PROGRAMME OF STUDIES

1. Description

Number of semesters:4	*Number ECTS points necessary to obtain qualifications:120*
Prerequisites (particularly for second-level studies): **Graduate at least of first-level studies (bachelor program).** *According to internal ordinance no 32/2012 from 30th April 2012r.* *http://rekrutacja.pwr.edu.pl/content/strona/PL/AKTY/rekrutacja20132014.html*	*Upon completion of studies graduate obtains* *professional degree of: Master of Science (magister)* *2nd level qualifications*

Possibility of continuing studies: third-level studies, doctoral studies.	*Graduate profile, employability:*
	
	     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.
	     Such masters graduates are qualified to work as an independent 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. 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.

Indicate connection with University's mission and its development strategy:
 	
    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.
 	
    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

[1]BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students
[2]Traditional – enter T, remote – enter Z
[3]Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)
[4]University-wide course /group of courses – enter O
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

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:

[1]BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students
[2]Traditional – enter T, remote – enter Z
[3]Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)
[4]University-wide course /group of courses – enter O
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

Area of Knowledge / Education: SOCIAL SCIENCES
Area of science: ECONOMIC SCIENCES
Scientific disciplines: MANAGAMENT 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.

---

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

4. 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[2] of course/group of courses	Way[3] of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
		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[2] of course/group of courses	Way[3] of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
1	JZL	Foreign language B2+		2				K2_ZARZ_U15 K2_ZARZ_U16	20	30	1	0,7	T	Z	O	P	KO	W
2	JZL	Foreign language A1 or A2		2				K2_ZARZ_U21 K2_ZARZ_U19 K2_ZARZ_U20	20	60	2	0,7	T	Z	O	P	KO	W
		Total	0	4	0	0	0		40	90	3	1,4						

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

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

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

No.	Course/group of courses code	Name of course/group of courses						effect symbol										
		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 **GK**)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form[2] of course/group of courses	Way[3] of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
		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[1]
lec	cl	lab	pr	sem				
0	**4**	**0**	**0**	**0**	**40**	**90**	**3**	**1,4**

4.1.2 List of basic sciences modules

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

4.1.2.1 *Mathematics* module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	MAZ1142W	Operations Research	2					K2_ZARZ_W13	20	120	4	0,7	T	E			PD	Ob
2	MAZ1142L	Operations Research			1			K2_ZARZ_U10 K2_ZARZ_U18	10	60	2	0,3	T	Z		P	PD	Ob
3	MAZ1136W	Econometric Modelling and Forecasting	1					K2_ZARZ_W13	10	60	2	0,3	T	Z			PD	Ob
4	MAZ1136P	Econometric Modelling and Forecasting				1		K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_U14 K2_ZARZ_U17 K2_ZARZ_K06	10	60	2	0,3	T	Z		P	PD	Ob
5	MAZ1141W	Statistics and ekonometrics	2					K2_ZARZ_W13	20	90	3	0,3	T	Z			PD	Ob
6	MAZ1141L	Statistics and ekonometrics			1			K2_ZARZ_U12 K2_ZARZ_U14	10	60	2	0,7	T	Z		P	PD	Ob
		Total	5	0	2	1	0		80	450	15	2,7						

4.1.2.2 *Physics* module

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

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

		Total												

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[1]
lec	cl	lab	pr	sem				
5	**0**	**2**	**1**	**0**	**80**	**450**	**15**	**2,7**

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 **GK**)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form[2] of course/group of courses	Way[3] of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
1	ZMZ1607W	Management concepts	2					K2_ZARZ_W04 K2_ZARZ_W08 K2_ZARZ_W05	20	90	3	0,7	T	E			K	Ob
2	ZMZ1607P	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	10	90	3	0,3	T	Z		P	K	Ob
3	ZMZ1271W	Controlling	1					K2_ZARZ_W09 K2_ZARZ_W06 K2_ZARZ_W07	10	60	2	0,3	T	Z			K	Ob

