

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish: Nauka o organizacji****Name of subject in English: Organizational Science****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management (OM)****Profile: academic****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code: ZMZ1243****Group of courses: NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15	-	-	-
Number of hours of total student workload (CNPS)	60	30	-	-	-
Form of crediting	crediting with grade	crediting with grade	-	-	-
For group of courses mark (X) final course	-	-	-	-	-
Number of ECTS points	2	1	-	-	-
including number of ECTS points for practical (P) classes	-	1	-	-	-
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7	-	-	-

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

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SUBJECT OBJECTIVES

To ensure fundamental knowledge (including application aspects) about:

C1. types of organizations and their organizational and legal forms

C2. the impact of the environment on organizational operations (including global environment issues)

C3. organizational development dynamics and characteristics of the organization in various development phases

C4. organization as a system of functions, processes and operations within the organization

C5. inter-organizational relationships (incl. corporate social responsibility issues)

To ensure fundamental skills to:

C6. identify and evaluate organizational and legal forms for selected organization

C7. analyze and evaluate the organization as a system of functions, processes and operations

C8. analyze and evaluate the organization in its different life cycle stages

SUBJECT EDUCATIONAL EFFECTS**relating to knowledge:**

PEU_W01 – has a basic knowledge about types of organizations and their organizational and legal forms

PEU_W02 – explains and illustrates the impact of the environment on the operations of the organization including global environment issues

PEU_W03 – has a basic knowledge about of forming and functioning of the organization, understands organizational development stages

PEU_W04 – explains and illustrates the organization as a system of functions, processes and operations

PEU_W05 – has basic knowledge about inter-organizational relationships

relating to skills:

PEU_U01 – analyzes and evaluates (at a basic level) the organizational and legal forms of organizations

PEU_U02 – analyzes and evaluates (at a basic level) the organization as a system of functions, processes and projects

PEU_U03 – analyzes and evaluates (at a basic level) organizational designs and work positions

PEU_U04 – analyzes and evaluates (at a basic level) organizations in different life cycle stages

relating to social competences:

PEU_K01 - is aware of the need to develop knowledge and skills in the science of organization and management

PEU_K02 - is aware that manager’s job is to continuously identify, analyze and resolve issues in organizations

PEU_K03 - is prepared to express and defend his/her views, and to persuade others to his/her views

PEU_K04 – is aware that managers have to comply with appropriate – professional and ethical standards

PROGRAMME CONTENT

Lectures		Number of hours
Lec1	Introduction to organizational science	2
Lec2	Ownership status. Organizational and legal forms of enterprises. Corporate governance	2
Lec3	Managing the environment	2
Lec4	Entrepreneurship, manager, organization – the essence and relations	2
Lec5	Organization as a system of functions, processes and operations	2
Lec6-7	Designing organizational structure	4
Lec8	Resources, property, potential and capital of organization – tasks and principles of functioning, relationships and developing tendencies.	2
Lec9	Communication, information and management	2
Lec10-11	Organizational transformations: birth, growth, decline, and death	4
Lec12	Managing organizational change	2
Lec13	Managing conflict, power, and politics	2
Lec14	Inter-organizational cooperation	2
Lec15	Corporate Social Responsibility	2
	Total hours	30
Classes		Number of hours
Cl 1	Introduction to organizational science classes	1

CI 2	Organizational and legal forms of enterprises	2
CI 3	Cross-cultural management issues	2
CI 4	Organization as a system of functions, processes and operations.	2
CI 5	Analysis and evaluation of organizational structure	2
CI 6	Analysis of work position (obligations, authority and responsibility)	2
CI 7	Managing organizational growth and decline	2
CI 8	Corporate Social Responsibility	2
	Total hours	15

TEACHING TOOLS USED

- N1. Traditional lecture with multimedia presentations
N2. Questions to students during lecture
N3. Case studies presented during lecture
N4. Discussion of selected issues
N5. Case studies solving (independently by student or jointly with other students)
N6. Self-study: classes preparation and final assessment preparation
N7. Presentations prepared by students

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_U01-4	Quizzes (during classes)
F2	PEU_U01-4, PEU_K01-4	Scoring students' involvement and presentations (during classes)
P1	Final mark consists of F1(60%) and F2 (40%)	
P2	PEU_W01-5	Final test

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Robbins S.P., DeCenzo D.: Fundamentals of management: essential concepts and applications, Pearson/Prentice Hall, 2008.
[2] Robbins S.P., Barnwell N.: Organization Theory, Person, 2006.

SECONDARY LITERATURE:

- [1] Easterby-Smith M., Thorpe R., Jackson P.R.: Management research, SAGE Publications, Los Angeles 2008.
[2] Griffin R.W.: Management, Houghton Mifflin Company, New York 2008.
[3] Jones G.R., George J.M., Essentials of contemporary management, McGraw-Hill Irwin, Boston 2007 (2006).
[4] Koźmiński A.K.: Management in transition, Difin, Warsaw 2008.
[5] McKee A.: Management: a focus on leaders, Pearson, Boston 2012.
[6] Messick D.M., Kramer R.M.: The psychology of leadership: new perspectives and research, Lawrence Erlbaum Associates, London 2005.
Robbins S.P., Coulter M.: Management, Pearson/Prentice Hall, 2009.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Anna Zgrzywa-Ziemak, anna.zgrzywa-ziemak@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish Marketing w społeczeństwie informacyjnym					
Name of subject in English Marketing in the information society					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management (OM)					
Profile: academic					
Level and form of studies: 1 st level, full-time					
Kind of subject: obligatory					
Subject code ZMZ1244					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	30			
Number of hours of total student workload (CNPS)	120	60			
Form of crediting	Examination	Crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	4	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	1.4			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. None

SUBJECT OBJECTIVES

C1. Introducing to basic marketing concepts, their evolution and present challenges, especially in regard of digital media.

C2. Provide an overview of marketing strategies in the social, technological and international context.

C3. Developing conceptual and analytical marketing skills necessary for modern marketers.

SUBJECT EDUCATIONAL EFFECTS

Relating to knowledge:

PEU_W01 – Understand how the basic principles of marketing are influenced by a variety of social, technological, cultural and economic issues.

PEU_W02 – Understand the basic principles, objectives, and problems in digital and international marketing channels.

Relating to skills:

PEU_U01 – Be able to plan and develop various marketing activates using modern methods of communication.

PEU_U02 – Be able to coordinate virtual and global marketing activities.

Relating to social competences:

PEU_K01 – Be aware of international and cross-cultural issues in marketing and digital media.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Introduction to marketing concept and process	2
Lec 2	Traditional marketing-mix	2
Lec 3	Information society and its influence on marketing strategies	2
Lec 4	Evolution of the new type of customers (prosumers)	2
Lec 5	Impact of the Internet on marketing activities	2
Lec 6	Products and customers	2
Lec 7	Prices and costs	2
Lec 8	Promotion and communication	2
Lec 9	Distribution and convenience	2
Lec 10	Personnel and competence	2
Lec 11	Process and capability	2
Lec 12	Physical environment and cultural context	2
Lec 13	Multinational and intercultural communication	2
Lec 14	New forms of marketing activities in virtual and real world	2
Lec 15	Exam	2
	Total hours	30
Classes		Number of hours
Cl 1	Evolution of marketing	2
Cl 2	Key thinkers in marketing	2
Cl 3	Modern marketing	2
Cl 4	Information society	2
Cl 5	Prosumerism	2
Cl 6	New products and services	2
Cl 7	Alternative pricing strategies	2
Cl 8	New forms of distribution	2
Cl 9	Push vs. Pull	2
Cl 10	Advertising	2
Cl 11	SEM and SEO	2
Cl 12	Social media marketing and Public Relations	2
Cl 13	International issues	2

CI 14	Intercultural issues	2
CI 15	Future trends in marketing	2
	Total hours	30
Laboratory		Number of hours
Lab 1		
	Total hours	
Project		Number of hours
Proj 1		
	Total hours	
Seminar		Number of hours
Sem 1		
	Total hours	
TEACHING TOOLS USED		
N1. Informative lectures N2. Discussion-based lectures N3. Multimedia presentation N4. Class discussion N5. Oral presentation N6. Case studies		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
P1 (lecture)	PEU_W01, PEU_W02, PEU_K01	Exam
F1 (classes)	PEU_U01 PEU_U02 PEU_K01	Oral presentation
F2 (classes)	PEU_U01 PEU_U02 PEU_K01	Report

P2 (classes) = 0,5*F1 + 0,5*F2

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Judy Strauss, Raymond Frost, E-Marketing: International Version, Pearson, 2012
[2] Dave Chaffey, Fiona Ellis-Chadwick, Digital Marketing: Strategy, Implementation and Practice, Pearson, 2012
[3] Efraim Turban, David King, Electronic Commerce, Pearson, 2012

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Adam Dzikowski, adam.dzikowski@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT**SUBJECT CARD**

Name of subject in Polish Zachowania organizacyjne
Name of subject in Polish English Organizational Behaviour
Discipline (if need): Management
Specialization (if need): Organizational Management (OM)
Profile: academic
Level and form of studies: 1st level, full-time
Type of course: obligatory
Course code: ZMZ1245
Groupe of courses: NO

Course Form	Lecture	Class	Laboratory	Project	Seminar
Number of hours/semester* provided in University (ZZU)	30	15			
Total Student's Workload (CNPS)	60	60			
Form of the course completion	Formal Presence and Evaluation's level of Knowledge	Evaluation of Diversified Activity			
For Group of Courses to Mark The Final Course (X)					
ECTS Credit	2	2			
Including the amount of relevant practice credit (P)		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Completion of the course aimed on theory of organization and management

SUBJECT OBJECTIVES

1. Awareness of essence and correctness of organizational behavior.
2. Identification of circumstances and factors and estimate of their influence on functioning organization
3. Behavior of organizational temporary organizations management.

SUBJECT EDUCATIONAL EFFECTS

Knowledge range:

PEU_W01 Knows the meaning and aims of creating organizational behavior.

PEU_W02 Knows the circumstances and their influence on organizational behavior.

PEU_W03 Knows the models and mechanisms of their functioning related to creating organizational behavior .

Skills range:

PEU_U01 Can to identify key determinants to create organizational behavior.

PEU_U02 Can to use instruments set to create organizational behavior in practice.

PEU_U03.

Social competences range:

PEU_K01 Is oriented to ethical and moral standards relevant to situational circumstances in practice.

PEU_K02. Is conscious to devote efforts and time designated to create organizational behavior.

PEU_K03 Has a honest perception of rate between ordinate and subordinate.

PROGRAMME CONTENT

Lectures		Number of hours
Lec1	Genesis and essence of Organizational Behavior	2
Lec2	Factors influencing on organization and forming organizational behavior, definitions and their interpretations	2
Lec3	Organizational behavior of Individuals. Solidarity and consolidation of the group	2
Lec4	Organizational behavior of group. Conflicts – their sources and resolving.	2
Lec5	Multi related organizational behavior. Integration and competition.	2
Lec6	Organization vs. Environment. Multi dimensioned organizational relationships. Cooperation	2
Lec7	Strategic management as the reactions on environmental factors.	2
Lec8	Methods and techniques in creating and organizational behavior	2
Lec9	Leadership and Styles of leading. The profile of contemporary leader	2
Lec10	Relational capital in organization – network, rates and processes of communications. Means of communication	2
Lec11	Person but changes in organization. Negotiations and Negotiating vs. Resist change. Methods and styles of negotiations	2
Lec12	Tiring, discouraging and “professional burning out” - reason, aspects, surmounting	2
Lec13	Ethic in organization – determinants, norms and standards vs. practice. Organizational culture	2
Lec14	Proofing the level of knowledge. Exam	2
Lec15	Final evaluation – analysis and discussion of result of test	2
	Total number of hours	30

Classes		Number of hours
Clas1	Organizational roles of course’s realization and promoting	1
Clas2	Leadership – theoretical aspects: attributes, skills, techniques. Individual and group aims vs. consolidation of the group	2
Clas3	Environment’s factors and their affect on organization – factors,	2

	impacts and results of influence. Sociological, technical, economical and political determinants creating the organizational behavior	
Clas4	Negotiations as manner of resolving conflicts. Communications tools and their role and meaning in motivation' processes	2
Clas5	Organizational culture and its role in forming individual and group organizational behavior. Motivating – historical and temporary theories and approaches	2
Clas6	Ethic in organization – determinants, norms and standards vs. practice. Crisis phenomena – source of failure and benefits	2
Clas7	Organizational pathology – conflict, mobbing, phenomena of distastes, manners of mitigation. “Hard” employee in organization – the role of group and leader in leadership	2
Clas8	Changes vs. “organizational gap”. Individuals and group in resolving problem of effectiveness	2
	Total number of hours	15

Laboratory		Number of hours
Lab1		
Lab2		
Lab3		
	Total number of hours	

Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total number of hours	

Seminar		Number of hours
Sem1		
Sem2		
Sem3		
	Total number of hours	

TEACHING TOOLS USED
M1. lecture (formal presence) M2. multimedia techniques (presentation) M3. discussion (panel, Internet) M4. individual work (literature overview, essays)

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (due to progress in semester), P – final (the end of semester))	Educational effect number	Way of evaluating educational effect achievement
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F1	PEU_W01,PEU_W02, PEU_W03,PEU_K01,PEU_K03	By measurement the formal presence and activity
F2	PEU_W02, PEU_W03, PEU_U01, PEU_U02, PEU_U03	The assessment by evaluation of the level of preparation of presentation
F3	PEU_W01,PEU_W02, PEU_W03, PEU_U03,PEU_K01,PEU_K03	The measurement by evaluation the level of readiness to panel discuss.
F4	PEU_W02, PEU_K02	By measurement the value of individual essays
P= 0,25F1+0,25F2 +0,35F3 +0,15F4		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1]. Robbins, Judge (2012), *Organizational Behavior*, 15/e, Prentice Hall
 [2]. McShane, Von Glinow, (2010) *Organizational behavior: Emerging knowledge and practice for the real world*, 15/e McGraw-Hill Irwin.
 [3]. Griffin, Moorhead (2013) *Organizational Behavior: Managing People and Organizations*, 11/e, Cengage Learning.

