university's strategy and the department's development plan, which indicates the need for interaction with the region and its economy, the institute has created a framework which ensures that students have systematic contact with enterprises and other institutions during their studies.

In line with the university's development strategy, the quality of our courses is being improved in all aspects. This is achieved through the development of our lecturers' research and teaching skills, as well as systematic refurbishment of the department's infrastructure, including modernization of lecture theaters, audio-visual equipment and computer laboratories.

The program of masters studies in management develops the theoretical knowledge and practical skills of students, enabling graduates to be highly competitiveness on the employment market. Graduates are able to undertake doctoral studies and carry out their own research. They also are conscious of the need for constant self-development in cooperation with their alma mater.

## 2. Fields of science and scientific disciplines to which educational effects apply:

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<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

Area of Knowledge / Education: **SOCIAL SCIENCES**  
Area of science: **ECONOMIC SCIENCES**  
Scientific disciplines: **MANAGEMENT SCIENCE, FINANCE**

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

The educational goals of our masters studies satisfy the following needs of employers on the job market:

- The need for employees to understand the functioning of an enterprise from a strategic perspective and, in particular, to assess and improve a firm's competitive and value (medium-sized and large enterprises);
- The ability to work independently, as well as to play various roles in a team including diagnosing problems, designing and implementing solutions in various functional areas of an enterprise - as appropriate to the graduate's speciality (medium-sized and large enterprises);
- Seeing the need for innovative methods and techniques for management and computer tools, as well as designing or choosing and implementing them;
- The ability to learn and share knowledge with others, as well as creativeness and openness to innovations.

The specific goals of this program answer the need for specialists/managers in various fields of financial management: cost management, management of fortunes and investments, liability and capital investment, who are able to gather and appropriately present financial information in financial language. Graduates will be able to model such problems and solve them by applying the appropriate tools and techniques.

The masters level course programs in management, together with the long standing experience of the teaching staff, create the conditions for students to achieve the set goals and to meet the demands of employers.

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<sup>7</sup> Optional – enter W, obligatory – enter Ob



## 4. List of education modules:

### 4.1. List of obligatory modules:

#### 4.1.1 List of general education modules

##### 4.1.1.1 Liberal-managerial subjects module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

##### 4.1.1.2 Foreign languages module (min. ....3.... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	JZL	Foreign language B2+		1				K2_ZARZ_U15 K2_ZARZ_U16	15	30	1	0,5	T	Z	O	P	KO	W
2	JZL	Foreign language A1 or A2		3				K2_ZARZ_U21 K2_ZARZ_U19 K2_ZARZ_U20	45	60	2	1,5	T	Z	O	P	KO	W
		Total	0	4	0	0	0		60	90	3	2,0						

##### 4.1.1.3 Sporting classes module (min. .... ECTS points):

No..	Course/group	Name of course/group of courses	Weekly number of hours					Field-of-	Number of hours	Number of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/group of courses
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<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

#### 4.1.1.4 Information technologies module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

#### Altogether for general education modules

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
0	4	0	0	0	60	90	3	2,0

#### 4.1.2 List of basic sciences modules

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

#### 4.1.2.1 Mathematics module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MAZ1129W	Operations Research	1					K2_ZARZ_W13	15	90	3	0,5	T	E			PD	Ob
2	MAZ1129L	Operations Research			2			K2_ZARZ_U10 K2_ZARZ_U18	30	60	2	1,0	T	Z		P	PD	Ob
3	MAZ1137W	Econometric Modelling and Forecasting	1					K2_ZARZ_W13	15	60	2	0,5	T	Z			PD	Ob
4	MAZ1137P	Econometric Modelling and Forecasting				1		K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_U14 K2_ZARZ_U17 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	PD	Ob
5	MAZ1128W	Statistics and ekonometrics	2					K2_ZARZ_W13	30	90	3	1,0	T	Z			PD	Ob
6	MAZ1128L	Statistics and ekonometrics			1			K2_ZARZ_U12 K2_ZARZ_U14	15	60	2	0,5	T	Z		P	PD	Ob
Total			4	0	3	1	0		120	420	14	4,0						

#### 4.1.2.2 Physics module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
Total																		

#### 4.1.2.3 Chemistry module

No..	Course/group	Name of course/group of courses	Weekly number of hours					Field-of-	Number of hours		Number of ECTS points		Form <sup>2</sup> of	Way <sup>3</sup> of	Course/group of courses
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<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

### Altogether for basic sciences modules:

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
4	0	3	1	0	120	420	14	4,0

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

### 4.1.3.1 Obligatory main-field-of-study modules

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
1	ZMZ1237W	Management concepts	2					K2_ZARZ_W04 K2_ZARZ_W08 K2_ZARZ_W05	30	90	3	1,0	T	E				K	Ob
2	ZMZ1237P	Management concepts				1		K2_ZARZ_U18 K2_ZARZ_U06 K2_ZARZ_U16 K2_ZARZ_K02 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K06	15	60	2	0,5	T	Z		P		K	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

3	ZMZ1237S	Management concepts					1	K2_ZARZ_U18 K2_ZARZ_U06 K2_ZARZ_U16 K2_ZARZ_K02 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
4	ZMZ1238W	Controlling	1					K2_ZARZ_W09 K2_ZARZ_W06 K2_ZARZ_W07	15	60	2	0,5	T	Z			K	Ob
5	ZMZ1238P	Controlling				1		K2_ZARZ_U08 K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_K06 K2_ZARZ_U02	15	60	2	0,5	T	Z		P	K	Ob
6	IEZ1147W	Simulation modeling	1					K2_ZARZ_W13	15	60	2	0,5	T	Z			K	Ob
7	IEZ1147L	Simulation modeling			1			K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_K06 K2_ZARZ_U14 K2_ZARZ_U17	15	60	2	0,5	T	Z		P	K	Ob
8	PSZ1118W	Psychology in Management	1					K2_ZARZ_W11 K2_ZARZ_W10 K2_ZARZ_W12	15	30	1	0,5	T	Z			K	Ob
9	PSZ1118S	Psychology in Management					1	K2_ZARZ_K08 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06 K2_ZARZ_K04 K2_ZARZ_K03 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	K	Ob
10	FBZ4201W	Managerial Accounting	1					K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07	15	30	1	0,5	T	Z			K	Ob
11	FBZ4201C	Managerial Accounting		1				K2_ZARZ_U02 K2_ZARZ_U06 K2_ZARZ_U03 K2_ZARZ_U08	15	60	2	0,5	T	Z		P	K	Ob
12	FBZ1149W	Value Based Management	1					K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07 K2_ZARZ_W08	15	90	3	0,5	T	E			K	Ob
13	FBZ1149P	Value Based Management				1		K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_K06 K2_ZARZ_U02	15	60	2	0,5	T	Z		P	K	Ob
14	IEZ4201W	Integrated Management Information Systems	2					K2_ZARZ_W14 K2_ZARZ_W09	30	60	2	1,0	T	Z			K	Ob
15	IEZ4201L	Integrated Management Information Systems			1			K2_ZARZ_U13	15	30	1	0,5	T	Z		P	K	Ob
Total			9	1	2	3	2		255	810	27	8,5						

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

### 4.1.3.2 ..... module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

### Altogether (for main-field-of-study modules):

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
9	1	2	3	2	255	810	27	8,5

## 4.2 List of optional modules

### 4.2.1 List of general education modules

#### 4.2.1.1 Liberal-managerial subjects modules (*min. .... ECTS points*):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

		Total																	

**4.2.1.2 Foreign languages module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.1.3 Sporting classes module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.1.4 Information technologies module (min. .... ECTS points):**

No..	Course/group	Name of course/group of courses	Weekly number of hours	Field-of-	Number of hours	Number of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/group of courses
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<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

**Altogether for general education modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

**4.2.2 List of basic sciences modules**

**4.2.2.1 Mathematics module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob



**4.2.2.2 Physics module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.2.3 Chemistry module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**Altogether for basic sciences modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

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

### 4.2.3.1 Strategic management module .... (min. .7... pkt ECTS):

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 <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	ZMZ4205W	Strategic Management	2					K2_ZARZ_W03 K2_ZARZ_W06 K2_ZARZ_W07 K2_ZARZ_W05 K2_ZARZ_W02	30	120	4	1,0	T	E			K	Ob
2	ZMZ4205P	Strategic Management				1		K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	K	Ob
3	ZMZ4205S	Strategic Management					1	K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
4	ZMZ4207W	Strategic Management	2					K2_ZARZ_W03 K2_ZARZ_W06 K2_ZARZ_W07 K2_ZARZ_W05 K2_ZARZ_W02	30	120	4	1,0	T	E			K	Ob
5	ZMZ4207P	Strategic Management				1		K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	K	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

6	ZMZ4207S	Strategic Management						1	K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
		Total																	

### Altogether for main-field-of-study modules:

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
2	0	0	1	1	60	210	7	2,0

## 4.2.4 List of specialization modules

### 4.2.4.1 Specialization subjects (e.g. whole specialization) modules (min. .63 ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	FBZ1158W	Audit and Revision of Commerce	1					S2_IZF_W08 S2_IZF_W03	15	30	1	0,5	T	Z			S	Ob
2	FBZ1158P	Audit and Revision of Commerce				1		S2_IZF_U03	15	30	1	0,5	T	Z		P	S	Ob
3	FBZ1160W	Budgeting	1					S2_IZF_W07 S2_IZF_W04	15	30	1	0,5	T	Z			S	Ob
4	FBZ1160P	Budgeting				1		S2_IZF_U06 S2_IZF_U04 S2_IZF_U07	15	30	1	0,5	T	Z		P	S	Ob
5	FBZ1162W	Public Finance	2					S2_IZF_W02	30	60	2	1,0	T	Z			S	Ob
6	FBZ1162P	Public Finance				1		S2_IZF_U02	15	60	2	0,5	T	Z		P	S	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

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<sup>7</sup>Optional – enter W, obligatory – enter Ob