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

No	Code	Course name	W	C	L	S	P	Learning outcomes	ZZU	CNPS	ECTS	BK	T/Z	E/Z	O	P	Group	Ob/W
4	ZMZ1271P	Controlling					1	K2_ZARZ_U06 K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_K06 K2_ZARZ_U02	10	60	2	0,3	T	Z		P	K	Ob
5	IEZ1217W	Simulation modeling	1					K2_ZARZ_W13	10	60	2	0,3	T	Z			K	Ob
6	IEZ1217L	Simulation modeling			1			K2_ZARZ_U12 K2_ZARZ_U11 K2_ZARZ_K06 K2_ZARZ_U14 K2_ZARZ_U17	10	60	2	0,3	T	Z		P	K	Ob
7	PSZ1120W	Psychology in Management	1					K2_ZARZ_W11 K2_ZARZ_W10 K2_ZARZ_W12	10	30	1	0,3	T	Z			K	Ob
8	PSZ1120S	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	10	30	1	0,3	T	Z		P	K	Ob
9	FBZ1156W	Managerial Accounting	1					K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07	10	30	1	0,3	T	Z			K	Ob
10	FBZ1156C	Managerial Accounting		1				K2_ZARZ_U02 K2_ZARZ_U06 K2_ZARZ_U03 K2_ZARZ_U08	10	60	2	0,3	T	Z		P	K	Ob
11	ZMZ1576W	Strategic Management	2					K2_ZARZ_W03 K2_ZARZ_W06 K2_ZARZ_W07 K2_ZARZ_W05 K2_ZARZ_W02	20	120	4	0,7	T	E			K	Ob
12	ZMZ1576P	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	10	90	3	0,3	T	Z		P	K	Ob
13	FBZ1205W	Value Based Management	1					K2_ZARZ_W06 K2_ZARZ_W09 K2_ZARZ_W07 K2_ZARZ_W08	10	60	2	0,3	T	E			K	Ob
14	FBZ1205P	Value Based Management					1	K2_ZARZ_U08 K2_ZARZ_U04 K2_ZARZ_K06 K2_ZARZ_U02	10	30	1	0,3	T	Z		P	K	Ob
15	IEZ1151W	Integrated Management Information Systems	1					K2_ZARZ_W14 K2_ZARZ_W09	10	60	2	0,3	T	Z			K	Ob

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
16	IEZ1151L	Integrated Management Information Systems			1			K2_ZARZ_U13	10	30	1	0,3	T	Z		P	K	Ob
		Total	10	1	2	4	1		180	960	32	6,0						

4.1.3.2 ……………… module

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
		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[1]
lec	cl	lab	pr	sem				
10	1	2	4	1	180	960	32	6,0

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 **GK**)	lec	cl	lab	pr	sem	Field-of-study educational	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

			effect symbol															
		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 **GK**)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form[2] of course/group of courses	Way[3] of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
		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 **GK**)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form[2] of course/group of courses	Way[3] of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
		Total																

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

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

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

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

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

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

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

4.2.3 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 **GK**)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form[2] of course/group of courses	Way[3] of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
		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[1]
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 **GK**)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form[2] of course/group of courses	Way[3] of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
1	FBZ1206W	Audit and Revision of Commerce	1					S2_IZF_W08 S2_IZF_W03	10	30	1	0,3	T	Z			S	Ob