SECONDARY LITERATURE:

- [1]. Gibson, Ivancevich, Donnelly (2000), *Organizations: Behavior, Structure, Processes*, 10/e, McGraw- Hill
 [2]. Nelson, Quick (2000), *Organizational Behavior: Foundations, Realities and Challenges*, 3/e, South- Western
 [3]. Schermerhan, Hunt, Osborn (2000), *Organizational Behavior*, 7/e, Wiley

TUTOR: (SURNAME, NAME, ADDRESS E-MAIL)

Zbigniew Malara, Zbigniew.Malara@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish: Współczesne metody i techniki organizacyjne					
Name of subject in English: Contemporary organizational methods and techniques					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management (OM)					
Profile: academic					
Level and form of studies: 1st level, full-time studies					
Kind of subject: obligatory					
Subject code: ZMZ1246					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	30	30			
Form of crediting	Crediting with grade	Crediting with grade			
For group of courses mark final course with (X)					
Number of ECTS points	1	1			
including number of ECTS points for practical (P) classes		1			
including number of ECTS points for direct teacher-student contact (BK) classes	0,5	0,5			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic knowledge of management

SUBJECT OBJECTIVES

C1 Getting by the students basic knowledge about the contemporary management methods and techniques in organizational processes

C2 Understanding the issues related to the organizational processes

C3 Ability of planning, analysis, measurement of processes in organizations

SUBJECT LEARNING OUTCOMES

relating to knowledge:

PEU_W01 has structured knowledge of organizational processes

PEU_W02 has structured knowledge of the contemporary methods and techniques in management

relating to skills:

PEU_U01 has the ability to identify the organizational processes

PEU_U02 has the ability to use chosen methods/techniques in management

relating to social competences:

PEU_K01 properly identify and resolve dilemmas related to management

PROGRAM CONTENT		
Lectures		Number of hours
Lec 1	Management methods and techniques and their use in organizational processes	2
Lec 2	Business plan - what is it?, why should it be prepared?, how to make it?	4
Lec 3	Activity Based Management (ABM) and methods related to it: Activity Based Costing (ABC) and Activity Based Budgeting (ABB)	4
Lec 4	Balanced Scorecard (BSC)	2
Lec 5	Management by Objectives (new version - OPTIMAL MBO)	2
Lec 6	Test	1
	Total hours	15
Classes		Number of hours
Cl 1	Canvas Model - exercises lists, workshops	4
Cl 2	Activity Based Costing (ABC) - exercises lists, workshops	5
Cl 3	Balanced Scorecard (BSC) - exercises lists, workshops	4
Cl 4	Presentation of students' works (related to workshops)	2
	Total hours	15

TEACHING TOOLS USED
N1. informative lecture N2. multimedia presentation N3. case studies N4. exercises lists N5. workshops

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating learning outcomes achievement
F1	PEU_W01	Test
F2	PEU_W02	Test
F3	PEU_U01	exercises lists, case studies analysis, workshops
F4	PEU_U02	exercises lists, case studies analysis, workshops
P lecture = F1 + F2		
P classes = F3 + F4		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Anand S., *Successfully implementing the balanced scorecard : Making strategy work using the balanced scorecard*, Hoboken, John Wiley & Sons, Inc. 2016.
- [2] Barrow C., Barrow P., Brown R., *The business plan workbook*, London, Kogan Page 2012.
- [3] Boyd K., *Cost accounting for dummies*, Wiley 2013.
- [4] Taticchi P., *Business performance measurement and management: New contents, themes and challenges*, Berlin, London, Springer 2010.

SECONDARY LITERATURE:

- [1] Kaplan R.S., Anderson S.R., *Time-Driven Activity-Based Costing: A Simpler and More Powerful Path to Higher Profits*, Harvard Business School Press, Boston, Massachusetts 2007
- [2] Kaplan R.S, Norton D.P., *The Balanced Scorecard: Translating Strategy into Action*, President and Fellowes of Harvard College, USA 1996

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish	Logistyka				
Name of subject in English	Logistics				
Main field of study (if applicable):	Management				
Specialization (if applicable):	Organizational Management				
Profile:	Academic				
Level and form of studies:	1st level, full-time				
Kind of subject:	Obligatory				
Subject code	ZMZ1247				
Group of courses	NO				
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	30	30			
Form of crediting	Crediting with grade	Crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	1	1			
including number of ECTS points for practical (P) classes		1			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic knowledge of management.

SUBJECT OBJECTIVES

- C1 Getting by the students basic knowledge about the area of logistics in business organizations.
- C2 Understanding the issues that are related to the area of logistics, including basic issues, e.g. ABC/XYZ classification, logistics centre location, JIT, inventory control, material requirements planning and transportation scheduling.
- C3 Ability of analysis, measurement and monitoring of supply chain.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

- PEU_W01 - Has structured knowledge of the supply chain and incorporates recent developments in logistics management.
- PEU_W02 - Is aware of the importance of logistics processes in performance of business organizations.

relating to skills:

- PEU_U01 - Has the ability to identify the factors influencing the supply chain.
- PEU_U02 - Has the ability to carry out economical calculations, which are the base to assessing the cost-effectiveness of the solutions used in the supply chain.

relating to social competences:
 PEU_K01 - Properly identify and resolve dilemmas related to the logistics profession.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Introduction to logistics – origins, definitions, evolution, trends.	1
Lec 2	Concepts of logistics, logistics strategies, methods, principles and systems.	2
Lec 3	Areas and logistics activities in modern enterprises.	2
Lec 4	Logistics processes, order processing, information systems and integration.	2
Lec 5	Supply logistics, production logistics, distribution logistics, green logistics.	2
Lec 6	Fundamentals of purchasing, warehousing and transportation systems.	2
Lec 7	Logistics systems’ requirements – forecasting, planning and decision making.	2
Lec 8	Course summary - practical conclusions and assessment.	2
	Total hours	15

Classes		Number of hours
Cl 1	Introduction to logistics – definition, evolution, activities, principles, trends.	1
Cl 2	Application of ABC (Pareto) and XYZ (demand variation) classification methods in logistics (inventory control, purchasing). Würth Group (distribution system) and Wal-Mart (cross-docking strategy) case studies. An overview of logistics strategies in enterprises. Basic solutions to the problem of logistics centre location (modal and network of geographical logistics configuration).	4
Cl 3	Supply chains and network logistics systems – examples of logistics structures. Purchasing and material supply in logistics (application of optimization in EOQ, and dynamic models). Inventory control – inventory control methods and models. Material and distribution requirements planning (MRP, DRP).	4
Cl 4	International transport systems and regulations. Case studies. Modal and intermodal transport systems. Basic transportation decisions in logistics. Transport management in logistics – fleet management, routing and scheduling.	4
Cl 5	Course summary - practical conclusions and assessment.	2
	Total hours	15

Laboratory		Number of hours
Lab 1		
	Total hours	

Project		Number of hours
Proj 1		
	Total hours	

Seminar		Number of hours
Sem 1		
	Total hours	

TEACHING TOOLS USED

- N1. Lecturing with multimedia - computer presentation.
 N2. Case studies.

N3. Discussions and comparative study.
 N4. Lists of logistics exercises.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
Lecture: P1 Exercises: F1, P2	PEU_W01, PEU_W02 PEU_U01, PEU_U02	Lecture: <i>Colloquium</i> – test (100%) Exercises: Attendance (25%); Course work (35%); <i>Colloquium</i> – test (40%)

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Ciesielski M. (ed.), *Instrumenty zarządzania logistycznego*, Wyd. PWE Warszawa, 2006 (in Polish).
- [2] Dolgui A., Proth J.-M., *Supply Chain Engineering. Useful Methods and Techniques*, Springer 2010.
- [3] Goetschalckx M., *Supply Chain Engineering*, Springer 2011.
- [4] Pietroń R., *Modelowanie i projektowanie procesów i systemów logistycznych*, Wyd. WSOWL Wrocław, 2015 (in Polish).
- [5] Pietroń R., *Logistics. Selected issues*, E-Material for students, WUS&T Wrocław, 2019.

SECONDARY LITERATURE:

- [1] Coyle J.J., Bardi E. J., Langley C.J., *Zarządzanie logistyczne*, PWE Warszawa, 2010.
- [2] Harrison A., van Hoek R., *Logistics Management and Strategy. Competing Through the Supply Chain*, FT Prentice Hall, Pearson Education, 3rd edition, 2008 (2002, 2005).
- [3] Selected papers from logistics journals: *Contemporary Logistics, International Journal of Logistics: Research and Application, International Journal of Physical Distribution & Logistics Management, International Journal of Transport & Logistics, Journal of Business Logistics, Logistics and Transportation Review, Logistics Information Management, The International Journal of Logistics Management, Gospodarka Materialowa & Logistyka (miesięcznik), Logistyka (dwumiesięcznik), Eurologistics. Logistyka w teorii i w praktyce (dwumiesięcznik), Logistyka a jakość (dwumiesięcznik)*

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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Other teacher:

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish: Zarządzanie marketingowe****Name of subject in English: Marketing Management****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management (OM)****Profile: academic****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code: ZMZ1248****Group of courses: NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	30	30			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	1	1			
including number of ECTS points for practical (P) classes		1			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Essentials of Management.
2. Essentials of Marketing.

SUBJECT OBJECTIVES**To acquire fundamental knowledge (including application aspects) about:**

- C1. Marketing concept, different orientations towards marketing activities and the nature and basic problems of marketing management,
- C2. Marketing planning process, in particular in the scope of analysis and methods used in this process and the reasons for deciding on marketing: objectives, strategies, tactics, budget and operational activities.
- C3. The creation of organizational solutions, managing and control in the marketing area of business management and the specificity of marketing management in services companies and non-profit organizations.

To acquire fundamental skills to:

- C4. Analysis of the degree of the marketing concept implementation in some dimensions, and development of proposals relevant to marketing management,
- C5. Analysis of the marketing situation of a company and deciding on marketing: objectives, strategies, tactics, budget and operational activities and to make relevant changes in the analyzed marketing plan.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 – knows and understands the marketing concept, different orientations towards marketing activities and the nature of marketing management.

PEU_W02 – knows the basics of building customer relationships.

PEU_W03 – knows and understands, at a basic level, the marketing planning process, in particular, the desired range of analyzes and methods used in the analysis of marketing situations and premises to decide on marketing: objectives, strategies, tactics, budget and operational activities, taking into account the specificity of Internet and social media.

PEU_W04 – has a basic knowledge of how to create organizational, managing and control in the in the marketing area of business management.

PEU_W05 – understands the specificity of marketing management in services companies and non-profit organizations.

relating to skills:

PEU_U01 – can analyze, at a basic level, the degree of the marketing concept implementation in some aspects, and develop proposals relevant to marketing management.

PEU_U02 – can - at a basic level - analyze and evaluate the correctness of the content of the substantive marketing plan, particularly in the use of methods of analysis of the marketing and marketing: objectives, strategies, tactics, budget, organizational and operational activities.

PEU_U03 – can make adequate changes in the analyzed marketing plan due to changes in the assumptions or the company environment.

relating to knowledge:

PEU_K01 - is aware of the need to develop knowledge and skills in management, in particular - in the scope of marketing approach to business management and marketing planning.

PEU_K02 – is aware that the contemporary business management manager job involves constant identifying, analyzing, prioritizing and solving management problems.

PEU_K03 - is prepared to take responsibility for the tasks assigned and co-workers, not only in essential but also in ethical dimension.

PEU_K04 – expresses a willingness to teamwork.

PEU_K05 - shows courage in communicating and defending own views.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Introduction to marketing management.	1
Lec 2	Marketing concept.	2
Lec 3	Getting customer loyalty and satisfaction, building relationships.	2
Lec 4	Marketing planning process.	2
Lec 5	Customer-oriented marketing planning and strategic brand management.	2
Lec 6	Marketing organization and control in managing a company	2
Lec 7	Marketing strategies on the internet. Final test.	2
Lec 8	Marketing strategies on the internet – cont. Retake of the final test.	2
	Total hours	15

Classes		Number of hours
C1 1- C12	Introduction to marketing management.	3
C1 3- C15	Strategies and challenges in marketing management.	6
C1 6- 8	The analysis and improvements of the exemplary marketing plan.	6
Total hours		15

Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	

Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	

Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	

TEACHING TOOLS USED
N1. Traditional lecture with multimedia presentations N2. Questions to students during lecture N3. Case studies N4. Discussion of selected issues N5. Questions to students during class N6. Self or team analysis and evaluation of assigned aspects of enterprise marketing management N7. Self or teamwork: preparing for classes exercises and preparation for the test N8. Presentation prepared by student

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester	Educational effect number	Way of evaluating educational effect achievement

end)		
P1	PEU_U01-3, PEU_K01-5	Evaluation of involvement in classes. Evaluation of assignments. Evaluation of analysis and changes in the exemplary marketing plan.
P2	PEU_W01-5	Test.

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Almquist E., Senior J., Bloch N., The elements of value, Harvard Business Review, 94, 9, 2016, pp. 46-53.
- [2] Brinker S., McLellan L., The Rise of the Chief Marketing Technologist, Harvard Business Review, 92, 7/8, 2014, pp. 82-85.
- [3] Kotler Ph., et al. Marketing Management: First European Edition, Harlow, England, Pearson/Prentice Hall, New York 2009.
- [4] Lake K., Stitch Fix's CEO on Selling Personal Style to the Mass Market, Harvard Business Review, 96, 5/6, 2018, pp.35-40.
- [5] McDonald, M., Marketing Plans: How to Prepare Them, How to Use Them, Elsevier Science & Technology, 1999.
- [6] Reed J., Get up to speed with online marketing: how to use websites, blogs, social networking and more to promote your business, Pearson, Harlow 2013.
- [7] Turner J., Shah R., How to Make Money with Social Media: An Insider's Guide to Using New and Emerging Media to Grow Your Business, Second Edition, Pearson FT Press 2015.

SECONDARY LITERATURE:

- [1] Armstrong G., Kotler Ph., Marketing: An Introduction, 10th Edition, Global Edition, Pearson Ed., Boston 2011.
- [2] Cheverton, P., Key Marketing Skills: Strategies, Tools and Techniques for Marketing Success, Kogan Page 2004.
- [3] Chaffey D., Smith P.R., eMarketing eXcellence. Planning and optimizing your digital marketing, 3rd ed., Amsterdam etc., Elsevier/Butterworth-Heinemann, 2008.
- [4] Ciurla M., Nowak M.W., The marketing orientation of Polish SMEs [in:] Marketing strategies for Central and Eastern Europe, Ed. by Arnold S., Chadraha P., Springer R., Aldershot, Ashgate 2001.
- [5] Hollensen S., Marketing Management: A Relationship Approach, 3rd ed., Pearson 2015.
- [6] Lansiti M., Lakhani Kr., Digital Ubiquity: How Connections, Sensors, and Data Are Revolutionizing Business, Harvard Business Review, 92, 11, 2014, pp. 90-99.
- [7] Sorger S., Marketing Planning, Prentice Hall 2012.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish** Zarządzanie operacjami**Name of subject in English** Operations Management**Main field of study (if applicable):** Management**Specialization (if applicable):** Organizational Management**Profile:** academic**Level and form of studies:** 1st level**Kind of subject:** obligatory**Subject code:** ZMZ1249**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15	15		
Number of hours of total student workload (CNPS)	60	30	30		
Form of crediting	Examination	Crediting with grade	Crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	2	1	1		
including number of ECTS points for practical (P) classes		1	1		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7	0.7		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Essentials of Management

SUBJECT OBJECTIVES

C1 To acquire the basic knowledge concerning approaches, strategies, models and methods useful in improving effectiveness and efficiency of production and service management in business organizations

C2 To acquire skills in building feasible and efficient production plans and schedules

C3. To acquire skills in efficient using of systems and models of inventory management in enterprise.