7	FBZ1164W	Strategic controlling	1					S2_IZF_W08 S2_IZF_W04	15	30	1	0,5	T	Z		S	Ob	
8	FBZ1164C	Strategic controlling		1				S2_IZF_U08	15	30	1	0,5	T	Z		P	S	Ob
9	FBZ1204W	Methods and tools for financial analysis	2					S2_IZF_W07 S2_IZF_W04	30	90	3	1,0	T	E		S	Ob	
10	FBZ1204L	Methods and tools for financial analysis			2			S2_IZF_U04	30	60	2	1,0	T	Z		P	S	Ob
11	FBZ1172W	The appraisal of investment projects (Project Finance)	1					S2_IZF_W06 S2_IZF_W01 S2_IZF_W02	15	30	1	0,5	T	Z		S	Ob	
12	FBZ1172C	The appraisal of investment projects (Project Finance)		1				S2_IZF_U04	15	30	1	0,5	T	Z		P	S	Ob
13	ZMZ1239P	Master thesis I				2		K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06 K2_ZARZ_K09 K2_ZARZ_U14	30	180	6	0,0	T	Z		P	S	Ob
14	ZMZ1240D	Master thesis II				2		K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U14 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06	30	540	18	0,0	T	Z		P	S	Ob
15	FBZ1174W	Reporting and valuation of intellectual assets	2					S2_IZF_W08 S2_IZF_W06 S2_IZF_W07	30	90	3	1,0	T	Z		S	Ob	
16	FBZ1174C	Reporting and valuation of intellectual assets		1				S2_IZF_U04 S2_IZF_U08	15	60	2	0,5	T	Z		P	S	Ob
17	FBZ1196W	Capital Market I	2					S2_IZF_W05	30	90	3	1,0	T	E		S	Ob	
18	FBZ1196C	Capital Market I		1				S2_IZF_U05	15	30	1	0,5	T	Z		P	S	Ob
19	FBZ1197W	Capital Market II	1					S2_IZF_W04	15	30	1	0,5	T	Z		S	Ob	
20	FBZ1197L	Capital Market II			1			S2_IZF_U06 S2_IZF_U05	15	60	2	1,0	T	Z		P	S	Ob
21	FBZ1178W	Market financial system - insurance	1					S2_IZF_W01	15	30	1	0,5	T	Z		S	Ob	
22	FBZ1178C	Market financial system - insurance		1				S2_IZF_U01	15	30	1	0,5	T	Z		P	S	Ob
23	ZMZ4203S	Diploma seminar I				1		K2_ZARZ_U04 K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U16	15	30	1	0,5	T	Z		P	S	Ob
24	ZMZ5202S	Diploma seminar II				1		K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U15 K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U03	15	60	2	0,5	T	Z		P	S	Ob

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

										K2_ZARZ_U06 K2_ZARZ_U05										
25	FBZ1194W	Computer Supported Financial Reporting	1							S2_IZF_W03 S2_IZF_W07	15	30	1	0,5	T	Z			S	Ob
26	FBZ1194L	Computer Supported Financial Reporting			1					S2_IZF_U04 S2_IZF_U07	15	30	1	0,5	T	Z		P	S	Ob
27	FBZ1180W	Risk Management	1							S2_IZF_W04 S2_IZF_W08 S2_IZF_W06	15	30	1	0,5	T	Z			S	Ob
28	FBZ1180S	Risk Management					1			S2_IZF_U08 S2_IZF_U06	15	60	2	0,5	T	Z		P	S	Ob
Total			16	5	4	7	3				525	1890	63	16,0						

#### 4.2.4.2 *Legal-economic module* (min. 4... pkt ECTS):

L.p.	Kod kursu/grupy kursów	Nazwa kursu/grupy kursów (grupę kursów oznaczyć symbolem GK)	Tygodniowa liczba godzin					Symbol kierunk. efektu kształcenia	Liczba godzin		Liczba pkt. ECTS		Forma <sup>2</sup> kursu/grupy kursów	Sposób <sup>3</sup> zaliczenia	Kurs/grupa kursów			
			w	ć	l	p	s		ZZU	CNPS	łącna	zajęć BK <sup>1</sup>			ogólno-uczelniane <sup>4</sup>	o charakt. praktycznym <sup>5</sup>	rodzaj <sup>6</sup>	typ <sup>7</sup>
1	EKZ1139W	Financial engineering	1					S2_IZF_W05 S2_IZF_W06	15	30	1	0,5	T	Z			S	W
2	EKZ1139C	Financial engineering		1				S2_IZF_U06	15	30	1	0,5	T	Z		P	S	W
3	EKZ1140W	INTERNATIONAL ECONOMIC TRANSACTIONS	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 S2_IZF_W02 S2_IZF_W03	15	30	1	0,5	T	Z			S	W
4	EKZ1140C	INTERNATIONAL ECONOMIC TRANSACTIONS		1				K2_ZARZ_U01 S2_IZF_U01	15	30	1	0,5	T	Z		P	S	W
5	PRZ1126W	Legal and economic conditions for business in the market of the European Union	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 S2_IZF_W02 S2_IZF_W03	15	30	1	0,5	T	Z			S	W
6	PRZ1126C	Legal and economic conditions for business in the market of the European Union		1				K2_ZARZ_U01 S2_IZF_U01	15	30	1	0,5	T	Z		P	S	W
7	PRZ1127W	Agreement in trade	1					K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	15	30	1	0,5	T	Z			S	W
8	PRZ1127C	Agreement in trade		1				K2_ZARZ_U01 K2_ZARZ_U05	15	30	1	0,5	T	Z		P	S	W

#### 4.2.4.3 *Psychological-sociological module* (min. 2... pkt ECTS):

L.p.	Kod kursu/	Nazwa kursu/grupy kursów (grupę kursów oznaczyć symbolem GK)	Tygodniowa liczba godzin	Symbol kierunk.	Liczba godzin	Liczba pkt. ECTS	Forma <sup>2</sup> kursu/	Sposób <sup>3</sup>	Kurs/grupa kursów
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<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup>Optional – enter W, obligatory – enter Ob

	grupy kursów		w	ć	l	p	s	efektu kształcenia	ZZ U	CNPS	łącna	zajęć BK <sup>1</sup>	grupy kursów	zaliczenia	ogólno-uczel-niany <sup>4</sup>	o charakt. prakty-cznym <sup>5</sup>	rodzaj <sup>6</sup>	typ <sup>7</sup>
1	PSZ1126W	Organizational commuication	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
2	PSZ1126S	Organizational commuication					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
3	PSZ1127W	Psychology of decision and risk	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
4	PSZ1127S	Psychology of decision and risk					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
5	PSZ1128W	Economic psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
6	PSZ1128S	Economic psychology					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
7	PSZ1129W	Cognitive psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
8	PSZ1129S	Cognitive psychology					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
9	PSZ1130W	Creativity and entrepreneurship psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
10	PSZ1130S	Creativity and entrepreneurship psychology					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
11	PSZ1131W	Resolving conflicts in the organizations	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W

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12	PSZ1131S	Resolving conflicts in the organizations					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
13	PSZ1132W	Team management	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
14	PSZ1132S	Team management					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W

**4.2.4.2 .....(e.g. diploma profile) module (min. .... ECTS points):**

**Altogether for specialization modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
19	8	3	7	4	615	2070	69	19,0

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

**4.4 Diploma dissertation module**

<b>Type of diploma dissertation</b>	<b>magister</b>	
<b>Number of diploma dissertation semesters</b>	<b>Number of ECTS points</b>	<b>Code</b>

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

3	1	ZMZ4203S - Diploma seminar I
	2	ZMZ5202S Diploma seminar II
	6	ZMZ1239P Master thesis I
	18	ZMZ1240D Master thesis II
<b>Character of diploma dissertation</b>		
Literature survey, project, computer program, etc.		
<b>Number of BK<sup>1</sup> ECTS points</b>	27	

### 5. Ways of verifying assumed educational effects

Type of classes	Ways of verifying assumed educational effects
lecture	Examination or test - multiple choice questions with single or multiple answers; open questions
problems classes	Test (multiple choice and/or open questions); written reports in the form of presentations - literature and case studies, diagnostic and/or project reports - empirical research in real organizations, presenting the opinions of representatives of such organizations; spoken presentations using modern presentation technology
laboratory	Technical report or test
project	Written report documenting the diagnosis and solution of a problem, spoken presentation of the project with questions.
seminar	Choice and formulation of a problem/theme; activeness in discussions, written report in an academic style, essay, “mini”-monograph. Spoken presentations using modern presentation technology
work placement	Written report on the work practice given by the student's placement supervisor, confirmation of

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<sup>7</sup> Optional – enter W, obligatory – enter Ob



	the completion and nature of the work placement by the employer
diploma thesis	Written report satisfying the current regulations for diploma theses, assessed by the supervisor and a reviewer using an appropriate form.
diploma examination	Spoken presentation of the results of the diploma thesis, answers to questions given by the examination committee, spoken answers to randomly chosen questions from the set appearing in the program of studies.

**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<sup>1</sup>)**

**96 ECTS**

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

Number of ECTS points for obligatory subjects .....	<b>14</b>
Number of ECTS points for optional subjects ....	<b>0</b>
Total number of ECTS points	<b>14</b>

**8. Total number of ECTS points, which student has to obtain from practical classes, including laboratory classes (enter total number of ECTS points for courses/group of courses denoted with code P)**

Number of ECTS points for obligatory subjects .....	<b>68</b>
Number of ECTS points for optional subjects ....	<b>3</b>
Total number of ECTS points	<b>71</b>

**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 study (enter number of ECTS points for courses/groups of courses denoted with code OG)**

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

3 ECTS points

10. Total number of ECTS points, which student may obtain doing optional modules (min. 30% of total number of ECTS points)

72 ECTS points

### 11. Range of diploma dissertation

Symbol of Learnig Outcome	Exam questions
K2_ZARZ_W01	1. Theories of regulation and their relationship to classical schools / economic trends. 2. Determinants of economic growth and development in the Keynesian and neo-liberal thinking.
K2_ZARZ_W02	1. Impact of competition policy and industrial policy measures in the EU market companies. 2 Pan-European organizational and legal forms of doing business. 3. Tools of economic and legal consequences of de-monopolization of markets.
K2_ZARZ_W03	1. Methods for the strategic analysis of environment and the potential of the organization. 2. The essence of strategic management. Schools and trends in strategic management. 3. Institutional and financial instruments to support the competitiveness and innovation of enterprises in the European Union. 4. Forms of internationalization of the company.
K2_ZARZ_W04	1. Models of growth and development of the organization. 2. Smart organization features.
K2_ZARZ_W05	1. Knowledge management in organizations - the objectives, functions, models and instruments - examples. 2. Strategies for knowledge management in an organization. 3. Institutional and non-institutional forms of intellectual property protection.

