PROGRAMME OF EDUCATION

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

MAIN FIELD OF STUDY: **MANAGEMENT**

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

EDUCATION LEVEL: **2nd level, magister studies**

FORM OF STUDIES: **full-time**

PROFILE: **general academic**

SPECIALIZATION **Business Information Systems**

LANGUAGE OF STUDY: **English**

Content:

Faculty Council Resolution of **29.04.2014**

In effect since **1.10.2014**

Zał. nr 2 do ZW 64/2012

Attachment no. …. to Programme of Education

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 49/2013 from 28th May 2013.*	*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 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. 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. Such a masters graduate is able to apply advanced methods in the following areas: analysis of business data, data mining, discrete optimization, network flows, decision theory. He/she can implement and exploit appropriate business information systems. He/she is able to analyze the information and technological needs of an organization.

	He/she can define the legal, economic, financial, organizational and technological constraints on the functioning of an organization and implement innovations from information technology within such an organization. This qualifies a masters graduate to carry out skilled work in the field of information systems, in particular, as an analyst of management information systems, a specialist implementing and maintaining such a system, an analyst of business processes, or a consultant in the field of applying information technology within enterprises. He/she is also qualified to take a role in middle and upper management in the field of information technology.
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 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:

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 strategiecal 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.

These specific effects answer the need for specialists/managers in IT departments working on the maintenance/development of computer software aiding management at the strategic and operational levels of enterprises and other organizations carrying out production, trade, services 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.

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		Form2 of course/group of courses	Way3 of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes1			university-wide4	practical[5]	kind[6]	type[7]
1	JZL	Foreign Language B2+		1					15	30	1	0,5	T	Z	O	P	O	W
2	JZL	Foreign Language A1 or A2		3					45	60	2	1,5	T	Z	O	P	O	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 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																

4.1.1.4 *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**	**60**	**90**	**3**	**2,0**

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 **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	MAZ1202W	Business Statistics	1					K2_ZARZ_W07	15	60	2	0,5	T	Z			PD	Ob

								K2_ZARZ_W13										
2	MAZ1202L	Business Statistics			1			K2_ZARZ_U11 K2_ZARZ_U12 K2_ZARZ_U14 K2_ZARZ_K09	15	60	2	0,5	T	Z		P	PD	Ob
3	MAZ1203W	Econometrics	1					K2_ZARZ_W07 K2_ZARZ_W13	15	60	2	0,5	T	Z			K	Ob
4	MAZ1203P	Econometrics				1		K2_ZARZ_U11 K2_ZARZ_U12 K2_ZARZ_K09	15	60	2	0,5	T	Z		P	K	Ob
5	MAZ1201W	Operations Research	1					K2_ZARZ_W13	15	60	2	0,5	T	E			K	Ob
6	MAZ1201L	Operations Research			2			K2_ZARZ_U10 K2_ZARZ_U18	30	60	2	1,0	T	Z		P	K	Ob
		Total	**3**	**0**	**3**	**1**	**0**		**105**	**360**	**12**	**3,5**						

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**)	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																

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	PRZ1206W	Legal protection of information	1					K2_ZARZ_W12 K2_ZARZ_W01 K2_ZARZ_W10	15	60	2	0,5	T	Z			PD	Ob

2	PRZ1206C	Legal protection of information		1				K2_ZARZ_U20 K2_ZARZ_U01 K2_ZARZ_U16 K2_ZARZ_U05 K2_ZARZ_K07 K2_ZARZ_K09	15	60	2	0,5	T	Z		P	PD	Ob
3	ZMZ1228W	Contemporary Management	2					K2_ZARZ_W11 K2_ZARZ_W08 K2_ZARZ_W04	30	120	4	1,0	T	E			PD	Ob
4	ZMZ1228C	Contemporary Management		1				K2_ZARZ_U06 K2_ZARZ_U18 K2_ZARZ_K01 K2_ZARZ_K06 K2_ZARZ_K09	15	60	2	0,5	T	Z		P	PD	Ob
5	EKZ1183W	Macroeconomic modeling	1					K2_ZARZ_W01 K2_ZARZ_W02	15	90	3	0,5	T	E			PD	Ob
6	EKZ1183C	Macroeconomic modeling		1				K2_ZARZ_U01 K2_ZARZ_K01	15	60	2	0,5	T	Z		P	PD	Ob
		Total	**6**	**3**	**0**	**0**	**0**		**135**	**540**	**18**	**4,5**						