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

	Code	Name						Outcomes	BK	h	ECTS	BK	T/Z	E/Z		P	KO	Ob
2	FBZ1161W	Budgeting	1					S2_IZF_W07 S2_IZF_W04	10	30	1	0,3	T	Z			S	Ob
3	FBZ1161P	Budgeting				1		S2_IZF_U06 S2_IZF_U04 S2_IZF_U07	10	60	2	0,3	T	Z		P	S	Ob
4	FBZ1207W	Public Finance	1					S2_IZF_W02	10	30	1	0,3	T	Z			S	Ob
5	FBZ1207P	Public Finance				1		S2_IZF_U02	10	60	2	0,3	T	Z		P	S	Ob
6	FBZ1208W	Strategic controlling	1					S2_IZF_W08 S2_IZF_W04	10	30	1	0,3	T	Z			S	Ob
7	FBZ1208C	Strategic controlling		1				S2_IZF_U08	10	30	1	0,3	T	Z		P	S	Ob
8	FBZ1167W	Methods and tools for financial analysis	1					S2_IZF_W07 S2_IZF_W04	10	90	3	0,3	T	E			S	Ob
9	FBZ1167L	Methods and tools for financial analysis			2			S2_IZF_U04	20	60	2	0,7	T	Z		P	S	Ob
10	FBZ1209W	The appraisal of investment projects (Project Finance)	1					S2_IZF_W06 S2_IZF_W01 S2_IZF_W02	10	30	1	0,3	T	Z			S	Ob
11	FBZ1209C	The appraisal of investment projects (Project Finance)		1				S2_IZF_U04	10	30	1	0,3	T	Z		P	S	Ob
12	ZMZ1608P	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	20	390	13	0,0	T	Z		P	S	Ob
13	ZMZ1609D	Master Thesis II				2		K2_ZARZ_U16 K2_ZARZ_U17 K2_ZARZ_U14 K2_ZARZ_U04 K2_ZARZ_U03 K2_ZARZ_U06	20	330	11	0,0	T	Z			S	Ob
14	FBZ1175W	Reporting and valuation of intellectual assets	1					S2_IZF_W08 S2_IZF_W06 S2_IZF_W07	10	60	2	0,3	T	Z			S	Ob
15	FBZ1175C	Reporting and valuation of intellectual assets		1				S2_IZF_U04 S2_IZF_U08	10	60	2	0,3	T	Z		P	S	Ob
16	FBZ1198W	Capital Market I	2					S2_IZF_W05	20	120	4	0,7	T	E			S	Ob
17	FBZ1198C	Capital Market I		1				S2_IZF_U05	10	60	2	0,3	T	Z		P	S	Ob
18	FBZ1199W	Rynek kapitałowy II	1					S2_IZF_W04	10	30	1	0,3	T	Z			S	Ob
19	FBZ1199L	Rynek kapitałowy II			1			S2_IZF_U06 S2_IZF_U05	10	60	2	0,3	T	Z		P	S	Ob
20	FBZ1179W	Market financial system - insurance	1					S2_IZF_W01	10	30	1	0,3	T	Z			S	Ob
21	FBZ1179C	Market financial system - insurance		1				S2_IZF_U01	10	30	1	0,3	T	Z		P	S	Ob

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
22	ZMZ1471S	Diploma seminar I					1	K2_ZARZ_U04 K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K08 K2_ZARZ_U16	10	30	1	0,3	T	Z		P	S	Ob
23	ZMZ2619S	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	10	60	2	0,3	T	Z		P	S	Ob
24	FBZ1195W	Computer Supported Financial Reporting	1						10	30	1	0,3	T	Z			S	Ob
25	FBZ1195L	Computer Supported Financial Reporting			1				10	60	2	0,3	T	Z		P	S	Ob
26	FBZ1210W	Risk Management	1					S2_IZF_W04 S2_IZF_W08 S2_IZF_W06	10	30	1	0,3	T	Z			S	Ob
27	FBZ1210S	Risk Management					1	S2_IZF_U08 S2_IZF_U06	10	30	1	0,3	T	Z		P	S	Ob
		Total	13	5	4	6	3		310	1890	63	8,3						

Specialization subjects Legal-economic module I (min. ..**3**.. pkt ECTS)

No..	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	EKZ1145W	Financial engineering	1					S2_IZF_W05 S2_IZF_W06	10	30	1	0,3	T	Z			S	W
2	EKZ1145C	Financial engineering		1				S2_IZF_U06	10	60	2	0,3	T	Z		P	S	W
3	EKZ1146W	INTERNATIONAL ECONOMIC TRANSACTIONS	1					K2_ZARZ_W01 K2_ZARZ_W02 K2_ZARZ_W03 S2_IZF_W02 S2_IZF_W03	10	30	1	0,3	T	Z			S	W
4	EKZ1146C	INTERNATIONAL ECONOMIC TRANSACTIONS		1				K2_ZARZ_U01 S2_IZF_U01	10	60	2	0,3	T	Z		P	S	W