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K2_ZARZ_W06	<ol style="list-style-type: none"> <li>1. Methods for calculating the costs and scope of their application.</li> <li>2. Methods for determining the value of the company.</li> <li>3. Instruments of strategic and operational controlling.</li> </ol>
K2_ZARZ_W07	<ol style="list-style-type: none"> <li>1. Integrated scorecard as a method of monitoring the achievement of strategic objectives.</li> <li>2. The roles and tasks of the budget process.</li> <li>3. Characterises the creation of value-added measures.</li> <li>4. Methods for measuring and evaluating the achievements of the organization as a whole and for its individual parts (responsibility centers).</li> </ol>
K2_ZARZ_W08	<ol style="list-style-type: none"> <li>1. Management by Objectives (MbO) – idea, concept, procedures and applications.</li> <li>2. Contemporary and classic structural solutions for management concept - similarities and differences.</li> <li>3. Essence, concepts and organizational procedures of controlling.</li> <li>4. VBM Value Based Management.</li> </ol>
K2_ZARZ_W10	<ol style="list-style-type: none"> <li>1. Psychological contract as a determinant of organizational culture.</li> <li>2. Range of objective and subjective prohibited commercial practices.</li> <li>3. The role of a good practice in consumer – economic organization relationship.</li> </ol>
K2_ZARZ_W11	<ol style="list-style-type: none"> <li>1. The essence of leadership in the organization. Concepts of leadership and styles of leadership.</li> <li>2. Conflict management, the concept of conflict, the sources and types of conflict in the organization, methods of solving interpersonal and intergroup conflict.</li> <li>3. The decision making process, individual and situational factors.</li> <li>4. Influence of motivation on human behavior in the aspect of achieving individual and common goals.</li> </ol>

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K2_ZARZ_W12	<ol style="list-style-type: none"> <li>1. Instruments for creating intra-entrepreneurship in organization.</li> <li>2. Psychological aspects of resistance to change and methods of overcoming them.</li> <li>3. Inhibitors and stimulants of the process of creative thinking. Techniques for creative approach in problem solving.</li> </ol>
K2_ZARZ_W13	<ol style="list-style-type: none"> <li>1. Methods of Operations Research - the purpose and scope of application in management - examples.</li> <li>2. The role of the significance level in statistical hypothesis testing.</li> <li>3. The components of the time series. Forecasting methods based on time series.</li> <li>4. Simulation methods. The process simulation. Objectives of simulation - examples of applications..</li> </ol>
K2_ZARZ_W14	<ol style="list-style-type: none"> <li>1. Common strategies for support management by IT techniques in industrial enterprises.</li> </ol>
S2_IZF_W01	<ol style="list-style-type: none"> <li>1. The market financial system - functions and components.</li> <li>2. Interdependence of market elements of the financial system - the essence of his actions.</li> </ol>
S2_IZF_W02	<ol style="list-style-type: none"> <li>1. The basic elements of the public financial system, the relationship between them and the relationship with the financial market.</li> <li>2. Factors of current and long-term imbalances in public finance.</li> <li>3. Calculating Indicators of Macroeconomic Systems - international reporting and types of documents.</li> </ol>
S2_IZF_W03	<ol style="list-style-type: none"> <li>1. Audit - the essence, objectives and types in different areas of the organization</li> <li>2. Polish and International Financial Reporting and Accounting Standards.</li> <li>3. The essence of the concept of auditing. The objectives and procedures of the audit.</li> </ol>
S2_IZF_W04	<ol style="list-style-type: none"> <li>1. Methods and tools for measuring the effectiveness of the organization.</li> <li>2. Application of analytical and simulation methodology in decision making processes in the organization.</li> </ol>

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

S2_IZF_W05	<ol style="list-style-type: none"> <li>1. Rules of the capital market and its instruments.</li> <li>2. Methods for obtaining and investing capital in the market.</li> <li>3. Methods for calculating the value of the capital and investor rate of profit.</li> </ol>
S2_IZF_W06	<ol style="list-style-type: none"> <li>1. Concepts and types of risk in economic decision making processes in the organization.</li> <li>2. Methods for identifying, measuring and risk management in the company.</li> </ol>
S2_IZF_W07	<ol style="list-style-type: none"> <li>1. Methodology and tools for the economic-financial analysis.</li> <li>2. Sources of information used in the economic-financial analysis.</li> </ol>
S2_IZF_W08	<ol style="list-style-type: none"> <li>1. Modern concepts of the value of organization.</li> <li>2. Determinants of creating value of the organization.</li> <li>3. Methodology of valuation of the organization.</li> </ol>

**12. Requirements concerning deadlines for crediting courses/groups of courses for all courses in particular modules – no requirements**

No.	Course code	Name of course	Crediting by deadline of... (number of semester)

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob


**13. Plan of studies (attachment no. ...4...)**

Approved by faculty student government legislative body:

.....  
Date, name and surname, signature of student representative

.....  
Date, Dean's signature

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

## PROGRAMME OF STUDIES

## 1. Description

<i>Number of semesters:4</i>	<i>Number ECTS points necessary to obtain qualifications:120</i>
<p><i>Prerequisites (particularly for second-level studies):</i></p> <p><b>Graduate at least of first-level studies (bachelor program).</b></p> <p><i>According to internal ordinance no 32/2012 from 30<sup>th</sup> April 2012r.</i></p> <p><a href="http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html">http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html</a></p>	<p><i>Upon completion of studies graduate obtains</i></p> <p><i>professional degree of: Master of Science (magister)</i></p> <p><i>2nd level qualifications</i></p>
<p><i>Possibility of continuing studies: third-level studies, doctoral studies.</i></p>	<p><i>Graduate profile, employability:</i></p> <p>A masters graduate possesses advanced specialist knowledge in the field of management sciences in the following areas: analytical models and methods, integrated information systems and, in particular, contemporary concepts and methods in managing, planning and monitoring the results of the activities of an enterprise, together with the functioning, development and strategical renewal of organizations. A masters graduate is characterized by the ability to think abstractly and a critical approach to theory, which enables him/her to identify, describe, analyze and interpret the complex processes and problems of a firm and its surroundings. He/she is in possession of the ability to integrate knowledge from various disciplines (economics, psychology, law) and apply computer and mathematical tools to carry out a full diagnosis of a problem and create innovative solutions in the workplace.</p> <p>Such masters graduates are qualified to work as an independent entrepreneur, manager, specialist or consultant due to their advanced</p>

	<p>ability to identify, formulate and solve problems within the framework of a complex and uncertain environment, as well as to select the appropriate methods and tools for analysis.</p> <p>A graduate understands the construction and technology of information systems at the fundamental level (computer programming, projecting elements of an application, knowledge engineering). He/she is also able to identify the need for, implement and maintain information systems at the operational level. He/she is able to describe the legal, economic, financial, organizational and technological constraints on the functioning of an organization, as well as implement technical innovations. He/she is able to analyze the technical needs of an organization and formulate an IT strategy (covering technical, organizational, economic, financial and social aspects of IT development) . He/she is able to carry out analysis of the IT market (equipment and software) in the areas of projecting, implementing, maintaining, administering and maintaining IT systems, managing the production process, implementing and using new IT solutions.</p> <p>These abilities qualify such a graduate to carry out a skilled role in the field of IT in organizations using technologically advanced IT systems, enterprises in the field of implementing the use of IT equipment and software in other firms, enterprises in the field of the creation and adaptation of IT systems for management, as well as in consultancy firms in the field of IT and business process reengineering.</p>
<p><i>Indicate connection with University's mission and its development strategy:</i></p> <p>Courses in Management are carried out within the Faculty of Computer Science and Management at Wrocław University of Technology. Although,</p>	

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob



such a subject lies in the field of social science, it lies directly within the mission and development strategy of a technical university.

The educational program in Management is coherent with the mission of Wrocław University of Technology in the following areas:

- Developing creative, critical and tolerant graduates, as studying a course in management develops these traits;
- Aiming to provide high quality courses and providing the students of Management and lecturers of the Institute of Organization and Management with conditions enabling open discussion and constructive criticism;
- Developing the values and tradition of higher education, wide-ranging cooperation with other universities via students taking part in the Erasmus program and with employers via practical learning, carried out in the form of projects in specific organizations;
- Aiming to make an impact on the national and international scene in the area of educating specialists in the field of management.

The development plan of the department is in line with the strategy of the university as a whole. In particular, the department "...connects theoretical, research and specialist abilities with educational and teaching skills. The department is a leading research and teaching center in Poland and an important center on the international scene. Its teaching and research profile, together with the quality of the courses and research carried out in economics and technical science, ensures it an appropriately high position in national and international rankings". Teaching courses in management is one of the long standing elements in the department's development strategy. In accordance with the decisions made at Wrocław University of Technology, our courses in

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

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

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management have an interdisciplinary nature. The program satisfies all the conditions stipulated in current legislation and is also in accordance with the National Educational Plan in the field of social science. In line with the university's strategy, in order to increase the attractiveness of our courses on the educational market, our programs in management have a unique character, since they make use of the natural - in business practice - complementarity of technical science and economics, enriched with the element of computer science. In accordance with the university's strategy and the department's development plan, which indicates the need for interaction with the region and its economy, the institute has created a framework which ensures that students have systematic contact with enterprises and other institutions during their studies.

In line with the university's development strategy, the quality of our courses is being improved in all aspects. This is achieved through the development of our lecturers' research and teaching skills, as well as systematic refurbishment of the department's infrastructure, including modernization of lecture theaters, audio-visual equipment and computer laboratories.

The program of masters studies in management develops the theoretical knowledge and practical skills of students, enabling graduates to be highly competitiveness on the employment market. Graduates are able to undertake doctoral studies and carry out their own research. They also are conscious of the need for constant self-development in cooperation with their alma mater.