SUBJECT EDUCATIONAL EFFECTS**SUBJECT EDUCATIONAL EFFECTS**

relating to knowledge:

PEU_W01 Knows and defines production process, productivity, operations management objectives, strategic and operational decisions of Operations Management.

PEU_W02 Identifies and describes production planning and control levels in an enterprise and their methods.

PEU_W03 Knows and describes inventory types, functions, costs and inventory management

systems and models.

PEU W04 Knows modern Operations Management approaches and strategies: Theory of Constrains, JIT/Lean Manufacturing

SUBJECT EDUCATIONAL EFFECTS

relating to skills:

PEU_U01 Explains production process, productivity, operations management , strategic and operational decisions of OM, can calculate productivity, can calculate operational profit, can select optimal product mix, can select optimal process.

PEU_U02 Develops feasible and efficient production plans and schedules, develops Gantt chart and can identify production lead time.

PEU_U03 Selects the right inventory management system and lot sizing model (MRP, EOQ) and uses them to make decisions: how much to order and when to order?, can calculate the optimal lot size.

relating to social competences:

PEU_K01 Understands importance of Operations Management in improving efficiency of an enterprise as well as of market economy.

PROGRAMME CONTENT

Lectures		Number of hours
Lec.1	Essence, functions, principles, aims, and decisions of Operations Management. Productivity and its measuring. Strategic and operational decisions in OM. Types of Productions Environments (Make to Stock, Make to Order, Assemble to Order, Engineering to Order). Types of Layouts. Types of Processes.	3
Lec 2	Production Management System. Production Planning and Control levels in Enterprise. Sales and Operations Planning (SOP). Aggregate Production Planning (objectives, strategies and methods).	2
Lec 3	Inventory Management. Inventory: Types, Functions, Costs. Inventory management systems and models. Dependent and Independent Demand Inventory. Economic Order Quantity Model.	2
Lec 4	Master Production Scheduling. Material Requirements Planning (MRP logic and system). Capacity Requirements Planning. MRPII/ERP system.	3
Lec 5	Detailed Scheduling and Production Activity Control.	3
Lec 6	JIT/Lean Manufacturing strategy	2
	Total hours	15
Classes		Number of hours
Cl 1	Choice of product mix (Production program optimization) – what and how much to produce and sell?	3
Cl 2	Time parameter – how long we will produce? (production lead time, methods of lead time reduction)	3
Cl 3	Quantity parameter – how much to purchase and how much to produce? (economic order quantity, inventory management models)	4
Cl 4	Capacity requirements planning – how much we can produce?, what are the capacity requirements to cover the demand?	2
Cl 5	Detailed scheduling and production activity control	3
	Total hours	15
Laboratory		Number of hours

Lab 1	Production Flow Control in Constrains conditions using OPT simulator.	4
Lab 2	Aggregate Production Planning . Development of feasible and efficient plans using Chase Demand and Capacity Level Strategies (POM for Windows software)	5
Lab 3	Master Production Schedule and Material Requirements Planning	6
	Total hours	15
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	
TEACHING TOOLS USED		
N1.Multi media show N2.Computer simulation N3.Problems solving N4 Literature studies		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1 Homework, Classwork, Test	PEU W01-W03 PEU_U01 -_U03	Student's presence. Acceptance of homework and classwork with grade (4 problems to solve).
F2 Laboratory report	PEU_U01 -_U03	Student's presence. Acceptance of 3 laboratory reports with grade.
P Exam	PEU W01 – W04	Exam in test form

Classes: F1 = average of 4 accepted test grades.
Laboratory: F2 = average of 3 accepted laboratory reports grades.
Lecture: P Exam in test form

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

[1] Render B., Heizer J., *Principles of Operations Management*, Prentice-Hall, Inc. A Simon & Schuster Co. New Jersey 1997.

[2] Bozarth C., C., Handfield R., *Introduction to Operations and Supply Chain Management*, Pearson Education, Inc. Co. Upper Saddle River, New Jersey 2006.

[3] Vonderembse M., A., White G., P., *Operations Management. Concepts, Methods, and Strategies*, West Publishing Company 1991

SECONDARY LITERATURE

[1] Reid R.D., *Operations management: an integrated approach* , John Wiley & Sons, Hoboken 2005.

[2] Heizer J., Render B., *Production and Operations Management. Strategies and Tactics*, Allyn and Bacon, a division of Simon & Schuster Inc. 1993.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Dorota Kuchta, dorota.kuchta@pwr.edu.pl

Faculty of Computer Science and Management**SUBJECT CARD****Name of subject in Polish** Prowadzenie projektów w nowoczesnych organizacjach**Name of subject in English** Leading projects in modern organisations**Main field of study (if applicable):** Management**Specialization (if applicable):** Organisational Management**Profile:** academic**Level and form of studies:** 1st level, full-time**Kind of subject:** obligatory**Subject code** ZMZ1251**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	90	60			
Form of crediting	Examination	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	3	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Fundamentals about project management
2. Fundamentals about organization management

SUBJECT OBJECTIVES

C1 presenting to the students modern project management methods, like the critical chain method, PRINCE methodology, and adaptive project management methods

C2 presenting to the students basic project portfolio methods

C3 making the students able to apply the modern project management methods in practice

C4 making the student able to manage simple project portfolios

C5 making the students aware of the advantages and disadvantages of traditional and modern project management methods

SUBJECT LEARNING OUTCOMES

relating to knowledge:

PEU_W01 the students know the advantages and disadvantages of the traditional project management methods

PEU_W02 the students know the fundamentals of the Critical Chain, PRINCE methodology and adaptive project management methods

PEU_W03 the students know the fundamentals of project portfolio management

relating to skills:

PEU_U01: the students are able to apply in simple cases modern project management methods

PEU_U02: the students are able to manage project portfolio in simple cases

relating to social competences:

PEU_K01: the students are aware of the advantages and disadvantages of various project management methods and are able to communicate them to others

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Summary of hard project traditional management methods	2
Lec 2	Summary of soft project traditional management methods	2
Lec 3	Critical chain method – project planning	2
Lec 4	Critical chain method – project control	2
Lec 5	Use of buffers in project management	2
Lec 6	Fundamentals about the PRINCE methodology	2
Lec 7	Individual elements of the PRINCE methodology	2
Lec 8	Adaptive Project structure – introduction	2
Lec 9	Defining version scope	2
Lec 10	Cycle structure and building	2
Lec 11	Version results review	2
Lec 12	Project portfolio management – main stages	2
Lec 13	Evaluation and selection of projects in a project portfolio	2
Lec 14	Managing active project portfolio	2
Lec 15	Final test	2
	Total hours	30
Classes		Number of hours
Cl 1	Exercise in traditional hard project management methods	2
Cl 2	Exercise in traditional soft project management methods	2
Cl 3	Exercise in critical chain management	2
Cl 4	Exercise in PRINCE methodology	2
Cl 5	Case study in PRINCE methodology	2
Cl 6	Exercise in adaptive project management	2
Cl 7	Exercise in project portfolio management	2
Cl 8	Final test	1
	Total hours	15
Laboratory		Number of hours
Lab 1		

Lab 2		
Lab 3		
	Total hours	
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	
TEACHING TOOLS USED		
N1. Informing lecture N2. Practical exercise		

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating educational effect achievement
P	PEU_W01, PEU_W01 PEU_U01 PEU_U02 PEU_K01	Written test and exam

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Harold Kerzner (2009), Project Management: A Systems Approach to Planning, Scheduling, and Controlling, John Wiley & Sons;
- [2] Robert K. Wysocki (2009), Effective Project Management: Traditional, Agile, Extreme, John Wiley & Sons
- [3] David Hinde (2012), PRINCE2 Study Guide, John Wiley & Sons.

SECONDARY LITERATURE:

- [1] A Guide to the Project Management Body of Knowledge, Project Management Institute (1996)
- [2] Goldratt E. (1997), Critical Chain, North River Press, Great Barrington;

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish** Metody i narzędzia podejmowania decyzji**Name of subject in English** Methods and Tools of Data Analysis**Main field of study (if applicable):** Management**Specialization (if applicable):** Organizational Management (OM)**Profile:** academic**Level and form of studies:** 1st level, full-time**Kind of subject:** obligatory**Subject code** ZMZ1253**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15		15		
Number of hours of total student workload (CNPS)	30		60		
Form of crediting	Crediting with grade		Crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	1		2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7		0.7		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Student has a basic knowledge of business management and decision making process. He has a general knowledge of information technics in management.
2. Student knows basic software for solving management problems, specially designed for decision making.
3. Student has a basic practical skills in working with Excel and SQL software.

SUBJECT OBJECTIVES

- C1. Acquisition of data mining knowledge in business management processes.
- C2. Getting skills in choosing and using decision support techniques in practical business problems solving.
- C3. Getting social skills in information and communication techniques for management.

SUBJECT LEARNING OUTCOMES

relating to knowledge:

PEU_W01: Student has a basic knowledge in construction and using some quantitative methods and computer technics in data mining useful in business information systems.

PEU_W02: Student has a basic knowledge in applying software in data mining.

relating to skills:

PEU_U01: Student can identify and propose ways of solving data mining problems.

PEU_U02: Student is able to build useful tools for data analysis for business decision processes.

relating to social competences:

PEU_K01: Student can enlarge his knowledge and abilities, can works in groups for solving management data mining problems.

PEU_K02: Student can find methods for solving decision problems, held accountable for his works, defend his views of the propose way of solving problems.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Tools and methods of decision support systems – introduction.	1
Lec 2	Decision making methods in business.	1
Lec 3	Multivariate analysis in decision making - examples of practical applications in business.	1
Lec 4	Multivariate analysis methods in decision making.	2
Lec 5	Relational databases OLTP.	2
Lec 6	Data warehouse.	2
Lec 7	OLAP in relational databases.	2
Lec 8	Decision tree – practical application in management	2
Lec 9	Written test.	2
	Total hours	15
Classes		Number of hours
Laboratory		Number of hours
Lab 1	Get acquainted with data warehouse.	2
Lab 2	Star scheme and snowflake scheme in relational data warehouse.	1
Lab 3	Using OLAP in statistical sale analysis.	1
Lab 4	Using OLAP in solving sale management problems.	1
Lab 5	Using OLAP in multivariate client analysis.	2
Lab 6	Team work: preparing data for constructing regression tree of sale.	2
Lab 7	Team work: construction regression tree of sale. Results presentation.	2
Lab 8	Team work: sale analysis - construction association rules. Results presentation.	2
Lab 9	Test with computer.	2
	Total hours	15
Project		Number of hours

Seminar	Number of hours

TEACHING TOOLS USED

- N1. Informational- problematical lecture.
- N2. Multimedia presentation.
- N3. Laboratory instruction.
- N4. Briefing during laboratory classes.
- N5. Team discussion.
- N6. Internet didactic team discussion.
- N7. Data mining software.
- N8. Result report.
- N9. Computer test.
- N10. Written test.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_U01, PEU_U02	Computer test.
F2	PEU_U01, PEU_U02, PEU_K01, PEU_K02	Report of team work results.
P	PEU_W01, PEU_W02	Written test.
F=2, P=1		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] David H., Heikki M., Padhraic S., *Data Mining*, MIT, 2001.
- [2] Han J., Kamber M.: *Data Mining. Concept and Techniques*, Elsevier Morgan Kaufmann Publishers, 2006.
- [3] Han J., Jiawei : *Data Mining: Concepts and Technics*, 2006.
- [4] Larose D.T.: *Discovering Knowledge in Data Analysis. An Introduction to Data Mining*, John Wiley & Sons, 2005.
- [5] Shmueli, Galit, *Data Mining for Business Intelligence: Concepts, Techniques, and Applications in Microsoft Office Excel with XLMiner*, Wiley-Interscience, 2006.
- [6] Sumathi S., *Introduction to Data Mining and Its Application*, 2006.

SECONDARY LITERATURE:

- [1] Cooc D.J., Holder L.B.: *Mining Graph Data*, Hoboken, N.J. : Wiley-Interscience, 2007.
- [2] Morrison D.F.: *Multivariate Statistical Methods*, McGraw-Hill, 1990.
- [3] Olson D.L. *Advance Data Mining Techniques*, Springer, 2008.
- [4] Larose D. T., *Data Mining methods and Models*, IEEE Computer Society Press, 2006.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT**SUBJECT CARD****Name of subject in Polish** Nowoczesne zarządzanie zasobami ludzkimi**Name of subject in English** Modern Human Resource Management**Main field of study (if applicable):** Management**Specialization (if applicable):** Organizational Management**Profile:** academic**Level and form of studies:** 1st level, full-time**Kind of subject:** obligatory**Subject code** ZMZ1254**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	30			
Number of hours of total student workload (CNPS)	60	60			
Form of crediting	Crediting with grade	Crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	2	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	1.4			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

Basic knowledge in the scope of basis of management and organizational behaviours.

SUBJECT OBJECTIVES**C1:** Providing students with information on objectives, instruments, principles and elements occurring in the human resource management in the organisation and internal and external factors of the process.**C2:** Providing students with information on modern methods and tools of HRM, for example: competency based management, innovative methods of rewarding, personnel marketing, personnel controlling.**C3:** Allowing students to directly learn principles and instruments that are actually used in particular areas of human resource management in given organisations (case studies).**C4:** Making students aware and convincing them of the necessity to create the human being as an object of management and the "most precious resource" of the organisation rather than an "ordinary production factor".**C5:** Showing students, on selected examples, the principles of conduct and behaviours of significant importance for the effective functioning of employees in individual and group work

SUBJECT EDUCATIONAL EFFECTS

Relating to knowledge:

- PEU_W01 Has a knowledge about the essence of personnel function, the personnel management process and human resource management. Understands the relations of the HRM with other elements of the enterprise management system.
- PEU_W02 Understands the essence of philosophy, policy and strategy of personnel function as well as knows the rules of the human resource planning and personnel controlling.
- PEU_W03 Has a knowledge about the recruitment, selection and introduction to the work processes (incl. personnel marketing). Knows the rules of competency based management.
- PEU_W04 Knows the essence and principles of periodical employee evaluation.
- PEU_W05 Has a knowledge about motivation and rewarding of employees (inc. innovative methods of rewarding).
- PEU_W06 Understands the rules of shaping the employees development and the career paths.
- PEU_W07 Knows the basic rules of building and functioning of the teams in the organization, as well as the factors influencing on the teams efficiency. Knows the roles of the leader and the team members in the organization. Knows the principles of communication in the organization.