Legal-economic module II (min. **2**.... pkt ECTS

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

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
								effect symbol							wide[4]			
1	PRZ1165W	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	10	30	1	0,3	T	Z			S	W
2	PRZ1165C	Legal and economic conditions for business in the market of the European Union		1				K2_ZARZ_U01 S2_IZF_U01	10	30	1	0,3	T	Z		P	S	W
3	PRZ1166W	Agreement in trade		1				K2_ZARZ_W02 K2_ZARZ_W03 K2_ZARZ_W10	10	30	1	0,3	T	Z			S	W
4	PRZ1166C	Agreement in trade		1				K2_ZARZ_U01 K2_ZARZ_U05	10	30	1	0,3	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 **GK**)	lec	cl	lab	pr	sem	Field-of-study educational effect symbol	ZZU	CNPS	total	BK classes[1]	Form[2] of course/group of courses	Way[3] of crediting	university-wide[4]	practical[5]	kind[6]	type[7]
1	PSZ1161W	Organizational commuication	1					K2_ZARZ_W11 K2_ZARZ_W12	10	30	1	0,3	T	Z			S	W
2	PSZ1161S	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	10	30	1	0,3	T	Z		P	S	W
3	PSZ1162W	Psychology of decision and risk	1					K2_ZARZ_W11 K2_ZARZ_W12	10	30	1	0,3	T	Z			S	W
4	PSZ1162S	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	10	30	1	0,3	T	Z		P	S	W
5	PSZ1163W	Economic psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	10	30	1	0,3	T	Z			S	W

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

6	PSZ1163S	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	10	30	1	0,3	T	Z		P	S	W
7	PSZ1164W	Cognitive psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	10	30	1	0,3	T	Z			S	W
8	PSZ1164S	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	10	30	1	0,3	T	Z		P	S	W
9	PSZ1165W	Creativity and entrepreneurship psychology	1					K2_ZARZ_W11 K2_ZARZ_W12	10	30	1	0,3	T	Z			S	W
10	PSZ1165S	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	10	30	1	0,3	T	Z		P	S	W
11	PSZ1166W	Resolving conflicts in the organizations	1					K2_ZARZ_W11 K2_ZARZ_W12	10	30	1	0,3	T	Z			S	W
12	PSZ1166S	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	10	30	1	0,3	T	Z		P	S	W
13	PSZ1167W	Team management	1					K2_ZARZ_W11 K2_ZARZ_W12	10	30	1	0,3	T	Z			S	W

Altogether for specialization modules:

Total number of hours	Total number of	Total number of CNPS	Total number of ECTS	Number of ECTS points for BK

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

					ZZU hours	hours	points	classes[1]
lec	cl	lab	pr	sem				
16	**7**	**4**	**6**	**4**	**370**	**2100**	**70**	**10,5**

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[1]**		**Training crediting mode**	**Code**
Training duration		**Training objective**		

4.4 Diploma dissertation module

Type of diploma dissertation	magister	
Number of diploma dissertation semesters	**Number of ECTS points**	**Code**
3	**1**	**ZMZ1471S** **Diploma Seminar I**
	2	**ZMZ2619S** **Diploma Seminar II**
	13	**ZMZ1608P** **Master Thesis I**
	11	**ZMZ1609D** **Master Thesis II**
Character of diploma dissertation		
Literature survey, project, computer program, etc.		
Number of BK[1] ECTS points	**27**	

5. Ways of verifying assumed educational effects

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

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

6. Total number of ECTS points, which student has to obtain from classes requiring direct academic teacher-student contact (enter total of ECTS points for courses/groups of courses denoted with code BK[1])

102…. ……. ECTS

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

Number of ECTS points for obligatory subjects …….	**18**
Number of ECTS points for optional subjects ….	**0**
Total number of ECTS points	**18**

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 …….	**75**
Number of ECTS points for optional subjects ….	**6**

[1]BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students
[2]Traditional – enter T, remote – enter Z
[3]Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)
[4]University-wide course /group of courses – enter O
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

Total number of ECTS points	**81**

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)

        4…. ……. ECTS points

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

        70……. 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.