## 2. Fields of science and scientific disciplines to which educational effects apply:

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

Area of Knowledge / Education: **SOCIAL SCIENCES**

Area of science: **ECONOMIC SCIENCES**

Scientific disciplines: **MANAGEMENT SCIENCE, FINANCE**

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

The educational goals of our masters studies satisfy the following needs of employers on the job market:

- The need for employees to understand the functioning of an enterprise from a strategical perspective and, in particular, to assess and improve a firm's competitive and value (medium-sized and large enterprises);
- The ability to work independently, as well as to play various roles in a team including diagnosing problems, designing and implementing solutions in various functional areas of an enterprise - as appropriate to the graduate's speciality (medium-sized and large enterprises);
- Seeing the need for innovative methods and techniques for management and computer tools, as well as designing or choosing and implementing them;
- The ability to learn and share knowledge with others, as well as creativeness and openness to innovations.

The specific goals of this program answer the need for specialists/managers in IT departments carrying out the maintenance/development of IT tools for management at the operational and strategic level in enterprises and other organizations carrying out production, trade, service or research activities.

The masters level course programs in management, together with the long standing experience of the teaching staff, create the conditions for students to achieve the set goals and to meet the demands of employers.

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<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

## 4. List of education modules:

### 4.1. List of obligatory modules:

#### 4.1.1 List of general education modules

##### 4.1.1.1 Liberal-managerial subjects module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

##### 4.1.1.2 Foreign languages module (min. 3 ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	JZL	Foreign language B2+		1				K2_ZARZ_U15 K2_ZARZ_U16	15	30	1	0,50	T	Z	O	P	KO	W
2	JZL	Foreign language A1 or A2		3				K2_ZARZ_U21 K2_ZARZ_U19 K2_ZARZ_U20	45	60	2	1,50	T	Z	O	P	KO	W
		Total	0	4	0	0	0		60	90	3	2,0						

##### 4.1.1.3 Sporting classes module (min. .... ECTS points):

No..	Course/group	Name of course/group of courses	Weekly number of hours	Field-of-	Number of hours	Number of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/group of courses
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<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

#### 4.1.1.4 Information technologies module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

#### Altogether for general education modules

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
0	4	0	0	0	60	90	3	2,0

### 4.1.2 List of basic sciences modules

#### 4.1.2.1 Mathematics module

No..	Course/group	Name of course/group of courses	Weekly number of hours	Field-of-	Number of hours	Number of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/group of courses
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<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MAZ1129W	Operations Research	1					K2_ZARZ_W13	15	90	3	0,50	T	E			PD	Ob
2	MAZ1129L	Operations Research			2			K2_ZARZ_U10 K2_ZARZ_U18	30	60	2	1,00	T	Z		P	PD	Ob
3	MAZ1137W	Econometric Modelling and Forecasting	1					K2_ZARZ_W13	15	60	2	0,50	T	Z			PD	Ob
4	MAZ1137P	Econometric Modelling and Forecasting				1		K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_U14 K2_ZARZ_U17 K2_ZARZ_K06	15	60	2	0,50	T	Z		P	PD	Ob
5	MAZ1128W	Statistics and ekonometrics	2					K2_ZARZ_W13	30	90	3	1,00	T	Z			PD	Ob
6	MAZ1128L	Statistics and ekonometrics			1			K2_ZARZ_U12 K2_ZARZ_U14	15	60	2	0,50	T	Z		P	PD	Ob
Total			4	0	3	1	0		120	420	14	4,0						

#### 4.1.2.2 Physics module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
Total																			

#### 4.1.2.3 Chemistry module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
Total																			

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob



3	ZMZ1237S	Management concepts					1	K2_ZARZ_U18 K2_ZARZ_U06 K2_ZARZ_U16 K2_ZARZ_K02 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
4	ZMZ1238W	Controlling	1					K2_ZARZ_W09 K2_ZARZ_W06 K2_ZARZ_W07	15	60	2	0,5	T	Z			K	Ob
5	ZMZ1238P	Controlling				1		K2_ZARZ_U08 K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_K06 K2_ZARZ_U02	15	60	2	0,5	T	Z		P	K	Ob
6	IEZ1147W	Simulation modeling	1					K2_ZARZ_W13	15	60	2	0,5	T	Z			K	Ob
7	IEZ1147L	Simulation modeling			1			K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_K06 K2_ZARZ_U14 K2_ZARZ_U17	15	60	2	0,5	T	Z		P	K	Ob
8	PSZ1118W	Psychology in Management	1					K2_ZARZ_W11 K2_ZARZ_W10 K2_ZARZ_W12	15	30	1	0,5	T	Z			K	Ob
9	PSZ1118S	Psychology in Management					1	K2_ZARZ_K08 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06 K2_ZARZ_K04 K2_ZARZ_K03 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	K	Ob
10	FBZ4201W	Managerial Accounting	1					K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07	15	30	1	0,5	T	Z			K	Ob
11	FBZ4201C	Managerial Accounting		1				K2_ZARZ_U02 K2_ZARZ_U06 K2_ZARZ_U03 K2_ZARZ_U08	15	60	2	0,5	T	Z		P	K	Ob
12	FBZ1149W	Value Based Management	1					K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07 K2_ZARZ_W08	15	90	3	0,5	T	E			K	Ob
13	FBZ1149P	Value Based Management				1		K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_K06 K2_ZARZ_U02	15	60	2	0,5	T	Z		P	K	Ob
14	IEZ4201W	Integrated Management Information Systems	2					K2_ZARZ_W14 K2_ZARZ_W09	30	60	2	1,0	T	Z			K	Ob
15	IEZ4201L	Integrated Management Information Systems			1			K2_ZARZ_U13	15	30	1	0,5	T	Z		P	K	Ob
Total			9	1	2	3	2		255	810	27	8,5						

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

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<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup>Optional – enter W, obligatory – enter Ob



### 4.1.3.2 ..... module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

### Altogether (for main-field-of-study modules):

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

## 4.2 List of optional modules

### 4.2.1 List of general education modules

#### 4.2.1.1 Liberal-managerial subjects modules (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

		Total																	

**4.2.1.2 Foreign languages module (min. .... ECTS points):**

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.1.3 Sporting classes module (min. .... ECTS points):**

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.1.4 Information technologies module (min. .... ECTS points):**

No.	Course/group	Name of course/group of courses	Weekly number of hours	Field-of-	Number of hours	Number of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/group of courses
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<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

**Altogether for general education modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

**4.2.2 List of basic sciences modules**

**4.2.2.1 Mathematics module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Total																

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

**4.2.2.2 Physics module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.2.3 Chemistry module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**Altogether for basic sciences modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

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

### 4.2.3.1 ..... module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

### Altogether for main-field-of-study modules:

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

## 4.2.4 List of specialization modules

### 4.2.4.1 Specialization subjects (e.g. whole specialization) modules (min. 63 ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	IEZ1153W	Business Analytics	1					s2_TIZ_W02	15	30	1	0,50	T	Z			S	Ob
2	IEZ1153L	Business Analytics			1			s2_TIZ_U02	15	30	1	0,50	T	Z		P	S	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

3	IEZ1155W	E-economy	1				S2_TIZ_W04	15	30	1	0,50	T	Z		S	Ob
4	IEZ1155C	E-economy		1			S2_TIZ_U01	15	30	1	0,50	T	Z	P	S	Ob
5	IEZ1157W	E-marketing	1				S2_TIZ_W01	15	30	1	0,50	T	Z		S	Ob
6	IEZ1157C	E-marketing		1			S2_TIZ_U01	15	30	1	0,50	T	Z	P	S	Ob
7	IEZ1197W	Web applications	2				S2_TIZ_W01	30	90	3	1,00	T	E		S	Ob
8	IEZ1197L	Web applications			2		S2_TIZ_U01	30	60	2	1,00	T	Z	P	S	Ob
9	IEZ1161W	Software Product Quality	1				S2_TIZ_W02	15	30	1	0,50	T	Z		S	Ob
10	IEZ1161L	Software Product Quality			1		S2_TIZ_U02 S2_TIZ_U04	15	60	2	0,50	T	Z	P	S	Ob
11	IEZ1163W	Computer analysis of business decisions	1				S2_TIZ_W02 S2_TIZ_W03	15	30	1	0,50	T	Z		S	Ob
12	IEZ1163L	Computer analysis of business decisions			1		S2_TIZ_U02 S2_TIZ_U03	15	30	1	0,50	T	Z	P	S	Ob
13	IEZ1165W	Business computer pplications	1				S2_TIZ_W02 S2_TIZ_W04	15	30	1	0,50	T	Z		S	Ob
14	IEZ1165L	Business computer pplications			1		S2_TIZ_U04	15	60	2	0,50	T	Z	P	S	Ob
15	IEZ1167W	Data Mining Methods	1				S2_TIZ_W02	15	30	1	0,50	T	Z		S	Ob
16	IEZ1167P	Data Mining Methods				1	S2_TIZ_U02	15	60	2	0,50	T	Z	P	S	Ob
17	IEZ1196W	Methods of the artificial intelligence	1				S2_TIZ_W02 S2_TIZ_W03	15	30	1	0,50	T	Z		S	Ob
18	IEZ1196L	Methods of the artificial intelligence			1		S2_TIZ_U02 S2_TIZ_U03	15	60	2	0,50	T	Z	P	S	Ob
19	IEZ1215W	Modeling of business processes in the organization	2				S2_TIZ_W03 S2_TIZ_W04	30	90	3	1,00	T	E		S	Ob
20	IEZ1215L	Modeling of business processes in the organization			2		S2_TIZ_U03 S2_TIZ_U04	30	60	2	1,00	T	Z	P	S	Ob
21	IEZ1216W	Optimization of decisions	1				S2_TIZ_W03	15	30	1	0,50	T	Z		S	Ob
22	IEZ1216L	Optimization of decisions			1		S2_TIZ_U03	15	60	2	0,50	T	Z	P	S	Ob
23	ZMZ1239P	Master thesis I				2	K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06 K2_ZARZ_K09 K2_ZARZ_U14	30	180	6	0,00	T	Z	P	S	Ob
24	ZMZ1240D	Master thesis II				2	K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U14 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06	30	540	18	0,00	T	Z	P	S	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