Relating to skills:

- PEU_U01: Student is able to make a diagnosis of the existing situation in particular areas of personnel management and to formulate conclusions in the scope of the evaluation of the condition in the context of recommendations resulting from literature.
- PEU_U02: Student is able to identify factors which influence the effectiveness of personnel function realisation.
- PEU_U03: Student is able to choose sources of information and use selected techniques for gaining information (interview, survey, documentation) for the purpose of solving typical diagnostic problems in selected areas of personnel management.
- PEU_U04: Student is able to prepare an expert appraisal in the form of a written report.
- PEU_U05: Student is able to present the results of the diagnostic research and to defend the conclusions before a group of experts.

Relating to social competences:

- PEU_K01: Student is able to update his/her knowledge; he/she knows the key authors, directions and tendency in the development of knowledge of personnel management.
- PEU_K02: Student is aware and prepared to identify, analyse and settle employee problems occurring in the work place in relation with the performance of the personnel function.

PROGRAMME CONTENT

Lectures		Number of hours
Lec1	Introduction, overview the lecture.	1
Lec1	The concept and essence of personnel function, goals of personnel management, human resource management conditions, meaning and the evolution of personnel function.	1
Lec2	Personnel punction in the context of the organisation management system. Task structure and the scope of personnel management process.	2
Lec3-4	Philosophy, policy and strategy of personnel function. Comparative analysis: Human Resources Management (HRM) and Personnel Management (PM). Strategic aspects of Human Resources Management.	4
Lec5	Human Resources Planning. Goals, conditions and stages of planning. Personnel Audit. Realisation control – personnel controlling.	2
Lec6	Recruitment, selection and introduction to the work processes. Competences based management in personnel management. Personnel marketing.	2

Lec7	Aims and concepts of employee evaluation. Periodical Employee Evaluation System (SOOP). Criteria, methods and rules of the employee evaluation. Effectiveness of the SOOP.	2
Lec8	Colloquium (1).	2
Lec9-10	Remuneration policy. Aims and principles of wage differentiation. The essence and goals of work evaluation. Criteria and methods of the work evaluation.	4
Lec11	Forms of remuneration. Functions of remuneration. Basic wages, bonuses and other elements of wages. Innovative methods of rewarding.	2
Lec12	Workforce potential. Influencing the employee development. Trainings; goals, types, evaluation of effectiveness. Career paths.	2
Lec13	The principles of building and functioning the teams in an organization, factors influencing on the teams efficiency. Roles of the leader and the team members in the organization.	2
Lec14	The principles and the systems of communication in the organization. The features an efficient communication process.	2
Lec15	Summary of the lecture. Colloquium (2).	2
	Total hours	30
Classes		Number of hours
Cl. 1	Presentation of the purpose of classes, their course and criteria of student evaluation. Discussion of particular tasks composing the diagnostic paper. Task 1: Selection of the theme and gaining an object of the research. Task 2: Presentation of the object of the research and formal principles and instruments applicable to the given area of personnel management. Task 3: Conducting diagnostic research in a real facility in the selected area of personnel management. Task 4: Working out a report documenting the results of the diagnostic research. Task 5: Presentation and defence of conclusions from the research.	2
Cl. 2	Consultations related to the selection of the theme and manner of conducting and documenting the diagnostic research related to the procedure (course of the process) and instruments of personnel management in the selected area. Discussing the contents of particular parts of the written report documenting the results of the diagnostic work in exemplary thematic areas. Answering students' questions.	2
Cl. 3 Cl. 4	Brief (5-minute) presentations of students related to: the object of the research (organisational and legal form, objects of the company), location of the given unit in the organisational structure and its basic tasks, scope of obligations and rights on selected positions, general discussion of the formal instruments applicable to the entire organisation and manners of personnel management in the selected thematic area. Indication by the lecturer of issues and problems requiring a detailed diagnosis and focusing the student's attention to innovative instruments that may be applied in the enterprise analysed.	4
Cl. 5 Cl. 6	Work in diagnostic groups - consultations related to substantive problems, evaluation of the advancement of students' work. Discussing the information gathered by groups, describing the existing situation and consultations related to the manner of preparation of Chapters 2 and 3 of the written report.	4
Cl. 7-14	Presentation of the results of the diagnostic research - case studies, discussion and evaluation of presentation.	16
Cl.15	Summing up classes: discussing conclusions related to the assessment of written reports and students' presentations - indication of good and bad points.	2

Total hours	30
TEACHING TOOLS USED	
N1. Traditional lecture with multimedia presentations. N2. Self-study of student N3. Short presentation (5 minutes) - audiovisual means (slides, computer projector). N4. Work in diagnostic groups - consultations with the lecturer. N5. Written report, edited according to a strictly defined template N6. Students' presentation of the final reports - audiovisual media (slides, computer projector) N7. Studies in chosen organization – interviews, documentary analysis, surveys. N8. Discussion.	

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_W01, PEU_W02 PEU_W03, PEU_W04	Colloquium 1.
F2	PEU_W05, PEU_W06 PEU_W07	Colloquium 2.
P(lecture)=0,5*F1+0,5*F2		
F3	PEU_U1, PEU_U5; PEU_K01	Participation during classes - participation in the discussion 28 pts.
F4	PEU_U03; PEU_05	1st presentation: substantive value - 5 pts., presentation quality - 5 pts.
F5	PEU_U02; PEU_U5; PEU_K01, PEU_K02	2nd presentation: completeness - 5 pts., substantive value - 10 pts., presentation quality - 10 pts.
F6	PEU_U01; PEU_U02; PEU_U04	Diagnostic report (30 pts) entitled "Diagnosis ... name of the selected area of personnel management in ... organisation name as exemplified by the ... (name) Department". source materials – 7 pts.
P(class)= F3+F4+F5+F6		
Failed .< 50 cred. Satisfactory. 51 - 59 cred.. Satisfactory + 60 - 67 cred. Good. 68 - 77 cred. Good.+ 78 - 85 cred. Very good 86 - 95 cred.. Excellent > 95 cred..		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

1. Contemporary human resource management :text and cases /ed. by Tom Redman and Adrian Wilkinson. Harlow [etc.] : Financial Times Prentice Hall, 2006.
2. Human resource management /Lloyd L. Byars, Leslie W. Rue. Boston : McGraw-Hill, cop. 2004.

SECONDARY LITERATURE:

1. Human resource management :an experiential approach /H. John Bernardin. Boston : McGraw-Hill/Irwin, cop. 2003.
2. Fundamentals of human resource management /David A. DeCenzo, Stephen P. Robbins. Hoboken : John Wiley & Sons, cop. 2005.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish ...KOMPLEKSOWE ZARZĄDZANIE JAKOŚCIĄ					
Name of subject in English ...TOTAL QUALITY MANAGEMENT					
Main field of study (if applicable): ...MANAGEMENT					
Specialization (if applicable): ORGANIZATIONAL MANAGEMENT (OM)					
Profile: academic					
Level and form of studies: 1st, full-time					
Kind of subject: obligatory					
Subject code ZMZ1255					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	30			
Number of hours of total student workload (CNPS)	90	60			
Form of crediting	Examination	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	3	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	1.4			

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES
Basic knowledge of theory of management
SUBJECT OBJECTIVES
C1 Acquisition of knowledge of the concepts of quality management in organizations, in particular the terms and the principles of quality management in the philosophy of TQM and KAIZEN.
C2 Acquisition of knowledge of the design, implementation, operation, maintenance and improvement of quality management systems in business organizations, especially the quality management standard according to ISO 9000 series.
C3 Acquisition of knowledge about the basic techniques and methods of improve the quality management.
C4 Acquisition of skills at using selected quality management tools in solving quality problems in organizations.
SUBJECT LEARNING OUTCOMES
relating to knowledge:
PEU_W01 Knows basic terms and definitions connected with the quality management.
PEU_W02 Knows concepts of quality management in organizations, in particular the principles of quality management according to TQM and KAIZEN.

PEU_W03	Knows the quality management standards according ISO 9000 series
PEU_W04	Knows the basic techniques and methods of quality management improvement.
relating to skills:	
PEU_U01	Can apply quality improvement tools in hypothetical organizations.
PEU_U02	Can identify and evaluate the possibilities of using quality improvement tools in organizations.
PEU_U03	Can interpret the requirements of the ISO 9001:2015.
relating to social competences:	
PEU_K01	Can search and choose the methods for solving problems in the workplace.
PEU_K02	Can individually improve the knowledge and understanding skills in the field.

PROGRAMME CONTENT		
Form of classes - lecture		Number of hours
Lec 1	Introduction to the lecture. Basic terms (quality, characteristics of quality, quality management)	2
Lec 2	Evolution of approaches to quality and quality management.	2
Lec 3	The concept of Kaizen.	2
Lec 4	Classic techniques of quality management.	2
Lec 5	New techniques of quality management.	2
Lec 6	The concept of quality management according to W. E. Deming.	2
Lec 7	Quality management according to the concept of Ph.B. Crosby.	2
Lec 8	Other philosophers of quality management. Costs of quality.	2
Lec 9	The concept and principles of Total Quality Management - TQM.	2
Lec 10	TQM principles - continued.	2
Lec 11	The FMEA Method.	2
Lec 12	Standard-setting bodies. Standardization of the quality management systems.	2
Lec 13	Requirements of the quality management according to the ISO 9001 standard.	2
Lec 14	The ISO 9001 auditing and certification. Other standards of quality management.	2
Lec 15	Summary of the lecture.	2
	Total hours	30

Form of classes – class		Number of hours
Cl 1	Introduction to the classes.	2
Cl 2	The classic techniques of quality management: the Ishikawa diagram.	2
Cl 3	The classic techniques of quality management: the Pareto-Lorenz diagram.	2
Cl 4	The classic techniques of quality management: the scatter diagram and histogram.	2
Cl 5	The classic techniques of quality management: the control chart $X_{ev}R$.	2
Cl 6	Additional classic techniques of quality management.	2
Cl 7	The modern techniques of quality management: “7 waste”, the matrix diagram.	2
Cl 8	The modern techniques of quality management: the systematic diagram, the PDPC diagram.	2

CI 9	Analysis of the quality costs.	2
CI 10	Process mapping.	2
CI 11	Failures analysis, their effects and causes: the FMEA method.	2
CI 12	Evaluation of customer satisfaction: CSI method.	2
CI 13	Analysis of the requirements of the ISO 9001:2015 standard.	2
CI 14	New techniques of quality management and another tools.	2
CI 15	Final test.	2
	Total hours	30

TEACHING TOOLS USED

- N1. Traditional lecture - presentation using a slide projector.
N2. Own work - independent literature studies and preparation for the final test.
N3. Solving tasks during classes and at home.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_U01÷PEU_U03 PEU_K01, PEU_K02	Results of solving tasks during classes
F2	PEU_U01÷PEU_U03	Written test on the skills at using the quality management tools
F3	PEU_W01÷PEU_W04	Exam
Classes P=F1+F2 Lecture P=F3		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] The materials published on the course website (Eportal).
[2] Hoyle D., *Quality: Management Essentials*, Oxford; Burlington, MA: Butterworth-Heinemann, 2007.
[3] Sujak-Cyruł B., *Quality Management System. An introduction to the Project of Documenting and Audit of Quality Management Systems*, Wrocław University of Technology, Wrocław 2011.
[4] ISO 9001, *Quality management systems – Requirements. ISO, 2015*.
[5] ISO 9000, *Quality management systems - Fundamentals and vocabulary. ISO, 2015*.

SECONDARY LITERATURE:

- [1] Evans J.R., Lindsay W.M., *Managing for Quality and Performance Excellence*, 10th Edition
[2] Dahlgaard J.J., Kristenson K., Kanji G. K. , *Fundamentals of Quality management*, Taylor and Francis 2002.
[3] Frankel E.G., *Quality decision management - the heart of effective futures-oriented management: a primer for effective decision-based management*, Springer Verlag, 2008.
[4] Oakland J. S., *Total quality management: text with cases*, Elsevier, Amsterdam 2003.
[5] www.ISO.org.
[6] www. PKN.org (polish).
[7] Selected articles from: „*The TQM Journal*”, „*The Total Quality Management and Excellence*”, „*The International Journal of Quality and Reliability Management*”, „*Managing Service Quality*”, „*The International Journal of Operational & Production Management*”, „*Quality Progress*”.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Anna Dobrowolska PhD, Ing. (Anna.Dobrowolska@pwr.edu.pl)

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD

Name of subject in PolishTrening kierowniczy
Name of subject in EnglishManagement Training
Main field of study (if applicable): ...Management
Specialization (if applicable):Organizational Management
Profile: Academic
Level and form of studies:1st level, full-time studies
Kind of subject:obligatory
Subject code ZMZ1257L
Group of courses NO*

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)			30		
Number of hours of total student workload (CNPS)			60		
Form of crediting			Crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points			2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)			1.4		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic knowledge from the field of organizational management, marketing and corporate finance
2. Basic skills in MS EXCEL.

SUBJECT OBJECTIVES

- C1: Improving the ability to develop simple computer systems (MS Excel worksheets) supporting the process of working out decisions in a company.
- C2: Deepening the ability to use the developed computer system in making prognosis on the economic and financial output of a simulated company.
- C 3: Improving abilities to make use of the developed decision support system in managing a simulated company.
- C4: Deepening the ability to analyze the reasons for and the dynamics of the economic and financial situation of a simulated company.

SUBJECT EDUCATIONAL EFFECTS

relating to skills:

- PEU_U01: Student is able to develop a simple computer system (DSS_G) supporting the process of working out decisions in a simulated company, and encompassing selected functional areas of that company.
- PEU_U02: Student is able to use the developed system DSS_G in preparing prognosis of the

economic and financial situation of a simulated company as well as to identify the main reasons for the discrepancies between these prognosis and the real situation of that company.

PEU_U03: Student is able to make an effective use of the system DSS_G in the management of the simulated company.

PEU_U04: Student is able to identify (analyze) the main reasons for the differences in financial and economic outcomes of competing companies acting on the same market.