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

[2]Traditional – enter T, remote – enter Z

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

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

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

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

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

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.
K2_ZARZ_W07	1. Integrated scorecard as a method of monitoring the achievement of strategic objectives. 2. The roles and tasks of the budget process. 3. Characterises the creation of value-added measures. 4. Methods for measuring and evaluating the achievements of the organization as a whole and for its individual parts (responsibility centers).
K2_ZARZ_W08	1. Management by Objectives (MbO) – idea, concept, procedures and applications. 2. Contemporary and classic structural solutions for management concept - similarities and differences. 3. Essence, concepts and organizational procedures of controlling. 4. VBM Value Based Management.
K2_ZARZ_W10	1. Psychological contract as a determinant of organizational culture. 2. Range of objective and subjective prohibited commercial practices. 3. The role of a good practice in consumer – economic organization relationship.

K2_ZARZ_W11	1.The essence of leadership in the organization. Concepts and leadership styles. 2. Conflict management, the concept of conflict, the sources and types of conflict in the organization, methods of solving interpersonal and intergroup conflict. 3. The decision making process, individual and situational factors. 4. Influence of motivation on human behavior in the aspect of achieving individual and common goals.
K2_ZARZ_W12	1. Instruments for creating intra-entrepreneurship in organization. 2. Psychological aspects of resistance to change and methods of overcoming them. 3. Inhibitors and stimulants of the process of creative thinking. Techniques for creative approach in problem solving.
K2_ZARZ_W13	1. Methods of Operations Research - the purpose and scope of application in management - examples. 2. The role of the significance level in statistical hypothesis testing. 3. The components of the time series. Forecasting methods based on time series. 4. Simulation methods. The process simulation. Objectives of simulation - examples of applications..
K2_ZARZ_W14	1. Common strategies for support management by IT techniques in industrial enterprises.
S2_IZF_W01	1. The market financial system - functions and components. 2. Interdependence of market elements of the financial system - the essence of his actions.
S2_IZF_W02	1. The basic elements of the public financial system, the relationship between them and the relationship with the financial market. 2. Factors of current and long-term imbalances in public finance. 3. Calculating Indicators of Macroeconomic Systems - international reporting and types of documents.

S2_IZF_W03	1. Audit - the essence, objectives and types in different areas of the organization 2. Polish and International Financial Reporting and Accounting Standards. 3. The essence of the concept of auditing. The objectives and procedures of the audit.
S2_IZF_W04	1. Methods and tools for measuring the effectiveness of the organization. 2. Application of analytical and simulation methodology in decision making processes in the organization.
S2_IZF_W05	1. Rules of the capital market and its instruments. 2. Methods for obtaining and investing capital in the market. 3. Methods for calculating the value of the capital and investor rate of profit.
S2_IZF_W06	1. Concepts and types of risk in economic decision making processes in the organization. 2. Methods for identifying, measuring and risk management in the company.
S2_IZF_W07	1. Methodology and tools for the economic-financial analysis. 2. Sources of information used in the economic-financial analysis.
S2_IZF_W08	1. Modern concepts of the value of organization. 2. Determinants of creating value of the organization. 3. Methodology of valuation of the organization.

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

[1]BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students
[2]Traditional – enter T, remote – enter Z
[3]Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)
[4]University-wide course /group of courses – enter O
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob

No.	Course code	Name of course	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

....
Date, Dean's signature

[1]BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students
[2]Traditional – enter T, remote – enter Z
[3]Exam – enter E, crediting – enter Z. For the group of courses – after the letter E or Z - enter in brackets the final course form (lec, cl, lab, pr, sem)
[4]University-wide course /group of courses – enter O
[5]Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses
[6] KO – general education, PD – basic sciences, K – field-of-studies, S – specialization
[7] Optional – enter W, obligatory – enter Ob