25	ZMZ4203S	Diploma seminar I					1	K2_ZARZ_U04 K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U16	15	30	1	0,50	T	Z		P	S	Ob.
26	ZMZ5202S	Diploma seminar II					1	K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U15 K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06 K2_ZARZ_U05	15	60	2	0,50	T	Z		P	S	Ob
27	IEZ1176W	Decision Support Systems	1					S2_TIZ_W03	15	30	1	0,50	T	Z			S	Ob
28	IEZ1176L	Decision Support Systems			1			S2_TIZ_U03	15	60	2	0,50	T	Z		P	S	Ob
Total			14	2	11	5	2		510	1890	63	15,0						

#### 4.2.4.2 Legal-economic module (min. .4... pkt ECTS):

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	EKZ1135W	Economical environment of business	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03	15	30	1	0,50	T	Z			S	W
2	EKZ1135C	Economical environment of business		1				K2_ZARZ_U01	15	30	1	0,50	T	Z		P	S	W
3	PRZ1124W	Legal and economic aspects of information and knowledge management	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W05 K2_ZARZ_W10	15	30	1	0,50	T	Z			S	W
4	PRZ1124C	Legal and economic aspects of information and knowledge management		1				K2_ZARZ_U01	15	30	1	0,50	T	Z		P	S	W
5	PRZ1126W	Legal and economic conditions for business in the market of the European Union	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03	15	30	1	0,50	T	Z			S	W
6	PRZ1126C	Legal and economic conditions for business in the market of the European Union		1				K2_ZARZ_U01	15	30	1	0,50	T	Z		P	S	W
7	PRZ1127W	Agreement in trade	1					K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	15	30	1	0,50	T	Z			S	W
8	PRZ1127C	Agreement in trade		1				K2_ZARZ_U01 K2_ZARZ_U05	15	30	1	0,50	T	Z		P	S	W

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

**4.2.4.3 Psychological-sociological module (min. .2... pkt ECTS):**

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	PSZ1126W	Organizational communication	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
2	PSZ1126S	Organizational communication					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
3	PSZ1127W	Psychology of decision and risk	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
4	PSZ1127S	Psychology of decision and risk					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
5	PSZ1128W	Economic psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
6	PSZ1128S	Economic psychology					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
7	PSZ1129W	Cognitive psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob



8	PSZ1129S	Cognitive psychology					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
9	PSZ1130W	Creativity and entrepreneurship psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
10	PSZ1130S	Creativity and entrepreneurship psychology					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
11	PSZ1131W	Resolving conflicts in the organizations	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
12	PSZ1131S	Resolving conflicts in the organizations					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W
13	PSZ1132W	Team management	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,50	T	Z			S	W
14	PSZ1132S	Team management					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,50	T	Z		P	S	W

**Altogether for specialization modules:**

Total number of hours	Total number of ZZU	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
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<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

					hours			
lec	cl	lab	pr	sem				
18	4	11	5	3	600	2070	69	18,0

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

Name of training			
Number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>	Training crediting mode	Code
Training duration		Training objective	

#### 4.4 Diploma dissertation module

Type of diploma dissertation	<i>Master Thesis</i>		
Number of diploma dissertation semesters	Number of ECTS points	Code	
3	1	ZMZ4203S -	Diploma seminar I
	2	ZMZ5202S	Diploma seminar II
	6	ZMZ1239P	Master thesis I
	18	ZMZ1240D	Master thesis II
Character of diploma dissertation			
Literature survey, project, computer program, etc.			
Number of BK <sup>1</sup> ECTS points	27		

#### 5. Ways of verifying assumed educational effects

Type of classes	Ways of verifying assumed educational effects
lecture	Examination or test - multiple choice questions with single or multiple answers; open questions

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

problems classes	Test (multiple choice and/or open questions); written reports in the form of presentations - literature and case studies, diagnostic and/or project reports - empirical research in real organizations, presenting the opinions of representatives of such organizations; spoken presentations using modern presentation technology
laboratory	Technical report or test
project	Written report documenting the diagnosis and solution of a problem, spoken presentation of the project with questions.
seminar	Choice and formulation of a problem/theme; activeness in discussions, written report in an academic style, essay, “mini”-monograph. Spoken presentations using modern presentation technology
work placement	Written report on the work practice given by the student's placement supervisor, confirmation of the completion and nature of the work placement by the employer
diploma thesis	Written report satisfying the current regulations for diploma theses, assessed by the supervisor and a reviewer using an appropriate form.
diploma examination	Spoken presentation of the results of the diploma thesis, answers to questions given by the examination committee, spoken answers to randomly chosen questions from the set appearing in the program of studies.

**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<sup>1</sup>)**  
 ...**96**.... ECTS

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

Number of ECTS points for obligatory subjects .....	<b>14</b>
Number of ECTS points for optional subjects ....	<b>0</b>
Total number of ECTS points	<b>14</b>

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

**8. Total number of ECTS points, which student has to obtain from practical classes, including laboratory classes** (enter total number of ECTS points for courses/group of courses denoted with code P)

Number of ECTS points for obligatory subjects .....	<b>68</b>
Number of ECTS points for optional subjects ....	<b>3</b>
Total number of ECTS points	<b>71</b>

**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 study** (enter number of ECTS points for courses/groups of courses denoted with code OG)

**3** ECTS points

**10. Total number of ECTS points, which student may obtain doing optional modules (min. 30% of total number of ECTS points)**

**72** ECTS points

**11. Range of diploma dissertation**

Symbol of Learnig Outcome	Exam question
K2_ZARZ_W01	1. Theories of regulation and their relationship to classical schools / economic trends. 2. Determinants of economic growth and development in the Keynesian and neo-liberal thinking.
K2_ZARZ_W02	1. Impact of competition policy and industrial policy measures in the EU market companies. 2. Pan-European organizational and legal forms of doing business. 3. Tools of economic and legal consequences of de-monopolization of markets.
K2_ZARZ_W03	1. Methods for the strategic analysis of environment and the potential of the organization. 2. The essence of strategic management. Schools and trends in strategic management. 3. Institutional and financial instruments to support the competitiveness and innovation of enterprises in the European Union. 4. Forms of internationalization of the company.

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

K2_ZARZ_W04	<ol style="list-style-type: none"> <li>1. Models of growth and development of the organization.</li> <li>2. Smart organization features.</li> </ol>
K2_ZARZ_W05	<ol style="list-style-type: none"> <li>1. Knowledge management in organizations - the objectives, functions, models and instruments - examples.</li> <li>2. Strategies for knowledge management in an organization.</li> <li>3. Institutional and non-institutional forms of intellectual property protection.</li> </ol>
K2_ZARZ_W06	<ol style="list-style-type: none"> <li>1. Methods for calculating the costs and scope of their application.</li> <li>2. Methods for determining the value of the company.</li> <li>3. Instruments of strategic and operational controlling.</li> </ol>
K2_ZARZ_W07	<ol style="list-style-type: none"> <li>1. Integrated scorecard as a method of monitoring the achievement of strategic objectives.</li> <li>2. The roles and tasks of the budget process.</li> <li>3. Characterises the creation of value-added measures.</li> <li>4. Methods for measuring and evaluating the achievements of the organization as a whole and for its individual parts (responsibility centers).</li> </ol>
K2_ZARZ_W08	<ol style="list-style-type: none"> <li>1. Management by Objectives (MbO) – idea, concept, procedures and applications.</li> <li>2. Contemporary and classic structural solutions for management concept - similarities and differences.</li> <li>3. Essence, concepts and organizational procedures of controlling.</li> <li>4. VBM Value Based Management.</li> </ol>
K2_ZARZ_W10	<ol style="list-style-type: none"> <li>1. Psychological contract as a determinant of organizational culture.</li> <li>2. Range of objective and subjective prohibited commercial practices.</li> <li>3. The role of a good practice in consumer – economic organization relationship.</li> </ol>
K2_ZARZ_W11	<ol style="list-style-type: none"> <li>1. The essence of leadership in the organization. Concepts and leadership styles.</li> <li>2. Conflict management, the concept of conflict, the sources and types of conflict in the organization, methods of solving interpersonal and intergroup conflict.</li> <li>3. The decision making process, individual and situational factors.</li> <li>4. Influence of motivation on human behavior in the aspect of achieving individual and common goals.</li> </ol>

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K2_ZARZ_W12	<ol style="list-style-type: none"> <li>1. Instruments for creating intra-entrepreneurship in organization.</li> <li>2. Psychological aspects of resistance to change and methods of overcoming them.</li> <li>3. Inhibitors and stimulants of the process of creative thinking. Techniques for creative approach in problem solving.</li> </ol>
K2_ZARZ_W13	<ol style="list-style-type: none"> <li>1. Methods of Operations Research - the purpose and scope of application in management - examples.</li> <li>2. The role of the significance level in statistical hypothesis testing.</li> <li>3. The components of the time series. Forecasting methods based on time series.</li> <li>4. Simulation methods. The process simulation. Objectives of simulation - examples of applications..</li> </ol>
K2_ZARZ_W14	<ol style="list-style-type: none"> <li>1. Common strategies for support management by IT techniques in industrial enterprises.</li> </ol>
S2_TIZ_W01	<ol style="list-style-type: none"> <li>1. Network Protocols: types, application and security.</li> <li>2. Programing technology for development Web application: opportunities, advantages and disadvantages.</li> <li>3. Applications of web-technologies in software packages type ERP or CRM.</li> <li>4. Applications of web-technologies in the development of marketing – mix approach.</li> </ol>
S2_TIZ_W02	<ol style="list-style-type: none"> <li>1. Graphical and numerical methods for the description and presentation of the data.</li> <li>2. Methods and tools for quantitative and qualitative data analysis.</li> <li>3. Integration of probabilistic elements (non-deterministic) into decision-making models.</li> <li>4. Data mining techniques and their applications.</li> </ol>
S2_TIZ_W03	<ol style="list-style-type: none"> <li>1. The subject matter and techniques applicable in business analytics and business intelligence.</li> <li>2. Categories of decision support systems.</li> <li>3. Decision support systems and business intelligence systems – key differences.</li> <li>4. Approach/method of computer supported decision depending on the degree of structuring decision problems.</li> <li>5. The use of spreadsheets to support business decisions and analysis of economic effects.</li> <li>6. Methods of decision making under uncertainty and risk.</li> <li>7. Methods for solving heavy optimization problems.</li> </ol>
S2_TIZ_W04	<ol style="list-style-type: none"> <li>1. Business models in the B2C market.</li> <li>2. The application of electronic tools in purchases in the B2B market.</li> <li>3. The characteristics of quality IT product.</li> <li>4. Features basic models (diagrams), described in UML.</li> <li>5. The definition of class diagram, class diagram types and types of relationships between classes.</li> </ol>