PROGRAMME CONTENT

Form of classes - laboratory		Number of hours
Lab 1	Discussion of the course completion criteria and the main work stages. Introduction to the management game, and - among other things – description of the economic system simulated in the game. Initial work on the system DSS_G supporting the process of working out decisions in the game: subsystem <i>Materials</i> .	2
Lab 2	Development of the system DSS_G (continuation) - subsystems: <i>Work in Process; Finished Products; External Warehouses; Natural Environment</i> .	2
Lab 3	Development of the system DSS_G (continuation) – subsystem <i>Selling Price of Finished Products</i> .	2
Lab 4	Development of the system DSS_G (continuation) – subsystems: <i>Necessary Production Personnel and Necessary Production Machines; Credits; Cash Flow</i> . Discussion of the requirements to be met during the <i>Test Game</i> . Test checking students knowledge.	2
Lab 5	<i>Test Game</i> . Correcting errors in the system DSS_G . Corrective (supplementary) test checking students knowledge.	2
Lab 6	Correcting errors in the system DSS_G (continuation). Discussion of the scenario for the main game.	2
Lab 7	Running the <i>Main Game</i> .	2
Lab 8	Running the <i>Main Game</i> (continuation).	2
Lab 9	Running the <i>Main Game</i> (continuation).	2
Lab 10	Running the <i>Main Game</i> (continuation).	2
Lab 11	Running the <i>Main Game</i> (continuation).	2
Lab 12	Running the <i>Main Game</i> (continuation).	2
Lab 13	Discussion of the main results achieved by the teams in the <i>Main Game</i> (teaching person). Presentation of the <i>Final Reports</i> prepared by teams (students).	2
Lab 14	Presentation of the <i>Final Reports</i> prepared by teams (continuation).	2
Lab 15	Presentation of the <i>Final Reports</i> prepared by teams (continuation). Course summary.	2
	Total hours	30

TEACHING TOOLS USED

- N1. Knowledge transfer with the use of multimedia (teaching person).
- N2. Student self-studying: preparatory work for laboratory classes.
- N3. Discussion.
- N4. Problem solving exercises.
- N5. Simulation Game/Simulation.
- N6. Presentation of the *Final Reports* with the use of multimedia (students).

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_U01	Answering questions; Test; Short tests; Results of the <i>Test Game</i>
F2	PEU_U02	Evaluation of the prognosis prepared for selected months with the help of the system DSS_G; Discussions
F3	PEU_U03	Evaluation of the results achieved by teams in the <i>Main Game</i>
F4	PEU_U04	Presentation of one of the obligatory elements of the Final Report
$P = 0,2 * F1 + 0,1 * F2 + 0,4 * F3 + 0,3 * F4$		
PRIMARY AND SECONDARY LITERATURE		
<u>PRIMARY LITERATURE:</u>		
[1] Rzońca W., Business Game <i>COMPANY</i> - user's manual, appendices and supplementary materials (accessible during the classes and on the website)		
[2] Jones J., Moven M., Hansen D., Heitger D., Rich J., Financial and Managerial Accounting: The Cornerstones of Business Decisions, South-Western Cengage Learning, 2012 (chosen parts)		
[3] Drury C., Management Accounting for Business, Cengage Learning EMEA 2009 (chosen parts)		
<u>SECONDARY LITERATURE:</u>		
[1]		
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*delete if not necessary

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
Name of subject in Polish ... Zarządzanie procesami					
Name of subject in English ... BUSINESS PROCESS MANAGEMENT					
Main field of study (if applicable): ... Management					
Specialization (if applicable): Organizational Management (OM)					
Profile: academic / practical*					
Level and form of studies: 1st level, full-time					
Kind of subject: obligatory					
Subject code ZMZ1258					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30				
Number of hours of total student workload (CNPS)	60				
Form of crediting	crediting with grade				
For group of courses mark (X) final course					
Number of ECTS points	2				
including number of ECTS points for practical (P) classes					
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4				

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

Basic knowledge of theory of management.

SUBJECT OBJECTIVES

C1 Acquisition of knowledge of the nature of a process approach to organization management.

C2 Acquisition of basic knowledge of the process management models in the organization and implementation of the process approach in the management of organizations.

C3 Acquisition of basic knowledge of processes management tools.

SUBJECT LEARNING OUTCOMES**relating to knowledge:**

PEU_W01 Knows the essence and basic models of the processes management in organizations.

PEU_W02 Knows the basic methods of design, analysis, modeling and evaluation of business processes.

PROGRAMME CONTENT		
Form of classes - lecture		Number of hours
Lec 1	Introduction to the lecture. Definition of a process of the organization. Types of business processes.	2
Lec 2	The approaches to the process management in the history of the management.	2
Lec 3	The idea of the process approach in the management of organizations. The rationale and objectives for the implementation of the process approach to management.	2
Lec 4	The differences between the functional-oriented and process-oriented organization. The organizational structure of process-managed organizations. Characteristics of the processes in a process-managed organization.	2
Lec 5	Business Process Management models. Assessment of the maturity of the process management in organization.	2
Lec 6	Rummler-Brache model of business process management and improvement.	2
Lec 7	Reengineering as a concept of implementation of the Business Process Management in an organization.	2
Lec 8	Application of Lean Management in improving processes. Process Management in Six Sigma organizations.	
Lec 9	Planning the implementation of process management in the organization. Modeling of the structure of processes in an organization.	2
Lec 10	Techniques of design and analysis of the process structure. Graphic description of the process.	2
Lec 11	Measurement and evaluation processes. Conditions of measurement process. Selection process evaluation measures. Methods for monitoring processes.	2
Lec 12	Benchmarking as a method of process improvement. Outsourcing in a process-managed organizations.	2
Lec 13	Barriers to the implementation of the process approach to an organization. Summary of the lecture.	2
Lec 14	Passing test - 1-st term	2
Lec 15	Passing test - 2-nd term	2
	Total hours	30

TEACHING TOOLS USED
N1. The traditional lecture - presentation using a slide projector.
N2. Own work - independent literature studies and preparation for the final test.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
P	PEU_W01- PEU_W02	Final test

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] The materials published on the course website (Eportal).
- [2] Damelio R., *The Basics of Process Mapping*, (2nd Edition) Francis&Taylor, USA, 2011.
- [3] Hammer M., Champy J., *Reengineering the Corporation. A Manifesto for Business Revolution..* Jossey-Bass Inc.,Publisher 1993.
- [4] Page S., *Power of Business Process Improvement - 10 Simple Steps to Increase Effectiveness, Efficiency, and Adaptability*, AMACOM – Book Division of American Management Association, 2010.
- [5] Rummler G.A., Brache A.P., *Improving performance. How to manage the white Space on the Organization Chart*. Jossey-Bass Inc.,Publisher 1995.

SECONDARY LITERATURE:

- [1] Armistead C., Rowland P., *Managing business processes: BPR and beyond*, John Wiley and Sons, Chichester 1996.
- [2] Becker J., Kugeler M., Rosemann M., *Process management: a guide for the design of business processes*. Springer-Verlag, Berlin Heidelberg 2003.
- [3] Burton T. T., Boeder S.M., *The lean extended enterprise: moving beyond the four walls to value stream excellence*, Boca Raton: J. Ross Publishing: APICS, 2003.
- [4] Hammer M. Hershman L., *Faster Cheaper Better: The 9 Levers for Transforming How Work Gets Done*. Crown Business, 2010.
- [5] Hammer M., *Beyond Reengineering. How the Process-Centered Organization is Changing our Work and our Lievs*. HarperCollins Publishers, Inc., New York, 1996.
- [6] Harrington, H.J. (et al.), *Business process improvement workbook : documentation, analysis, design, and management of business process improvement*. McGraw-Hill, 2012.
- [7] Koren Y., *Global Manufacturing Revolution - Product-Process-Business Integration and Reconfigurable*, John Wiley & Sons, 2010 .
- [8] Smith H., Fingar P., *Business Process Management: The Third Wave*, Off-press November 2002, Meghan-Kiffer Pres.
- [9] Selected articles from: „*Business Process Management Journal*”, „*The TQM Magazine*”, „*The Total Quality Management and Excellence*”, „*The International Journal of Quality and Reliability Management*”, „*The International Journal of Operational & Production Management*”.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish: Badania marketingowe****Name of subject in English: Marketing Research****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management (OM)****Profile: academic****Level and form of studies: 1st level, full-time studies****Kind of subject: obligatory****Subject code: ZMZ1655****Group of courses: NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	30			
Number of hours of total student workload (CNPS)	60	60			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	2	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	1.4			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Essentials of Marketing.

SUBJECT OBJECTIVES**To acquire fundamental knowledge (including application aspects) about:**

C1. managing marketing research process and common problems in this area (including: marketing research on the Internet)

C2. formulating research problems and hypotheses, research planning, selecting and applying data analysis methods and developing a research report

To acquire fundamental skills to:

C3. design and conduct marketing research using basic quantitative and qualitative methods (including: in the internet environment) - for the purpose of making appropriate marketing decisions

C4. use appropriate sources and methods for collecting and analyzing data in marketing research projects.

SUBJECT EDUCATIONAL EFFECTS**relating to knowledge:**

PEU_W01 – knows a basic notions, concepts and methods of marketing research and understands its role in managing a business

PEU_W02 – has a basic knowledge of marketing research process and understands requirements, problems and the specificity of marketer - researcher cooperation

relating to skills:

PEU_U01 – can design and conduct - at a basic level – marketing research projects.

PEU_U02 – can apply – at a basic level - fundamental marketing research methods.

relating to social competences:

PEU_K01 - is aware of the need to develop knowledge and skills in management, in particular - in the scope of marketing research to support marketing decision making.

PEU_K02 - is prepared to take responsibility for the tasks assigned and co-workers, not only in essential but also in ethical dimension.

PEU_K03 – expresses a willingness to teamwork.

PEU_K04 - shows courage in communicating and defending own views.

PEU_K05 - shows commitment and creativity in solving problems, reaching out to sources of information and overcoming obstacles to achieve the objectives.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1-2	Introduction to marketing research.	4
Lec 3	Research problem and an approach to solve it.	2
Lec 4	Secondary and syndicated data.	2
Lec 5	Qualitative research. Focus groups.	2
Lec 6	Research design: survey and observation. Introduction to questionnaires & scales. Experimentation and causal research.	2
Lec 7	Research design: measurement and scaling.	2
Lec 8	Research design: questionnaires design.	2
Lec 9	Research design: sampling.	2
Lec 10	Data collection and preparation in marketing research.	2
Lec 11- Lec 12	Data analysis.	4
Lec 13	Report of the marketing research project - preparation and presentation.	2
Lec 14	Final test.	2
Lec 15	Marketing research: concept, process and challenges - summary. Retake of the final test.	2
	Total hours	30

Classes	Number of hours
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CI 1-CI 3	Introduction to marketing research.	6
CI 4-CI 5	Research problem and an approach to solve it.	4
CI 6	Secondary and syndicated data.	2
CI 7	Qualitative research. Focus groups.	2
CI 8-CI 11	Research design.	8
CI 12-CI 15	Data collection, analysis, and reporting.	8
	Total hours	30

Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	

Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	

Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	

TEACHING TOOLS USED
N1. Traditional lecture with multimedia presentations.
N2. Questions to students during lectures.
N3. Case studies and other types of assignments.
N4. Discussion of selected issues.
N5. Questions to students during classes.
N6. Self or teamwork: preparation for classes, data and information acquiring and analysis for marketing research purposes, preparation for a test.
N7. Report developing.
N8. Presentations prepared by students.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
P	PEU_U01-2, PEU_K01-5	Evaluation of involvement in classes. Evaluation of assignments.
P	PEU_W01-2	Test.

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Kotler Ph., et al., Marketing Management. First European Edition, Harlow, England, Pearson/Prentice Hall, New York 2009.
- [2] Malhotra N. K., Essentials of Marketing Research. Global Edition, Pearson Education Ltd., Boston, London 2015.
- [3] Malhotra N. K., Student Resource Manual with Technology Manual. Essentials of Marketing Research: A Hands-On Orientation. First Edition, Companion Website for Essentials of Marketing Research, Global Edition, 2015.

SECONDARY LITERATURE:

- [1] Anderson Ch., How to give a killer presentation, Harvard Business Review, June, 2013, 91, 6, pp.121-125.
- [2] Companion Website for Essentials of Marketing Research, Global Edition, 2015.
- [3] Janssens W., Wijnen K., De Pelsmacker P., Van Kenhove P., Marketing research with SPSS, Prentice Hall/Financial Times, London 2008.
- [4] Kaden R.J., Guerrilla marketing research: marketing research techniques that can help any business make more money, Kogan Page, London, Philadelphia 2006.
- [5] The Power of Positive Surveying, Harvard Business Review, January–February 2017, 95, 1-2, pp.22–24.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Milleniusz W. Nowak, Ph.D., Milleniusz.Nowak@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT**SUBJECT CARD****Name in Polish Mikroekonomia****Name in English Microeconomics****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management (OM)****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code EKZ1127****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	30			
Number of hours of total student workload (CNPS)	120	60			
Form of crediting	Examination	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	4	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	1.4			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**SUBJECT OBJECTIVES**

C1 The main aim of the course is to present basic knowledge in microeconomics area, especially:

C2 To introduce essential economic models like demand model and supply model

C3. To introduce economic terms like costs, revenues, profits

C4. To introduce how the company functions

C5. To introduce optimal decisions theory for: customers and producers

C6. To introduce basics of market structures

C7.To extend students abilities of understanding the functioning of market

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEK_W01 Understands the economy mechanisms, especially how the market functions

PEK_W02 Knows the basic tools of government intervention

PEK_W03 Understands the gain from trade

PEK_W04 Understands the fundamental economic laws and relationships

PEK_W05 Knows and understands essential economic terms and indicators.

PEK_W06 Knows the fundamental market structures and typical economic decisions of companies functioning in all market structures

PEK_W07 Understands all essential economic terms concerning the business: assets, capital, revenue, cost, profit.

PEK_W08 Knows all essential relationships between customer and producer

relating to skills:

PEK_U01 Can identify main chances and threats for businesses.

PEK_U02 Can calculate and interpret basic economic indicators and measures.

PEK_U03 Can calculate the optimal economic point

PEK_U04 Can analyze the market structures and give examples from real economy

PEK_U05 Can classify costs in real company

PEK_U06 Can analyze the economic environment of company

relating to social competences:

PEK_K01 Can identify economic and social determinants.