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				
9	**3**	**3**	**1**	**0**	**240**	**900**	**30**	**8,0**

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	Name of course/group of courses (denote group of courses with symbol **GK**)	Weekly number of	Field-of-study educational	Number of hours	Number of ECTS	Form[2] of course/group	Way[3] of crediting	Course/group of courses

	code		hours					effect symbol			points		of courses					
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes[1]			university-wide[4]	practical[5]	kind[6]	type[7]
1	PRZ1207W	Legal protection and commercialization of knowledge	1					K2_ZARZ_W12 K2_ZARZ_W01 K2_ZARZ_W10 K2_ZARZ_W07	15	30	1	0,5	T	Z			K	Ob
2	ZMZ1402W	Logistics Management Tools	1					S2_BIS_W02	15	60	2	0,5	T	Z			K	Ob
3	FBZ1201W	Management Accounting	1					K2_ZARZ_W06	15	60	2	0,5	T	Z			K	Ob
4	FBZ1201C	Management Accounting		1				K2_ZARZ_U06 K2_ZARZ_K04	15	60	2	0,5	T	Z		P	K	Ob
5	PSZ2201W	Organizational Psychology	2					K2_ZARZ_W12 K2_ZARZ_W11	30	60	2	1,0	T	Z			K	Ob
6	ZMZ1201W	Process Management	1					S2_BIS_W04 S2_BIS_W05	15	60	2	0,5	T	Z			K	Ob
7	ZMZ2204W	Strategic Management	1					K2_ZARZ_W03	15	90	3	0,5	T	Z			K	Ob
8	ZMZ2204S	Strategic Management					1	K2_ZARZ_U02 K2_ZARZ_U09 K2_ZARZ_K01	15	90	3	0,5	T	Z		P	K	Ob
		Total	**7**	**1**	**0**	**0**	**1**		**135**	**510**	**17**	**4,5**						

4.1.3.2 …… module

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				
7	**1**	**0**	**0**	**1**	**135**	**510**	**17**	**4,5**

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 **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																

4.2.1.2 *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):*

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																

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				

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. ...70 . 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	IEZ1205W	Business Data Analysis	2					S2_BIS_W01	30	60	2	1,0	T	Z			S	Ob
2	IEZ1205L	Business Data Analysis			1			S2_BIS_U01 K2_ZARZ_K05	15	60	2	0,5	T	Z		P	S	Ob
3	IEZ2201W	Business Process Modeling	1					S2_BIS_W04	15	60	2	0,5	T	Z			S	Ob
4	IEZ2201L	Business Process Modeling			1			S2_BIS_U05 K2_ZARZ_K02	15	60	2	0,5	T	Z		P	S	Ob
5	IEZ2201P	Business Process Modeling				1		S2_BIS_U05 K2_ZARZ_K02	15	60	2	0,5	T	Z		P	S	Ob
6	IEZ2203W	Data Mining	1					S2_BIS_W01	15	90	3	0,5	T	E			S	Ob
7	IEZ2203P	Data Mining				2		S2_BIS_U01 K2_ZARZ_K02	30	60	2	1,0	T	Z		P	S	Ob
8	IEZ1206W	Discrete Optimization and Network Flows	2					S2_BIS_W02	30	60	2	1,0	T	Z			S	Ob
9	IEZ1206L	Discrete Optimization and Network Flows			1			S2_BIS_U02 K2_ZARZ_K04 K2_ZARZ_K05	15	60	2	0,5	T	Z		P	S	Ob
10	IEZ2205W	e-Economy	1					S2_BIS_W03	15	90	3	0,5	T	Z			S	Ob
11	IEZ2204W	Games and Decisions in Management	2					S2_BIS_W02	30	90	3	1,0	T	E			S	Ob
12	IEZ2204C	Games and Decisions in Management		1				S2_BIS_U02 K2_ZARZ_K04 K2_ZARZ_K05	15	60	2	0,5	T	Z		P	S	Ob
13	IEZ1201W	Information Systems Analysis	1					S2_BIS_W05	15	30	1	0,5	T	Z			S	Ob
14	IEZ1202W	Internet Information Services and Systems	1					S2_BIS_W03	15	60	2	0,5	T	Z			S	Ob
15	IEZ1202L	Internet Information Services and Systems			2			S2_BIS_U05	30	60	2	1,0	T	Z		P	S	Ob
16	IEZ1204W	Management Information Systems	1					S2_BIS_W03	15	60	2	0,5	T	E			S	Ob
17	IEZ1204L	Management Information Systems			2			S2_BIS_U04 S2_BIS_U05 K2_ZARZ_K02	30	60	2	1,0	T	Z		P	S	Ob