## 12. Requirements concerning deadlines for crediting courses/groups of courses for all courses in particular modules – no requirements

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

<i>No.</i>	<i>Course code</i>	<i>Name of course</i>	<i>Crediting by deadline of... (number of semester)</i>

### 13. Plan of studies (attachment no. ...4...)

Approved by faculty student government legislative body:

.....  
Date, name and surname, signature of student representative

.....  
Date, Dean's signature

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## PROGRAMME OF STUDIES

## 1. Description

<i>Number of semesters:4</i>	<i>Number ECTS points necessary to obtain qualifications:120</i>
<p><i>Prerequisites (particularly for second-level studies):</i></p> <p><b>Graduate at least of first-level studies (bachelor program).</b></p> <p><i>According to internal ordinance no 32/2012 from 30<sup>th</sup> April 2012r.</i></p> <p><a href="http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html">http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html</a></p>	<p><i>Upon completion of studies graduate obtains</i></p> <p><i>professional degree of: Master of Science (magister)</i></p> <p><i>2nd level qualifications</i></p>
<p><i>Possibility of continuing studies: third-level studies, doctoral studies.</i></p>	<p><i>Graduate profile, employability:</i></p> <p>A masters graduate possesses advanced specialist knowledge in the field of management sciences in the following areas: analytical models and methods, integrated information systems and, in particular, contemporary concepts and methods in managing, planning and monitoring the results of the activities of an enterprise, together with the functioning, development and strategical renewal of organizations. A masters graduate is characterized by the ability to think abstractly and a critical approach to theory, which enables him/her to identify, describe, analyze and interpret the complex processes and problems of a firm and its surroundings. He/she is in possession of the ability to integrate knowledge from various disciplines (economics, psychology, law) and apply computer and mathematical tools to carry out a full diagnosis of a problem and create innovative solutions in the workplace.</p> <p>Such masters graduates are qualified to work as an independent</p>



	<p>entrepreneur, manager, specialist or consultant due to their advanced ability to identify, formulate and solve problems within the framework of a complex and uncertain environment, as well as to select the appropriate methods and tools for analysis.</p> <p>A graduate is able to support the directorship of an organization in the process of formulating development strategies. He/she is capable of creating and managing work teams designing and implementing new, innovative solutions and organizational structures. He/she can use methods, techniques and instruments aiding quality management in an organization, taking into account the effect of the surrounding environment, as well as using advanced instruments aiding the generation of new, innovative solutions, together with their assessment and testing. These abilities qualify a graduate to carry out skilled work in small and medium-sized enterprises, which are based on the innovativeness of their workers or owners, or in large organizations, where such a graduate may play the role of manager of “entrepreneurship and innovation” in relation to various types of project.</p>
<p><i>Indicate connection with University’s mission and its development strategy:</i></p> <p>Courses in Management are carried out within the Faculty of Computer Science and Management at Wrocław University of Technology. Although, such a subject lies in the field of social science, it lies directly within the</p>	

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mission and development strategy of a technical university.

The educational program in Management is coherent with the mission of Wrocław University of Technology in the following areas:

- Developing creative, critical and tolerant graduates, as studying a course in management develops these traits;
- Aiming to provide high quality courses and providing the students of Management and lecturers of the Institute of Organization and Management with conditions enabling open discussion and constructive criticism;
- Developing the values and tradition of higher education, wide-ranging cooperation with other universities via students taking part in the Erasmus program and with employers via practical learning, carried out in the form of projects in specific organizations;
- Aiming to make an impact on the national and international scene in the area of educating specialists in the field of management.

The development plan of the department is in line with the strategy of the university as a whole. In particular, the department "...connects theoretical, research and specialist abilities with educational and teaching skills. The department is a leading research and teaching center in Poland and an important center on the international scene. Its teaching and research profile, together with the quality of the courses and research carried out in economics and technical science, ensures it an appropriately high position in national and

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international rankings”. Teaching courses in management is one of the long standing elements in the department's development strategy. In accordance with the decisions made at Wrocław University of Technology, our courses in management have an interdisciplinary nature. The program satisfies all the conditions stipulated in current legislation and is also in accordance with the National Educational Plan in the field of social science. In line with the university's strategy, in order to increase the attractiveness of our courses on the educational market, our programs in management have a unique character, since they make use of the natural - in business practice - complementarity of technical science and economics, enriched with the element of computer science. In accordance with the university's strategy and the department's development plan, which indicates the need for interaction with the region and its economy, the institute has created a framework which ensures that students have systematic contact with enterprises and other institutions during their studies.

In line with the university's development strategy, the quality of our courses is being improved in all aspects. This is achieved through the development of our lecturers' research and teaching skills, as well as systematic refurbishment of the department's infrastructure, including modernization of lecture theaters, audio-visual equipment and computer laboratories.

The program of masters studies in management develops the theoretical knowledge and practical skills of students, enabling graduates to be highly

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

competitiveness on the employment market. Graduates are able to undertake doctoral studies and carry out their own research. They also are conscious of the need for constant self-development in cooperation with their alma mater.	
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## 2. Fields of science and scientific disciplines to which educational effects apply:

Area of Knowledge / Education: SOCIAL SCIENCES

Area of science: ECONOMIC SCIENCES

Scientific disciplines: MANAGEMENT SCIENCE, FINANCE

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

The educational goals of our masters studies satisfy the following needs of employers on the job market:

- The need for employees to understand the functioning of an enterprise from a strategic perspective and, in particular, to assess and improve a firm's competitive and value (medium-sized and large enterprises);
- The ability to work independently, as well as to play various roles in a team including diagnosing problems, designing and implementing solutions in various functional areas of an enterprise - as appropriate to the graduate's speciality (medium-sized and large enterprises);
- Seeing the need for innovative methods and techniques for management and computer tools, as well as designing or choosing and implementing them;
- The ability to learn and share knowledge with others, as well as creativeness and openness to innovations.

The specific goals of this program answer the need for specialists/managers in entrepreneurship and innovation with regard to various forms of projects in large enterprises. In small and medium-sized enterprises based on the individual entrepreneurship of individual employees, graduates may play the role of entrepreneurs or their assistant. Graduates are able to formulate an organization's development strategy, create and manage work teams. They are able to develop and implement new, innovational organizational structures and apply methods and techniques of improving the work practices of an organization.

The masters level course programs in management, together with the long standing experience of the teaching staff, create the conditions for students to achieve the set goals and to meet the demands of employers.

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

## 4. List of education modules:

### 4.1. List of obligatory modules:

#### 4.1.1 List of general education modules

##### 4.1.1.1 Liberal-managerial subjects module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

##### 4.1.1.2 Foreign languages module (min. 3 ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	JZL	Foreign language B2+		1				K2_ZARZ_U15 K2_ZARZ_U16	15	30	1	0,5	T	Z	O	P	KO	W
2	JZL	Foreign language A1 or A2		3				K2_ZARZ_U21 K2_ZARZ_U19 K2_ZARZ_U20	45	60	2	1,5	T	Z	O	P	KO	W
		Total	0	4	0	0	0		60	90	3	2,0						

##### 4.1.1.3 Sporting classes module (min. .... ECTS points):

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

#### 4.1.1.4 Information technologies module (min. .... ECTS points):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

#### Altogether for general education modules

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
0	4	0	0	0	60	90	3	2,0

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

## 4.1.2 List of basic sciences modules

### 4.1.2.1 Mathematics module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	MAZ1129W	Operations Research	1					K2_ZARZ_W13	15	90	3	0,5	T	E			PD	Ob
2	MAZ1129L	Operations Research			2			K2_ZARZ_U10 K2_ZARZ_U18	30	60	2	1,0	T	Z		P	PD	Ob
3	MAZ1137W	Econometric Modelling and Forecasting	1					K2_ZARZ_W13	15	60	2	0,5	T	Z			PD	Ob
4	MAZ1137P	Econometric Modelling and Forecasting					1	K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_U14 K2_ZARZ_U17 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	PD	Ob
5	MAZ1128W	Statistics and ekonometrics	2					K2_ZARZ_W13	30	90	3	1,0	T	Z			PD	Ob
6	MAZ1128L	Statistics and ekonometrics			1			K2_ZARZ_U12 K2_ZARZ_U14	15	60	2	0,5	T	Z		P	PD	Ob
1	MAZ1129W	Operations Research	1					K2_ZARZ_W13	15	90	3	0,5	T	E			PD	Ob
Total			4	0	3	1	0		120	420	14	4,0						

### 4.1.2.2 Physics module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
Total																		

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<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

### 4.1.2.3 Chemistry module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

Altogether for basic sciences modules:

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
4	0	3	1	0	120	420	14	4,0

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

#### 4.1.3.1 Obligatory main-field-of-study modules

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	ZMZ1237W	Management concepts	2					K2_ZARZ_W04 K2_ZARZ_W08 K2_ZARZ_W05	30	90	3	1,0	T	E			K	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob



2	ZMZ1237P	Management concepts				1	K2_ZARZ_U18 K2_ZARZ_U06 K2_ZARZ_U16 K2_ZARZ_K02 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	K	Ob
3	ZMZ1237S	Management concepts				1	K2_ZARZ_U18 K2_ZARZ_U06 K2_ZARZ_U16 K2_ZARZ_K02 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
4	ZMZ1238W	Controlling	1				K2_ZARZ_W09 K2_ZARZ_W06 K2_ZARZ_W07	15	60	2	0,5	T	Z			K	Ob
5	ZMZ1238P	Controlling				1	K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_K06 K2_ZARZ_U02	15	60	2	0,5	T	Z		P	K	Ob
6	IEZ1147W	Simulation modeling	1				K2_ZARZ_W13	15	60	2	0,5	T	Z			K	Ob
7	IEZ1147L	Simulation modeling			1		K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_K06 K2_ZARZ_U14 K2_ZARZ_U17	15	60	2	0,5	T	Z		P	K	Ob
8	PSZ1118W	Psychology in Management	1				K2_ZARZ_W11 K2_ZARZ_W10 K2_ZARZ_W12	15	30	1	0,5	T	Z			K	Ob
9	PSZ1118S	Psychology in Management				1	K2_ZARZ_K08 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06 K2_ZARZ_K04 K2_ZARZ_K03 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	K	Ob
10	FBZ4201W	Managerial Accounting	1				K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07	15	30	1	0,5	T	Z			K	Ob
11	FBZ4201C	Managerial Accounting		1			K2_ZARZ_U02 K2_ZARZ_U06 K2_ZARZ_U03 K2_ZARZ_U08	15	60	2	0,5	T	Z		P	K	Ob
12	FBZ1149W	Value Based Management	1				K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07 K2_ZARZ_W08	15	90	3	0,5	T	E			K	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