PEK_K02 Can discuss about business and justify his opinions

PROGRAMME CONTENT

Form of classes - lecture		Number of hours
Lec 1	Introduction. Main Principles of economics	2
Lec 2	Interdependence and gain from trade	2
Lec 3	The market forces of supply and demand	2
Lec 4	Elasticity and its application: demand and supply elasticities, price and income elasticities, classification of goods	2
Lec 5	Supply, demand and government policies	2
Lec 6	Welfare economics	2
Lec. 7	The economics of the public sector	2
Lec. 8	The firm behavior – cost of production (part 1)	2
Lec. 9	The firm behavior – cost of production (part 2)	2
Lec. 10	The firm behavior – cost of production (part 3)	2
Lec. 11	Market structures – general overview, classification and key features	2
Lec. 12	The markets for the factors of production	2
Lec. 13	The theory of consumer choice (part 1)	2
Lec. 14	The theory of consumer choice (part 2)	2
Lec. 15	Review	2
	Total hours	30
Form of classes - class		Number of hours

Cl 1	The production possibilities frontier Opportunity cost	2
Cl 2	Specialization and trade The principle of comparative advantage and absolute advantage	2
Cl 3	Demand schedule and demand curve Shifts in the demand curve Supply schedule and supply curve Shifts in the supply curve The equilibrium of supply and demand	2
Cl 4	Computing price elasticity of demand The variety of demand curves Total revenue and the price elasticity of demand Computing cross elasticity of demand Computing income elasticity of demand Computing price elasticity of supply	2
Cl. 5	Price ceiling and price floor Elasticity and taxes	2
Cl. 6	Consumer and producer surplus in the market equilibrium Cost of taxation The equilibrium with/ without international trade (import/ export)	2
Cl. 7	TEST no. 1 Externalities and market inefficiency Public goods and common resource	2
Cl. 8	Opportunity cost Total revenue, total cost and profit Economic profit versus accounting profit	2
Cl. 9	The production function and marginal product	2
Cl. 10	The total cost curve Fixed and variable cost Average costs Marginal costs Average and total cost in short and long run	2
Cl. 11	Firm's short- and long run decisions in the competitive market Monopoly's production decisions (demand and marginal-revenue curves) Monopolistic versus perfect competition Oligopoly and monopolistic competition	2
Cl. 12	Labor market The markets for land and capital	2
Cl. 13	The consumer's budget constraint The consumer's preferences The consumer's optimum	2
Cl. 14	Income and substitution effects The deriving the demand curve Moral hazard Asymmetric information Behavioral economics	2
Cl. 15	TEST no. 2	2
	Total hours	30
TEACHING TOOLS USED		
Lectures		

N1. Lectures
N2. Multimedia presentations
N3. Films
Classes
N4. Exercises
N5. Discussion
N6. Homework
N7. Case studies

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEK_U01÷PEK_U06 PEK_K01, PEK_K02	Activity in solving exercises during classes
F2	PEK_U04, PEK_U06	Activity in discussions during classes
F3	PEK_U01÷PEK_U05	Checking of homework
F4	PEK_U02÷PEK_U06	Written tests
F5	PEK_W01 ÷PEK_W08 PEK_U01÷PEK_U06	Exam
P (lecture) = F5		
P (classes) = 0,10*F1+0,10*F2+0,10*F3+0,7*F4		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Mankiw N.G., Principles of microeconomics, 6th edition, South-Western Cengage Learning, 2011
- [2] Krugman P., Wells R., Microeconomics, 3rd edition, 2012

SECONDARY LITERATURE:

- [1] „Microeconomics 6e” Prentice Hall Publishing House, June 2004
- [2] D. Begg, S. Fischer, R. Dornsbuch *Economics*, 2003.
- [3] Mas-Colell A., Whinston M.D. Green J.R. *Microeconomic Theory*, Oxford University Press, 1995.
- [4] G.A. Jehle, P.J.Reny, *Advanced Microeconomic Theory*. Addison Wesley, 2001.
- [5] Mas-Colell, M. Whinston, J. Creen, *Microeconomic Theory*. Oxford University Press, Oxford 1995.
- [6] H.R. Varian, *Microeconomic Analysis*. W. W. Norton and Company, 1992.
- [7] M. Friedman, R. Friedman, *Free to choose*, Harvest Book 1990.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Grzegorz Chodak, grzegorz.chodak@pwr.edu.pl
 Anna Kowalska-Pyzalska anna.kowalska-pyzalska@pwr.edu.pl

Faculty Computer Science and Management**SUBJECT CARD**

Name of subject in Polish:	Wprowadzenie do zarządzania ryzykiem
Name of subject in English:	Introduction to Risk Management
Main field of study (if applicable):	Management
Specialization (if applicable):	Organizational Management
Profile: academic	
Level and form of studies:	1st level, full-time
Kind of subject:	obligatory
Subject code:	EKZ1129
Group of courses:	NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	30	60			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	1	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

Basic knowledge of the mechanics of financial markets, elementary probability and statistics.

SUBJECT OBJECTIVES

C1 To provide information about the statistics of financial markets, the use of financial instruments to manage risk and the tools for risk measurement.

SUBJECT LEARNING OUTCOMES

Relating to knowledge:

PEU_W01 Knows the mechanics of financial markets.

PEU_W02 Knows how to measure statistical properties of financial asset prices.

PEU_W03 Knows how to use financial instruments to manage risk.

PEU_W04 Knows how to measure risk.

Relating to skills:

PEU_U01 Can measure volatility of asset prices.

PEU_U02 Can evaluate duration and convexity of bond portfolios.

PEU_U03 Can build stock portfolios.

PEU_U04 Can measure VaR and CFaR.

Relating to social competences:

PEU_K01 Is aware of the need for an independent, critical assessment of the scope and level of his/her knowledge in the field of risk management. Is prepared for conducting self-studies in this area.

PEU_K02 Can engage in a discussion and defend his/her views regarding the methods of risk management.

PROGRAMME CONTENT

Lectures		Number of hours
Lec1	Investments, financial markets, stock and futures exchanges	4
Lec2	Statistics of financial markets	3
Lec3	FX and debt instruments, duration and convexity	2
Lec4	Capital market, elements of portfolio theory	2
Lec5	Value-at-risk (VaR), Cash Flow-at-Risk (CFaR)	4
	Total hours	15
Classes		Number of hours
Cl1	Financial markets, stock and futures exchanges	2
Cl2	Statistics of financial markets	3
Cl3	FX and debt instruments, duration and convexity	2
Cl4	Capital market, elements of portfolio theory	2
Cl5	Value-at-risk (VaR), Cash Flow-at-Risk (CFaR)	4
Cl6	Final test	2
	Total hours	15

TEACHING TOOLS USED

N1. Multimedia lecture
 N2. Practical exercises
 N3. Discussion
 N4. Student's own work

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating educational effect achievement
F1	PEU_W01÷PEU_W04	Class participation (participation in discussions and

	PEU_U01÷PEU_U04	problem solving, preparation for class activities)
F2	PEU_W01÷PEU_W04 PEU_U01÷PEU_U04	Grade based on the final test
$P(W) = \frac{1}{2} F1 + \frac{1}{2} F2$ $P(\dot{C}) = \frac{1}{2} F1 + \frac{1}{2} F2$		

PRIMARY AND SECONDARY LITERATURE
<u>PRIMARY LITERATURE:</u>
<p>[1] Z. Bodie, A. Kane, A.J. Marcus (2007) Essentials of Investments (6th ed.), McGraw-Hill</p> <p>[2] J. Franke, W. Härdle, C. Hafner (2005) Introduction to Statistics of Financial Markets, Springer</p> <p>[3] P. Jorion (2006) Value at Risk (3rd Ed.), McGraw-Hill</p>
<u>SECONDARY LITERATURE:</u>
<p>[1] E.J. Elton, M.J. Gruber, S.J. Brown, W.N. Goetzmann (2002) Modern Portfolio Theory and Investment Analysis, Wiley</p> <p>[2] F.J. Fabozzi (2005) The Handbook of Fixed Income Securities", McGraw-Hill</p> <p>[3] P. Wilmott (2000) Paul Wilmott on Quantitative Finance, Wiley, Chichester</p>
SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)
Prof. dr hab. Rafał Weron, rafal.weron@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT**SUBJECT CARD****Name of subject in Polish** STRUKTURY RYNKU I ICH REGULACJE**Name of subject in English** Market Structure And Their Regulations**Main field of study (if applicable):** Management**Specialization (if applicable):** Organizational Management (OM)**Profile:** academic**Level and form of studies:** 1st level, full-time**Kind of subject:** optional**Subject code** EKZ1166**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	60	60			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	2	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Student knows basic definitions, economic laws and relations in microeconomics.
2. Student knows basic market structures and their characteristics and can identify them.

SUBJECT OBJECTIVES

C1 – The objective of the subject is presenting solid (reliable) backgrounds to understand problem related to decisions making by firms at different competitive markets.

C2 - The objective of the subject is systematic description of action and presenting connections and relations between market structure and market regulation made by government or EU.

C3 – The objective of the subject is to get known definitions connected with microeconomics, regulations and decision making in foreign language, and possessing ability of using correct words during problematic discussion.

SUBJECT LEARNING OUTCOMES

relating to knowledge:

PEU W1 – Student knows and can explain basic definitions, economic laws and relations in micro and macroeconomics. Student knows economic and law regulations related to national economy, economy of European Union and global economy.

PEU W2 – Student knows regulation theories in context of different government functions in economy.

PEU W3 – Student knows assumptions and causes, different tools and effects of economics and law regulations at microeconomics and macroeconomics level, in relation to particular markets and firms.

relating to skills:

PEU U1 – Student can define and analyze effects of incoming economics and law regulations at national and international level for particular organizations, markets and integration groups, such as EU.

PEU U2 – Student can formulate alternative solutions of typical management problems and formulate own opinions, based on chosen information sources, related to economic incidents and phenomena which influence on management decisions.

PEU U3 - K1-ZARZ_U15

PEU U4 - K1-ZARZ_U16

PEU U5 - K1_ZARZ_U17

relating to social competences:

PEU K1 - K1_ZARZ_K01

PEU K2 - K1_ZARZ_K02

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Introduction: examples of different market structures and their effects on decision process	1
Lec 2	Costs of production: cost curve, average costs, marginal costs, entry costs, costs in the short and the long run	2
Lec 3	Decisions about market entry: income and profits, discounting future profits, temporal and inter-temporal decision	2
Lec 4	Competitive market: market structure, price setting, company decisions	2
Lec 5	Monopoly: market structure, price setting, company decisions, examples	2
Lec 6	Oligopoly: basics of the game theory, market structure, price setting, company decisions, examples	5
Lec 7	Monopolistic competition: market structure, price setting, company decisions, examples	4
Lec 8	Measurements of a market concentration	2
Lec 9	Regulations: introduction; government policy for fusion of companies: objectives and rules of antitrust policy, interpretation of antitrust policy, the processes taking place in Poland and their characteristics, examples of antitrust government policy	2
Lec 10	Partial Test	2
Lec 11	Examples of regulations: fiscal and money Policy and market structure change, infrastructural policy, regional policy	2
Lec 12	Examples of regulated markets: electricity market	2

Lec 13	Final test	2
	Total hours	30
Classes		Number of hours
Cl 1	Costs and profits in decision process	1
Cl 2	Competitive market	2
Cl 3	Monopoly	2
Cl 4	Oligopoly	3
Cl 5	Monopolistic competition	3
Cl 6	Case study	4
	Total hours	15
Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	
TEACHING TOOLS USED		
Lecture: N1 – information lecture, N2 – multimedia presentation, N3 – problematic lecture. Class: N4 – analysis of selected problems, problematic discussion, N5 – written report		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	W1,W2,W4, U4, U5	partial test
F2	W3, W4, U6, U5	final test

F3	U1, U2, U4, U5	activity during classes, taking part in problematic discussion
F4	U1, U2, U3, U4	report
Lecture: $P = 0,5 \cdot F1 + 0,5 \cdot F2$ Class: $P = 0,4 \cdot F1 + 0,4 \cdot F4 + 0,2 \cdot F3$		
PRIMARY AND SECONDARY LITERATURE		
<u>PRIMARY LITERATURE:</u>		
[1] <i>Principles of Macroeconomics</i> by Mankiw, Kneebone, McKenzie, Fifth Canadian edition, Publisher: Nelson.		
[2] Trefor Jones, <i>Business Economics and Managerial Decision Making</i> , John Wiley&Sons, 2004		
[3] Webster Thomas J., <i>Managerial economics: theory and practice</i> , Academic Press, Amsterdam, 2003		
<u>SECONDARY LITERATURE:</u>		
[1] David Begg, Stanley Fischer, Rudiger Dornbusch, <i>Economics</i> , McGraw-Hill, London, 1994		
SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)		
Katarzyna Maciejowska, katarzyna.maciejowska@pwr.edu.pl		

FACULTY OF INFORMATICS AND MANAGEMENT**SUBJECT CARD****Name of subject in Polish Makroekonomia****Name of subject in English Macroeconomics****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management (OM)****Profile: academic****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code EKZ1182****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of classes organized by the University (ZZU)	30	15			
The total number of hours of student workload (CNPS)	120	60			
Form of crediting	Examination	credit with a grade			
For a group of courses final course mark (X)					
Number of points ECTS	4	2			
including the number of points corresponding to the classes of practical (P)		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*niepotrzebne skreślić

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. A course in microeconomics

SUBJECT OBJECTIVES

C1 Knowledge and understanding of the theory of macroeconomic management

C2 Education the ability to understand the correctness of macroeconomic management in the context of economic growth and development.

C3 Education skills identification and analysis of macroeconomic factors in the dimension of content and control in conjunction with the implemented economic policy

SUBJECT LEARNING OUTCOMES

The scope of knowledge:

PEU_W01 He has knowledge of the place of economics in the sciences, and of the substantive and methodological links with other scientific disciplines. It is characterized by the main theories of economics.

PEU_W02 He knows the circumstances and depending on macroeconomic growth and development of the national economy and the world. Knows the basic economic tools and regulations on the national economy, the economies of integration groups globally.

The range of skills:

PEU_U01 Understands and is able to use theoretical knowledge in economics and related disciplines to analyze and interpret problems in macroeconomic management.

PEU_U02 It has the ability to identify, understand and analyze the macroeconomic factors in the context of the policy as part of macroeconomic and business environment.

The scope of social competence:

PEU_K01 Can discuss possible solutions to the practical functioning of the economy at the macroeconomic level, to justify the view presented by analyzing the benefits and risks of particular solutions.