18	IEZ1204S	Management Information Systems					1	S2_BIS_U04 S2_BIS_U05	15	30	1	0,5	T	Z		P	S	Ob
19	IEZ1203W	Management Information Systems Modeling	1					S2_BIS_W04	15	60	2	0,5	T	Z			S	Ob
20	IEZ1203L	Management Information Systems Modeling			1			S2_BIS_U03 K2_ZARZ_K05	15	60	2	0,5	T	Z		P	S	Ob
21	ZMZ2205P	MSc Thesis I				2			30	150	5	0,0	T	Z		P	S	Ob
22	ZMZ2206D	MSc Thesis II				6			90	480	16	0,0	T	Z		P	S	Ob
23	IEZ2206W	Business Object Modeling	1					S2_BIS_W04 S2_BIS_W05	15	60	2	0,5	T	Z			S	Ob
24	IEZ2206L	Business Object Modeling			2			S2_BIS_U03	30	60	2	1,0	T	Z		P	S	Ob
25	ZMZ2202S	Seminar I					1		15	60	2	0,5	T	Z		P	S	Ob
26	ZMZ2203S	Seminar II					1		15	60	2	0,5	T	Z		P	S	Ob
		Total	**14**	**1**	**10**	**11**	**3**		**585**	**2100**	**70**	**15,5**						

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[1]
lec	cl	lab	pr	sem				
14	**1**	**10**	**11**	**3**	**585**	**2100**	**70**	**15,5**

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	Licencjat / inżynier / magister / magister inżynier	
Number of diploma dissertation semesters	**Number of ECTS points**	**Code**
3	**2**	**ZMZ2202S Seminar I**
	2	**ZMZ2203S Seminar II**
	5	**ZMZ2205P MSc Thesis I**
	16	**ZMZ2206D MSc Thesis II**
Character of diploma dissertation		
literature and / or research and / or diagnostic and / or project		
Number of BK[1] ECTS points	**25**	

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[1])

……99 . ECTS

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

Number of ECTS points for obligatory subjects …….	**22**
Number of ECTS points for optional subjects ….	**0**
Total number of ECTS points	**22**

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 …….	**66**
Number of ECTS points for optional subjects ….	**0**
Total number of ECTS points	**66**

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)

…73…. ECTS points

11. Range of diploma dissertation

1. What kind of data a company may collect and what statistical tools can be used for analysing them? (Business Data Analysis)
2. Methods of business process modeling. (Business Process Modeling)
3. Significance: its place and role in statistics. (Business Statistics)
4. Point to the basic types of legally protected information (Legal protection of information)
5. List and discuss the categories referred to as intellectual property. Explain the concept of commercialization of knowledge (Legal protection and commercialization of knowledge)
6. Data mining methods and applications. (Data mining)
7. Describe the minimum cost flow problem and show some of its applications. (Discrete Optimization and Network Flows)
8. Essence of Gauss-Markov's assumptions in econometrical modeling. (Econometrics)
9. E-government and its importance for citizens. (e-Economy)
10. Functioning and a structure of the Enterprise Management System (Contemporary Management)
11. Describe the concept of eqilibrium in game theory (Games and Decisions in Management)
12. Methods for gathering organizational information requirements (Information Systems Analysis)
13. What are the features, advantages and disadvantages of various dynamic web content platforms? (Internet Information Services and Systems)
14. Explain the concept of Just - in - Time.(Logistics Management Tools)
15. Microeconomic foundations of macroeconomic models (Macroeconomic modeling)
16. Ethical aspect of business activity (Management Ethics)
17. General characteristics of management information system sets (Management Information Systems)
18. Describe the reference framework concepts for the information system model, which consists of two main components: the structure model (ERD) and the process model (HFD, DFD). (Management Information Systems Modeling)
19. How Cost-Volume-Profit Analysis supports decision making - explain using examples (Managerial Accounting)
20. Business architecture and UML application in modeling it. (Business Object Modeling)
21. Applications of linear programming and integer programming models. Solving linear programming and integer programming problems (Operations Reasearch)
22. Main psychological factors influencing human performance at work (Organizational Psychology)
23. What are the differences between process oriented and functional organizations? (Process Management)
24. **Describe the Porter's model of strategy** (Strategic Management)

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

....
Date, Dean’s signature