13	FBZ1149P	Value Based Management				1		K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_K06 K2_ZARZ_U02	15	60	2	0,5	T	Z		P	K	Ob
14	IEZ4201W	Integrated Management Information Systems	2					K2_ZARZ_W14 K2_ZARZ_W09	30	60	2	1,0	T	Z			K	Ob
15	IEZ4201L	Integrated Management Information Systems			1			K2_ZARZ_U13	15	30	1	0,5	T	Z		P	K	Ob
Total			9	1	2	3	2		255	810	27	8,5						

### Altogether (for main-field-of-study modules):

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
9	1	2	3	2	255	810	27	8,5

## 4.2 List of optional modules

### 4.2.1 List of general education modules

#### 4.2.1.1 Liberal-managerial subjects modules (*min. .... ECTS points*):

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
Total																			

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

**4.2.1.2 Foreign languages module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.1.3 Sporting classes module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.1.4 Information technologies module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

Total																		
-------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Altogether for general education modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

**4.2.2 List of basic sciences modules**

**4.2.2.1 Mathematics module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	
		Total																	

**4.2.2.2 Physics module (min. .... ECTS points):**

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses				
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>	

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

Total																		

#### 4.2.2.3 Chemistry module (min. .... ECTS points):

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
Total																		

#### Altogether for basic sciences modules:

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				

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

#### 4.2.3.1 ... Strategic management module (min. 7... ECTS points):

No.	Course/group	Name of course/group of courses	Weekly number of hours	Field-of-	Number of hours	Number of ECTS points	Form <sup>2</sup> of	Way <sup>3</sup> of	Course/group of courses

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

	of courses code	(denote group of courses with symbol <b>GK</b> )	lec	cl	lab	pr	sem	study educational effect symbol	ZZU	CNPS	total	BK classes <sup>1</sup>	course/group of courses	crediting	university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
		Strategic management module	2	0	0	1	1		60	210	7	2,0						
1	ZMZ4205W	Strategic Management	2					K2_ZARZ_W03 K2_ZARZ_W06 K2_ZARZ_W07 K2_ZARZ_W05 K2_ZARZ_W02	30	120	4	1,0	T	E			K	Ob
2	ZMZ4205P	Strategic Management				1		K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	K	Ob
3	ZMZ4205S	Strategic Management					1	K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
4	ZMZ4207W	Strategic Management	2					K2_ZARZ_W03 K2_ZARZ_W06 K2_ZARZ_W07 K2_ZARZ_W05 K2_ZARZ_W02	30	120	4	1,0	T	E			K	Ob
5	ZMZ4207P	Strategic Management				1		K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	60	2	0,5	T	Z		P	K	Ob
6	ZMZ4207S	Strategic Management					1	K2_ZARZ_U09 K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_K01 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U18 K2_ZARZ_U02 K2_ZARZ_K02 K2_ZARZ_U07 K2_ZARZ_K06	15	30	1	0,5	T	Z		P	K	Ob
Total																		

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

**Altogether for main-field-of-study modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
2	0	0	1	1	60	210	7	2,0

## 4.2.4 List of specialization modules

### 4.2.4.1 Specialization subjects (e.g. whole specialization) modules (min. .. 60.. 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 <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	ZMZ1276W	Knowledge-based business	1					S2_PIP_W10 S2_PIP_W04	15	30	1	0,5	T	Z			S	Ob
2	ZMZ1276L	Knowledge-based business					1	S2_PIP_U02 S2_PIP_U06 S2_PIP_U07	15	30	1	0,5	T	Z		P	S	Ob
3	ZMZ1278W	Design Management	1					S2_PIP_W02 S2_PIP_W10	15	30	1	0,5	T	Z			S	Ob
4	ZMZ1278P	Design Management				1		S2_PIP_U02 S2_PIP_U06	15	30	1	0,5	T	Z		P	S	Ob
5	ZMZ1603W	Entrepreneurship incubators	2					S2_PIP_W06	30	90	3	1,0	T	E			S	Ob
6	ZMZ1603S	Entrepreneurship incubators					1	S2_PIP_U05	15	30	1	0,5	T	Z		P	S	Ob
7	ZMZ1282W	Marketing towards innovation	1					S2_PIP_W10 S2_PIP_W04 S2_PIP_W03	15	30	1	0,5	T	Z			S	Ob
8	ZMZ1282P	Marketing towards innovation				1		S2_PIP_U09 S2_PIP_U07	15	60	2	0,5	T	Z		P	S	Ob
9	ZMZ1286W	Measurements of entrepreneurship and innovation	1					S2_PIP_W02 S2_PIP_W10	15	30	1	0,5	T	Z			S	Ob
10	ZMZ1286C	Measurements of entrepreneurship and innovation		1				S2_PIP_U09	15	60	2	0,5	T	Z		P	S	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob

11	ZMZ1239P	Master thesis I				2	K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06 K2_ZARZ_K09 K2_ZARZ_U14	30	180	6	0,0	T	Z		P	S	Ob
12	ZMZ1240D	Master thesis II				2	K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U14 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06	30	540	18	0,0	T	Z		P	S	Ob
13	ZMZ1288W	Innovation processes	2				S2_PIP_W05 S2_PIP_W04	30	60	2	1,0	T	Z			S	Ob
14	ZMZ1288P	Innovation processes				1	S2_PIP_U01 S2_PIP_U03	15	30	1	0,5	T	Z		P	S	Ob
15	ZMZ1292W	Strategic Entrepreneurship	2				S2_PIP_W04 S2_PIP_W03	30	60	2	1,0	T	Z			S	Ob
16	ZMZ1292S	Strategic Entrepreneurship				1	S2_PIP_U09	15	30	1	0,5	T	Z		P	S	Ob
17	ZMZ4203S	Diploma seminar I				1	K2_ZARZ_U04 K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U16	15	30	1	0,5	T	Z		P	S	Ob
18	ZMZ5202S	Diploma seminar II				1	K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U15 K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06 K2_ZARZ_U05	15	60	2	0,5	T	Z		P	S	Ob
19	ZMZ1604S	Corporate Social Responsibility (CSR)				1	S2_PIP_W08 S2_PIP_U01	15	60	2	0,5	T	Z		P	S	Ob
20	ZMZ1296W	Protected Knowledge Management Strategies	1				S2_PIP_W07	15	30	1	0,5	T	Z			S	Ob
21	ZMZ1296S	Protected Knowledge Management Strategies				1	S2_PIP_U01	15	30	1	0,5	T	Z		P	S	Ob
22	ZMZ1298W	Advanced Project Management	2				S2_PIP_W05 S2_PIP_W11 S2_PIP_W09	30	90	3	1,0	T	E			S	Ob
23	ZMZ1298C	Advanced Project Management		1			S2_PIP_U02 S2_PIP_U08 S2_PIP_U03 S2_PIP_U04	15	30	1	0,5	T	Z		P	S	Ob
24	ZMZ1298P	Advanced Project Management				2	S2_PIP_U02 S2_PIP_U08 S2_PIP_U03 S2_PIP_U04	30	60	2	1,0	T	Z		P	S	Ob
25	ZMZ1412W	Change Management	1				S2_PIP_W01	15	30	1	0,5	T	Z			S	Ob

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob



26	ZMZ1412S	Change Management					1	S2_PIP_U01	15	60	2	0,5	T	Z		P	S	Ob
Total			14	2	0	8	9		495	1800	60	14,5						

#### 4.2.4.2 Legal-economic module (min. .4... pkt ECTS)

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	EKZ1137W	Institutional and financial tools to support innovation of enterprise and economy	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	15	30	1	0,5	T	Z			S	W
2	EKZ1137C	Institutional and financial tools to support innovation of enterprise and economy		1				K2_ZARZ_U01 S2_PIP_W05 S2_PIP_W06 S2_PIP_U01 S2_PIP_U05	15	30	1	0,5	T	Z		P	S	W
3	EKZ1138W	Internationalization of Company Activities	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	15	30	1	0,5	T	Z			S	W
4	EKZ1138C	Internationalization of Company Activities		1				K2_ZARZ_U01 S2_PIP_W05 S2_PIP_W06 S2_PIP_U01 S2_PIP_U05	15	30	1	0,5	T	Z		P	S	W
5	EKZ1140W	INTERNATIONAL ECONOMIC TRANSACTIONS	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03	15	30	1	0,5	T	Z			S	W
6	EKZ1140C	INTERNATIONAL ECONOMIC TRANSACTIONS		1				K2_ZARZ_U01 S2_PIP_W06 S2_PIP_U01 S2_PIP_U05	15	30	1	0,5	T	Z		P	S	W
7	PRZ1123W	Legal and economic aspects of doing business and innovative projects	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	15	30	1	0,5	T	Z			S	W
8	PRZ1123C	Legal and economic aspects of doing business and innovative projects		1				K2_ZARZ_U01 S2_PIP_W05 S2_PIP_W06 S2_PIP_U01 S2_PIP_U05	15	30	1	0,5	T	Z		P	S	W
9	PRZ1127W	Agreement in trade	1					K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	15	30	1	0,5	T	Z			S	W
10	PRZ1127C	Agreement in trade		1				K2_ZARZ_U01 K2_ZARZ_U05	15	30	1	0,5	T	Z		P	S	W

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<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup>Optional – enter W, obligatory – enter Ob

#### 4.2.4.3 Psychological-sociological module (min. .2... pkt ECTS)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	PSZ1126W	Organizational communication	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
2	PSZ1126S	Organizational communication					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
3	PSZ1127W	Psychology of decision and risk	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
4	PSZ1127S	Psychology of decision and risk					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
5	PSZ1128W	Economic psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
6	PSZ1128S	Economic psychology					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
7	PSZ1129W	Cognitive psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W