Course content		
Lectures		Number of hours
1	Flow of money in an economy (market of production factors, goods market, financial market, money market); aggregated demand and supply, market equilibrium	2
2	National accounts: components of national accounts, price deflators	2
3	Market of production factors: production functions, equilibrium wages and rents, income division,	2
4	Goods and financial markets: Determinants of demand for goods (consumption, government expenditures, investments); equilibrium interest rate	4
5	Money market: history of money, role of money, inflation (real values of money, costs of inflation), demand and supply of money, money creation	3
6	International trade: net export, small open economy (international vs. local interest rate), exchange rate, international effects of fiscal policies	3
7	Keynesian cross: expected and realized expenditures; multiplier effect	2
8	IS-LM model: fiscal vs. monetary policies; multiplier effect	4
9	Labor market: measurements of employment and policy analysis	2
10	Business cycle: theories and stylized facts; effects of stabilizing policies	4
11	Globalization and international economic integration: an example of EU	2

Total hours	30
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Classes		Number of hours
Cl 1	Aggregated demand and supply, market equilibrium	2
Cl 2	National accounts: components of national accounts, price deflators	2
Cl 3	Market of production factors: production functions, equilibrium wages and rents	2
Cl 4	Goods and financial markets: equilibrium interest rate	2
Cl 5	Money market: real values of money, demand and supply of money, money creation	2
Cl 6	International trade: net export, small open economy (international vs. local interest rate), exchange rate	2
Cl 7	Final test	2
	Total hours	15

Laboratory		Number of hours
La1		
La2		
La3		
	Total hours	

Project		Number of hours
Pr1		
Pr2		
Pr3		
	Total hours	

Seminar		Number of hours
Se1		
Se2		
Se3		
	Total hours	

TEACHING TOOLS USED
Lecture N1. Lecture information N2. Multimedia presentation N3. Lecture problem Classes N4. Solving practical N5. Discussion

EVALUATION OF THE EFFECTS OF EDUCATION ACHIEVEMENTS

Ratings (F - forming (during the semester), P - Summary (at the end)	Learning outcomes number	Way to evaluate the effect of education achievement
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of the semester)		
F1	PEU W02	Test
F2	PEU U01 PEU U02	Practical exercises test
F3	PEU K01	Participation in the discussion
F4	PEU W01 PEU W02 PEU U01	The examination in the form of test
P (lectures) = F4		
P (exercises) = 0,4*F1+0,4*F2+0,2*F3		

PRIMARY AND SECONDARY LITERATURE
<u>PRIMARY LITERATURE:</u>
[1] <i>Principles of Macroeconomics</i> by Mankiw, Kneebone, McKenzie, Fifth Canadian edition, Publisher: Nelson.
[2] D. Begg, S. Fischer, R. Dornsbuch, <i>Makroekonomics</i> , Mc GRAW-HILL BOOK COMPANY.
<u>SECONDARY LITERATURE:</u>
[1] R. Milewski (red.), <i>Podstawy ekonomii. Ćwiczenia, zadania, problemy</i> , PWN, Warszawa 2002 i kolejne wydania.
COURSE SUPERVISOR (NAME, ADDRESS E-MAIL)
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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish – Podstawy finansów****Name of subject in English – Essentials of finance****Main field of study – Management****Specialization - Organizational Management****Profile - academic****Level and form of studies - 1st level, full-time****Kind of subject - obligatory****Subject code - FBZ1150W****Group of courses - No**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30				
Number of hours of total student workload (CNPS)	60				
Form of crediting	Crediting with grade				
For group of courses mark (X) final course					
Number of ECTS points	2				
including number of ECTS points for practical (P) classes					
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4				

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Competencies in mathematics confirmed by positive marks on certificate from a high school.
2. Skills of making notes during lectures and studying recommended literature.
3. Social competencies allowing taking part in lectures conducted for big student groups.

SUBJECT OBJECTIVES

- C1. Acquiring by students the essential knowledge components from the area of basic finance, such as:
- C1.1 Notion of finance,
 - C1.2 Development of finance as knowledge/science,
 - C1.3 Fundamental financial categories,
 - C1.4 Role and functioning of money in economy,
 - C1.5 Notion of rate of return (percentage rate), types and components of percentage rates,
 - C1.6 Time value of money,
 - C1.7 Notion of value in finance,
 - C1.8 Notion and measuring of risk in finance,
 - C1.9 The essence, functions and components of financial system of economy (including system in Poland),
 - C1.10 Basic financial instruments.

C2. Mastering by students:

C2.1 The skills of correct usage of notions and financial terminology from the scope of fundamentals of finance,

C2.2 The skills of classification and description of fundamental financial events and processes,

C2.3 The skills of interpretation and basic analysis and evaluation of financial events and processes.

C3. Acquiring and developing by students the social competencies, such as:

C3.1 Responsible behavior and responsibility for oral and written statements,

C3.2 Fairness and truth in conduct in academic environment and in a society,

C3.3 Positive influence on functioning of a student group (coherent with subject objectives),

C3.4 Tolerance for cultural differences, respect for personal individual choices not limiting freedoms of others, skills of finding areas of agreement and cooperation in a changing, multicultural society.

SUBJECT LEARNING OUTCOMES

Relating to knowledge:

PEU_W01 – know etymology of a “finance” term and basic stages of finance development,

PEU_W02 – know subject and methods of research of finance and various specific financial disciplines,

PEU_W03 – know and understand basic financial categories, such as price, revenue, income, profit, percentage rate, rent, expenditure, cost, amortization, loan, credit, deficit, debt,

PEU_W04 – have knowledge on role and functioning of money in economy,

PEU_W05 – know a notion of a percentage rate, identify types and components of percentage rates,

PEU_W06 – have knowledge on time value of money, inflation and its results, and methods of measuring the time value of money,

PEU_W07 – know a notion of value in finance and know methods of financial valuation,

PEU_W08 – know a notion of income and various rates of income,

PEU_W09 – know a notion of risk and know methods of measuring risk,

PEU_W10 – have knowledge on the essence, functions, and components of financial system in economy (particularly in Poland),

PEU_W11 – know and characterize basic financial instruments of transfer of capital and transfer of risk.

Relating to skills:

PEU_U01 – can correctly use the notions and financial terminology from the scope of fundamentals of finance,

PEU_U02 – can present/describe typical financial events and processes,

PEU_U03 – are able to perform a quantitative analysis of financial events and interpret and evaluate results of analysis.

Relating to social competencies:

PEU_K01 – openness on information presented in media on financial topics,

PEU_K02 – consciousness of a need of an analytical/critique approach towards financial information received and financial opinions presented ,

PEU_K03 – activity in looking for supplementary information and its selection and verification,

PEU_K04 – care for developing ability of independent application of acquired knowledge and skills,

PEU_K05 – consciousness of influence of applied financial solutions on economy, producers, consumers and social development,

PEU_K06 – objectivism in evaluating arguments of others, rational approach in supporting own points of view with application of knowledge of essentials of finance,

PEU_K07 – conforming to good habits and rules of behavior obligatory in academic

environment and in society

PROGRAM CONTENT

Lectures		Number of hours
Lec 1	Organizational matters. Notion of finance, finance development and disciplines of finance.	2
Lec 2	Basic financial categories.	2
Lec 3	Role and functions of money in economy.	5
Lec 4	Notion of percentage rate, types and components of percentage rates.	2
Lec 5	Time value of money. Intermediate written knowledge and skills verification.	5
Lec 6	Notion of value in finance, topic of valuation and of income rate.	2
Lec 7	Notion and measure of risk.	2
Lec 8	The essence, functions and components of financial system in economy (particularly in Poland).	5
Lec 9	Basic financial instruments. Final written knowledge and skills verification	5
	Total hours	30

Classes		Number of hours
Cl 1		
Cl 2		
...		
	Total hours	

Laboratory		Number of hours
Lab 1		
Lab 2		
...		
	Total hours	

Project		Number of hours
Proj 1		
Proj 2		
...		
	Total hours	

Seminar		Number of hours

Sem 1		
Sem 2		
...		
	Total hours	

TEACHING TOOLS USED

- N1. Traditional lecture
 N2. Lecture with application of slides (projector and computer)
 N3. Written knowledge and skills verification
 N4. Consultations
 N5. Individual work – studying and preparation for knowledge and skills verification.

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	W01÷W06, U01÷U03, K01, K02, K04÷K07	Written knowledge and skills verification
F2 = P	W01÷W11, U01÷U03, K01, K02, K04÷K07	Written knowledge and skills verification

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Ritter L.S., Silber W.L., Udell G.F., Principles of Money, Banking and Financial Markets, Prentice Hall, 1997.
 [2] Burton M., Nesiba R., Brown B., An Introduction to Financial Markets and Institutions, M.E. Sharpe, Inc., 2010.

SECONDARY LITERATURE:

- [1] Jajuga K., Elementy nauki o finansach, PWE, Warszawa 2007.
 [2] Owsiak S., Podstawy nauki finansów, PWE, Warszawa 2002.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Wojciech Sibilski, wojciech.sibilski@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish – Rachunkowość finansowa w procesie podejmowania decyzji					
Name of subject in English – Financial accounting in the organizational decision making process					
Main field of study - Management					
Specialization – Organizational Management					
Profile - academic					
Level and form of studies - 1st level, full-time					
Kind of subject - obligatory					
Subject code – FBZ1151					
Group of courses - No					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	60	60			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark final course with (X)					
Number of ECTS points	2	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic knowledge of microeconomics
2. Basic familiarity with functioning of organizations

SUBJECT OBJECTIVES

C1 Possessing the basic knowledge about the principles, methods and ways of transaction analysis and about formal (legal) and/or generally accepted requirements of bookkeeping and of financial reporting.

C2 Possessing the ability to enter transactions in the accounts, closing accounting periods (closing the books) and preparing financial statements.

SUBJECT LEARNING OUTCOMES

Relating to knowledge:

PEU_W01 have an ordered knowledge of the object, scope and principles of financial accounting, about economic operations of organizations and the accounting principles of their documentation and recording

PEU_W02 characterize elements of organization of accounting process and know foundations of financial reporting (balance sheet, profit and loss statement)

Relating to skills:

PEU_U01 are able to list and present the legal requirements concerning documentation of the

policy of accounting adopted by the entity, requirements concerning the obligation of running the full accounting plus the compulsory elements of the accounting documentation

PEU_U02 are able to apply in practice the principles transaction analysis, to close and open accounting periods, and to prepare components of financial statements (balance sheet, profit and loss statement).

Relating to social competences:

PEU_K01 have the consciousness of significance of accounting in the economic practice.

PROGRAM CONTENT		
Lectures		Number of hours
Lec 1	Fundations and legal principles of accounting	4
Lec 2	Functioning principles of accounts and types of transactions	4
Lec 3	Recording and evaluating of balance sheet elements	4
Lec 4	Chart of accounts	2
Lec 5	Revenues and expenses	5
Lec 6	Profit and loss statement	5
Lec 7	Other elements of financial reporting	4
	Final test	2
	Total hours	30
Classes		Number of hours
Cl 1	Classification of balance sheet elements	2
Cl 2	Economic transactions and their consequences	2
Cl 3	Balance sheet accounts – principles of functioning, trial balance	2
Cl 4	Profit and expense accounts - principles of functioning	2
Cl 5	Financial reporting	2
Cl 6	Case studies	3
Cl 7	Final test	2
	Total hours	15
Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours

Sem 1		
Sem 2		
Sem 3		
	Total hours	

TEACHING TOOLS USED

- N1. Multimedia lectures
N2. Practical exercises and cases

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating learning outcomes achievement
F1	PEU_W01, PEU_W02, PEU_U01, PEU_U02	Final test
P = F1		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Kimmel P.D., Weygant J.J., Kieso D.E., Accounting – tools for business decision making, John Wiley and Sons, 2011
[2] Shim J.K., Siegel J.G., Financial Accounting, McGraw-Hill, 1999
[3] Marshall D.H., A survey of accounting: what the numbers mean, Irwin, 1993
[4] Horngren Ch.T., Sundem G.L., Elliott J.A., Introduction to Financial Accounting, Prentice Hall, 1993.

SECONDARY LITERATURE:

- [1] Piper M., Accounting made simple, Obliviousinverstor, 2010;
[2] Matulich S., Heitger L.E., Financial Accounting, McGRAW-Hill, 1985;
[3] Lerner J.J., Cashin A.C., Principles of Accounting I and II, McGRAW-Hill, 1994.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Wojciech Sibilski wojciech.sibilski@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish Finanse przedsiębiorstw					
Name of subject in English Corporate finance					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management					
Profile: academic					
Level and form of studies: 1st level, full-time					
Kind of subject: obligatory					
Subject code FBZ1152					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	90	60			
Form of crediting	Examination	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	3	2			
including number of ECTS points for practical (P) classes	-	2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basics of Economics
2. Basics of Accounting

SUBJECT OBJECTIVES

- C1. to familiarize students with the most important financial mechanisms operating in the company
 C2. to familiarize students with the main sources of company financing and their characteristics
 C3. to familiarize students with the methods used to evaluate company's financial condition

SUBJECT LEARNING OUTCOMES**relating to knowledge:**

Students receiving credition:

- PEU_W01 – know basic financial categories and know differences between accounting and economic models of economic information,
 PEU_W02 – have knowledge about main sources of company financing – their types, features, functions and costs,
 PEU_W03 – know basic efficiency model of corporation,
 PEU_W04 – are familiar with mechanism of operational, financial and total leverage, know factors (decisions) that influence leverage and risk associated with a given level of

leverage (operational, financial and total leverage)
 PEU_W05 – know methods of company’s financial situation evaluation, have knowledge about introductory evaluation of a company on the basis of it’s financial reports and methods of ratio analysis.

relating to skills:

Students receiving credition:

PEU_U01 – are able to see dependencies and cause-effect relationships between events taking place in the company,

PEU_U02 – have skills of searching for and applying information from various sources in the financial decision making process,

PEU_U03 – are able to apply learned tools and methods of corporation’s financial situation evaluation in economic practice.

relating to social competences:

Students receiving credition:

PEU_K01 – are able to identify and supplement a lacking knowledge that allows to solve financial problems,

PEU_K02 – are able to identify opportunities and threats to the company’s financial situation in an external environment,

PEU_K03 – are prepared for taking part in projects aiming at changes in management of company’s resources,

PEU_K04 – understand a need for permanent education and skills development and know the possibilities and ways of development of their skills.