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<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup>KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup>Optional – enter W, obligatory – enter Ob

8	PSZ1129S	Cognitive psychology					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
9	PSZ1131W	Resolving conflicts in the organizations	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
10	PSZ1131S	Resolving conflicts in the organizations					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W
11	PSZ1132W	Team management	1					K2_ZARZ_W11 K2_ZARZ_W12	15	30	1	0,5	T	Z			S	W
12	PSZ1132S	Team management					1	K2_ZARZ_U05 K2_ZARZ_U07 K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K03 K2_ZARZ_K04 K2_ZARZ_K05 K2_ZARZ_K06 K2_ZARZ_K08 K2_ZARZ_K09	15	30	1	0,5	T	Z		P	S	W

#### 4.2.4.4 Lecture to choose from (min. 3... pkt ECTS):

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol <b>GK</b> )	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form <sup>2</sup> of course/group of courses	Way <sup>3</sup> of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes <sup>1</sup>			university-wide <sup>4</sup>	practical <sup>5</sup>	kind <sup>6</sup>	type <sup>7</sup>
1	ZMZ1418W	Project Controlling	2					S2_PIP_W10	30	90	3	1,00	T	Z			S	W
2	ZMZ1419W	PROCESS QUALITY IMPROVEMENT METHODS	2					S2_PIP_W02	30	90	3	1,00	T	Z			S	W
3	ZMZ1420W	Process and project modeling in conditions of uncertainty	2					S2_PIP_W02 S2_PIP_W04 S2_PIP_W09	30	90	3	1,00	T	Z			S	W
4	PSZ1133W	Creativity and entrepreneurship psychology	2					K2_ZARZ_W11 K2_ZARZ_W12 S2_PIP_W05 S2_PIP_W11	30	90	3	1,00	T	Z			S	W

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<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup>Optional – enter W, obligatory – enter Ob

**Altogether for specialization modules:**

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>
lec	cl	lab	pr	sem				
19	4	0	8	10	615	2070	69	18,5

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

Name of training			
Number of ECTS points	Number of ECTS points for BK classes <sup>1</sup>	Training crediting mode	Code
Training duration		Training objective	

**4.4 Diploma dissertation module**

Type of diploma dissertation	Licencjat / inżynier / magister / magister inżynier	
Number of diploma dissertation semesters	Number of ECTS points	Code
3	1	ZMZ4203S - Diploma seminar I
	2	ZMZ5202S - Diploma seminar II
	6	ZMZ1239P - Master thesis I
	18	ZMZ1240D - Master thesis II
Character of diploma dissertation		
Literature survey, project, computer program, etc.		
Number of BK <sup>1</sup> ECTS points	27	

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

## 5. Ways of verifying assumed educational effects

Type of classes	Ways of verifying assumed educational effects
lecture	Examination or test - multiple choice questions with single or multiple answers; open questions
problems classes	Test (multiple choice and/or open questions); written reports in the form of presentations - literature and case studies, diagnostic and/or project reports - empirical research in real organizations, presenting the opinions of representatives of such organizations; spoken presentations using modern presentation technology
laboratory	Technical report or test
project	Written report documenting the diagnosis and solution of a problem, spoken presentation of the project with questions.
seminar	Choice and formulation of a problem/theme; activeness in discussions, written report in an academic style, essay, “mini”-monograph. Spoken presentations using modern presentation technology
work placement	Written report on the work practice given by the student's placement supervisor, confirmation of the completion and nature of the work placement by the employer
diploma thesis	Written report satisfying the current regulations for diploma theses, assessed by the supervisor and a reviewer using an appropriate form.
diploma examination	Spoken presentation of the results of the diploma thesis, answers to questions given by the examination committee, spoken answers to randomly chosen questions from the set appearing in the program of studies.

## 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<sup>1</sup>)

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

...96.... ECTS

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

Number of ECTS points for obligatory subjects .....	14
Number of ECTS points for optional subjects ....	0
Total number of ECTS points	14

**8. Total number of ECTS points, which student has to obtain from practical classes, including laboratory classes (enter total number of ECTS points for courses/group of courses denoted with code P)**

Number of ECTS points for obligatory subjects .....	68
Number of ECTS points for optional subjects ....	3
Total number of ECTS points	71

**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 study (enter number of ECTS points for courses/groups of courses denoted with code OG)**

...3.... ECTS points

**10. Total number of ECTS points, which student may obtain doing optional modules (min. 30% of total number of ECTS points)**

...72.... ECTS points

**11. Range of diploma dissertation**

Symbol of Learnig Outcome	Exam question
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<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

K2_ZARZ_W01	<ol style="list-style-type: none"> <li>1. Theories of regulation and their relationship to classical schools / economic trends.</li> <li>2. Determinants of economic growth and development in the Keynesian and neo-liberal thinking.</li> </ol>
K2_ZARZ_W02	<ol style="list-style-type: none"> <li>1. Impact of competition policy and industrial policy measures in the EU market companies.</li> <li>2. Pan-European organizational and legal forms of doing business.</li> <li>3. Tools of economic and legal consequences of de-monopolization of markets.</li> </ol>
K2_ZARZ_W03	<ol style="list-style-type: none"> <li>1. Methods for the strategic analysis of environment and the potential of the organization.</li> <li>2. The essence of strategic management. Schools and trends in strategic management.</li> <li>3. Institutional and financial instruments to support the competitiveness and innovation of enterprises in the European Union.</li> <li>4. Forms of internationalization of the company.</li> </ol>
K2_ZARZ_W04	<ol style="list-style-type: none"> <li>1. Models of growth and development of the organization.</li> <li>2. Smart organization features.</li> </ol>
K2_ZARZ_W05	<ol style="list-style-type: none"> <li>1. Knowledge management in organizations - the objectives, functions, models and instruments - examples.</li> <li>2. Strategies for knowledge management in an organization.</li> <li>3. Institutional and non-institutional forms of intellectual property protection.</li> </ol>
K2_ZARZ_W06	<ol style="list-style-type: none"> <li>1. Methods for calculating the costs and scope of their application.</li> <li>2. Methods for determining the value of the company.</li> <li>3. Instruments of strategic and operational controlling.</li> </ol>
K2_ZARZ_W07	<ol style="list-style-type: none"> <li>1. Integrated scorecard as a method of monitoring the achievement of strategic objectives.</li> <li>2. The roles and tasks of the budget process.</li> <li>3. Characterises the creation of value-added measures.</li> <li>4. Methods for measuring and evaluating the achievements of the organization as a whole and for its individual parts (responsibility centers).</li> </ol>

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<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

K2_ZARZ_W08	<ol style="list-style-type: none"> <li>1. Management by Objectives (MbO) – idea, concept, procedures and applications.</li> <li>2. Contemporary and classic structural solutions for management concept - similarities and differences.</li> <li>3. Essence, concepts and organizational procedures of controlling.</li> <li>4. VBM Value Based Management.</li> </ol>
K2_ZARZ_W10	<ol style="list-style-type: none"> <li>1. Psychological contract as a determinant of organizational culture.</li> <li>2. Range of objective and subjective prohibited commercial practices.</li> <li>3. The role of a good practice in consumer – economic organization relationship.</li> </ol>
K2_ZARZ_W11	<ol style="list-style-type: none"> <li>1. The essence of leadership in the organization. Concepts and leadership styles.</li> <li>2. Conflict management, the concept of conflict, the sources and types of conflict in the organization, methods of solving interpersonal and intergroup conflict.</li> <li>3. The decision making process, individual and situational factors.</li> <li>4. Influence of motivation on human behavior in the aspect of achieving individual and common goals.</li> </ol>
K2_ZARZ_W12	<ol style="list-style-type: none"> <li>1. Instruments for creating intra-entrepreneurship in organization.</li> <li>2. Psychological aspects of resistance to change and methods of overcoming them.</li> <li>3. Inhibitors and stimulants of the process of creative thinking. Techniques for creative approach in problem solving.</li> </ol>
K2_ZARZ_W13	<ol style="list-style-type: none"> <li>1. Methods of Operations Research - the purpose and scope of application in management - examples.</li> <li>2. The role of the significance level in statistical hypothesis testing.</li> <li>3. The components of the time series. Forecasting methods based on time series.</li> <li>4. Simulation methods. The process simulation. Objectives of simulation - examples of applications..</li> </ol>
K2_ZARZ_W14	<ol style="list-style-type: none"> <li>1. Common strategies for support management by IT techniques in industrial enterprises.</li> </ol>

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<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob



S2_PIP_W01	1. Methodology of change management in the organization. 2. Phases of organization development (eg the model of Greiner).
S2_PIP_W02	1. Methods of designing, analysis and modeling processes in the organization. 2. Methods of evaluation and improvement processes in the organization.
S2_PIP_W03	1. The essence of corporate, academic and social entrepreneurship. 2. The elements of a business plan for an innovative project, particularly spin-offs and spin-outs type.
S2_PIP_W04	1. Innovation processes in the organization and tools to support them. 2. Entrepreneurship or innovation - key differences.
S2_PIP_W05	1. Mechanisms and methods to stimulate and support creativity and innovation in organizations.
S2_PIP_W06	1. Supporting institutions for the development of innovation and entrepreneurship. The purposes and means of support. 2. Rules for the granting of public aid for innovation policy of the European Union.
S2_PIP_W07	1. Protection of exclusive rights to the intellectual property in the market activities of the enterprise. 2. Intellectual property management strategy in the enterprise.
S2_PIP_W08	1. Social corporate responsibility in business – roles and instruments.

## 12. Requirements concerning deadlines for crediting courses/groups of courses for all courses in particular modules **no requirements**

No.	Course code	Name of course	Crediting by deadline of...
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<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

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<sup>7</sup> Optional – enter W, obligatory – enter Ob

			(number of semester)

**13. Plan of studies (attachment no. 4.....)**

Approved by faculty student government legislative body:

.....  
Date, name and surname, signature of student representative

.....  
Date, Dean's signature

<sup>1</sup>BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

<sup>2</sup>Traditional – enter T, remote – enter Z

<sup>3</sup>Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)

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

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

<sup>6</sup> KO – general education, PD – basic sciences, K – field-of-studies, S – specialization

<sup>7</sup> Optional – enter W, obligatory – enter Ob