PROGRAM CONTENT		
Lectures		Number of hours
Lec 1	The basic financial categories	2
Lec 2	Overview of assets - their characteristics and functions	2
Lec 3	Types and functions of capital	2
Lec 4	Cost of capital	2
Lec 5	Financial concepts of profit	2
Lec 6	Transition from cash to accrual accounting principle	2
Lec 7	Cost-volume-profit analysis	4
Lec 8	Financial leverage	2
Lec 9	Operating leverage	2
Lec 10	Total leverage	2
Lec 11	Profitability analysis	4
Lec 12	Liquidity and working capital management	2
Lec 13	Methods of company’s financial statement evaluation	2
	Total hours	30
Classes		Number of hours
Cl 1	Transition from cash to accrual accounting principle	2
Cl 2	Cost-volume-profit analysis	3

Cl 3	Operating leverage	2
Cl 4	Financial leverage	2
Cl 5	Total leverage	2
Cl 6	Profitability analysis	2
Cl 7	Test	2
	Total hours	15
Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	
TEACHING TOOLS USED		
N1. Lecture with multimedia presentation and discussion		
N2. Exercises solving and discussion		
N3. Individual work – preparation for classes and exam		

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
P1	PEU_U01-PEU_U05	Test
P2	PEU_W01-PEU_W05	Examination
PRIMARY AND SECONDARY LITERATURE		

PRIMARY LITERATURE:

- [1] Brealey R.A., Myers S.C., Allen F., *Corporate Finance*, McGraw-Hill, Irwin, Boston 2006.
[2] Damodaran A., *Corporate Finance, Theory and Practice*, John Wiley & Sons, New York 2001
[3] Brigham E.F., Gapenski L.C., Ehrhardt M.C., *Financial Management, Theory and Practice*, The Dryden Press, Rort Worth 1999.

SECONDARY LITERATURE:

- [2] Ross S.T., Westerfield R.W., Jaffe J.F., *Corporate Finance*, McGraw-Hill, Irwin, Boston 2005

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Bogumiła Brycz, bogumila.brycz@pwr.edu.pl

*delete if not necessary

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT / DEPARTMENT OF
MANAGEMENT SYSTEMS

SUBJECT CARD

Name of subject in Polish Zarządzanie finansami

Name of subject in English Financial Management

Main field of study (if applicable): Management

Specialization (if applicable) Organizational Management

Profile: academic

Level and form of studies: 1st level, full-time

Kind of subject: obligatory

Subject code FBZ1153

Group of courses NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	60	30			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark final course with (X)					
Number of ECTS points	2	1			
including number of ECTS points for practical (P) classes		1			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knowledge of basic organizational and legal forms of organization
2. Basic knowledge of financial reporting
3. The ability to make simple mathematical calculations

SUBJECT OBJECTIVES

- C1 Understanding the sources of funding of the organization
 C2 Knowing valuation methods chosen forms of financing
 C3 Knowledge of methods for estimating the efficiency of investment decisions

SUBJECT LEARNING OUTCOMES

relating to knowledge:
 PEU_W01 Knows the subject of time value of money
 PEU_W02 Knows financial sources of the organization
 PEU_W03 Understands the subject of cost capital valuation models
 relating to skills:
 PEU_U01 Can calculate the future and present value of money
 PEU_U02 Can use cost capital valuation models
 PEU_U03 Can evaluate financial performance of investments
 relating to social competences:
 PEU_K01 Is aware of influence of time value of money, cost of capital and risk on management decisions

PROGRAM CONTENT

Lectures		Number of hours
Lec 1	Introduction. The concept of financial management and value for the organization	2
Lec 2	Introduction to the modeling of time value of money	2
Lec 3	Models of the present and the future value of money	2
Lec 4	Models of the present and the future value of annuity	2
Lec 5	Classification of financial sources of the organization	2
Lec 6	Cost and risk of debt and equity financing	2
Lec 7	Share pricing models- dividend models	2
Lec 8	Share pricing models – models of stable profit growth	2
Lec 9	Bond pricing models	2
Lec 10	Cost of capital valuation model of organization	2
Lec 11	The risk of some forms of financing and its measurement	2
Lec 12	Introduction to the market valuation of the risk - CML model	2
Lec 13	Real investments in the company	2
Lec 14	Introduction to assessing financial performance of investments	2
Lec 15	Test	2
	Total hours	30
Classes		Number of hours
Cl 1	Introduction. Interest rates on loans.	2
Cl 2	Calculation of the future and the present value of money. Cost-effectiveness study of deposits and credit costs	2
Cl 3	Calculation of the annuity. Repayment of loans by the classical method and equal payments	2
Cl 4	Calculation of share price-dividend method	2
Cl 5	Calculation of the share price - constant growth dividend method	2
Cl 6	Bond price calculation	2
Cl 7	WACC calculation	2
Cl 8	Test	1
	Total hours	15
Laboratory		Number of hours
Lab 1		
Lab 2		

Lab 3		
Lab 4		
Lab 5		
...		
	Total hours	
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
Proj 4		
...		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
...		
	Total hours	
TEACHING TOOLS USED		
N1. Multimedial lecture N2. Problems resolving N3. Calculation exercises		

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating learning outcomes achievement
P1	PEU_W01- PEU_W03, PEU_U01-PEU_U03, PEU_K01	Test
P2	PEU_W01- PEU_W03, PEU_U01- PEU_U03, PEU_K01	Test
PRIMARY AND SECONDARY LITERATURE		

PRIMARY LITERATURE:

- [1] FINANCIAL Management : Theory and Practice / Eugene F. Brigham, Michael C. Ehrhardt. - 11 ed.. - Mason : Thomson : South-Western Cengage Learning, 2005
- [2] CONTEMPORARY Corporate Finance / James R. McGuigan, William J. Kretlow, R. Charles Moyer. - 11 ed., internat. student ed.. - Mason : South-Western Cengage Learning : Thomson, 2009.
- [3] INTERMEDIATE Financial Management / Eugene F. Brigham, Louis C. Gapenski. - 5 ed.. - Fort Worth : The Dryden Press : Harcourt Brace College Publishers, c. 1996

SECONDARY LITERATURE:

- [1] CAPITAL budgeting and investment analysis / Alan C. Shapiro. - Upper Saddle River : Pearson Education, c. 2005.
- [2] Levy H., Sarnat M., Capital investment and Financial Decisions, Prentice Hall, Hertfordshire, 1994
- [3] LUMBY S., Investment Appraisal and Financial Decisions, London, Chapman & Hall, 1996

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Tadeusz Dudycz, tadeusz.dudycz@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT	
SUBJECT CARD	
Name of subject in Polish:	Inżynieria finansowa
Name of subject in English:	Financial engineering
Main field of study (if applicable):	Management
Specialization (if applicable):	Organizational Management (OM)
Profile: academic	
Level and form of studies:	1st level, full-time
Kind of subject:	optional
Subject code:	FBZ1187
Group of courses:	NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	60	60			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	2	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

Knowledge of financial markets and elementary probability and statistics.

SUBJECT OBJECTIVES

C1 To provide basic information about construction, valuation and the use of derivatives in the financial markets.

SUBJECT LEARNING OUTCOMES

Relating to knowledge:

PEU_W01 Knows the basic debt instruments and their valuation methods.

PEU_W02 Knows portfolio theory.

PEU_W03 Knows the four basic classes of derivatives - forwards, futures, swaps and options.

PEU_W04 Knows option pricing methods – the binomial and Black-Scholes approaches.

Relating to skills:

PEU_U01 Can build a portfolio of debt instruments and measure its sensitivity.

PEU_U02 Can construct optimal portfolios from stocks and bonds.

PEU_U03 Can evaluate forwards, futures and swaps using the (no-)arbitrage approach.

PEU_U04 Can price options using binomial trees and the Black-Scholes method.

Relating to social competences:

PEU_K01 Is aware of the need for an independent, critical assessment of the scope and level of his/her knowledge in the field of financial engineering. Is prepared for conducting self-studies in this area.

PEU_K02 Can engage in a discussion and defend his/her views regarding the methods of financial engineering.

PROGRAMME CONTENT

Lectures		Number of hours
Lec1	Introduction; Investments and investors	2
Lec2	Financial markets, stock and futures exchanges	2
Lec3	Currencies, debt instruments, yield curve	4
Lec4	Capital market, portfolio theory	4
Lec5	Forwards, futures and swaps: applications and pricing	4
Lec6	Options; Portfolios of derivatives	4
Lec7	Binomial option pricing model: valuation and hedging strategy	4
Lec8	Black-Scholes model; Sensitivity analysis	4
Lec9	Final test	2
	Total hours	30

Classes		Number of hours
C11	Time value of money	2
C12	Debt instruments	2
C13	Portfolio theory	2
C14	Forwards, futures and swaps: applications and pricing	2
C15	Options; Portfolios of derivatives	2
C16	Binomial option pricing model: valuation and hedging strategy	3
C17	Black-Scholes model; Sensitivity analysis	2
	Total hours	15

TEACHING TOOLS USED

- N1. Multimedia lecture
- N2. Practical exercises
- N3. Discussion
- N4. Student's own work

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F –	Learning outcomes	Way of evaluating educational effect achievement
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forming (during semester), P – concluding (at semester end)	number	
F1	PEU_W01÷PEU_W04 PEU_U01÷PEU_U04	Class participation (participation in discussions and problem solving, preparation for class activities)
F2	PEU_W01÷PEU_W04 PEU_U01÷PEU_U04	Grade based on the final test
P (L) = ½ F1 + ½ F2 P (C) = ½ F1 + ½ F2		
PRIMARY AND SECONDARY LITERATURE		
<u>PRIMARY LITERATURE:</u>		
[1] Z. Bodie, A. Kane, A.J. Marcus (2007) Essentials of Investments (6th ed.), McGraw-Hill [2] J. Hull (2008) Options, Futures and Other Derivatives (7th ed.), Prentice Hall [3] A. Weron, R. Weron (1998, ..., 2009) Inżynieria finansowa, WNT		
<u>SECONDARY LITERATURE:</u>		
[4] J. Czekaj, red., (2008) Rynki, instrumenty i instytucje finansowe, PWN [5] E.J. Elton, M.J. Gruber, S.J. Brown, W.N. Goetzmann (2002) Modern Portfolio Theory and Investment Analysis, Wiley [6] F.J. Fabozzi (2005) The Handbook of Fixed Income Securities", McGraw-Hill [7] J. Franke, W. Härdle, C. Hafner (2005) Introduction to Statistics of Financial Markets, Springer [8] K. Jajuga, T. Jajuga (1996, ..., 2007) Inwestycje, PWN [9] P. Wilmott (2000) Paul Wilmott on Quantitative Finance, Wiley, Chichester		
SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)		
Prof. dr hab. Rafał Weron, rafal.weron@pwr.edu.pl		

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish Analiza finansowa wspomagana komputerem					
Name of subject in English Financial analysis supported by computer					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management (OM)					
Profile: academic					
Level and form of studies: 1 st level, full-time studies					
Kind of subject: obligatory					
Subject code FBZ1233					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15		15		
Number of hours of total student workload (CNPS)	30		60		
Form of crediting	Crediting with grade		Crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	1		2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7		0.7		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. None

SUBJECT OBJECTIVES

- C1. Introducing to core concepts of financial analysis.
 C2. Provide an overview of computer software and systems useful in financial analysis.
 C3. Developing analytical skills necessary to perform comprehensive financial statement analysis supported by computer.

SUBJECT LEARNING OUTCOMES

Relating to knowledge:

PEU_W01 – Understand the basic principles, objectives and problems of financial analysis.**PEU_W02 – Familiarize with computer software and systems useful in financial analysis.**

Relating to skills:

PEU_U01 – Be able to perform comprehensive financial statement analysis**PEU_U02 – Be able to evaluate the financial standing of an enterprise using computer software.**

Relating to social competences:

PEU_K01 – Be aware of constantly changing legal, economic and social determinants of financial standing of enterprises.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	The role of financial management	1
Lec 2	Financial statements	2
Lec 3	Financial statement analysis	2
Lec 4	Ratios analysis	2
Lec 5	Modelling and forecasting	2
Lec 6	TPS, MIS and DSS in financial analysis	2
Lec 7	ESS, ERP and corporate platforms	2
Lec 8	Final test	2
	Total hours	15

Classes		Number of hours
Cl 1		
	Total hours	

Laboratory		Number of hours
Lab 1	Horizontal and vertical analysis	1
Lab 2	Profitability ratios	2
Lab 3	Liquidity ratios	2
Lab 4	Activity ratios	2
Lab 5	Leverage ratios	2
Lab 6	Value ratios	2
Lab 7	DuPont Financial Analysis Model	2
Lab 8	Bankruptcy Prediction Models	2
	Total hours	15

Project		Number of hours
Proj 1		
	Total hours	

Seminar		Number of hours
Sem 1		
	Total hours	

TEACHING TOOLS USED

- N1. Informative lectures
- N2. Discussion-based lectures

N3. Multimedia presentation
 N4. Assignments
 N5. Computations
 N6. Reports

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating learning outcomes achievement
P1 (lecture)	PEU_W01, PEU_W02, PEU_K01	Test
P2 (laboratory)	PEU_U01 PEU_U02 PEU_K01	Report

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Aileen M. Ormiston, Lyn M. Fraser, Understanding Financial Statements: International Edition, Pearson, 2012
- [2] J. Van Horne, John M Wachowicz, Fundamentals of Financial Management, Pearson, 2009
- [3] Philip J. Adelman, Alan M. Marks, Entrepreneurial Finance: International Edition, Pearson, 2010

SECONDARY LITERATURE:

- [1] Ken Laudon, Jane Laudon, Management Information Systems, Pearson, 2012

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Adam Dzikowski, adam.dzikowski@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT**SUBJECT CARD****Name of subject in Polish ...Fizyka Środowiska Pracy****Name of subject in English Work Environment Physics****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management****Profile: academic****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code FZZ2503****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15	15		
Number of hours of total student workload (CNPS)	60	30	30		
Form of crediting	crediting with grade	crediting with grade	crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	2	1	1		
including number of ECTS points for practical (P) classes		1	1		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7	0.7		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic statistical and mathematical skills (maturity exam or higher)
- 2.
- 3.

SUBJECT OBJECTIVES

C1 Possessing the basic knowledge about parameters of work environment and the work designing with taking into consideration principles of ergonomics.

C2: Ability of work organization with taking into consideration principles of ergonomics.

C2.1: optimization of work conditions for effective physical and mental work

C2.2: preventing the harmful effects of physical factors in order to maintain optimal conditions for effective physical and mental activity

C3: Acquisition and consolidation of social skills involving the ability to work in a group of students.

C4: The training of work habits according to the principles of ergonomics.

SUBJECT LEARNING OUTCOMES

The scope of knowledge: basic knowledge about physics, ergonomics and safety.

PEU_W01: knowing the basic principles of physics with emphasis on the work environment factors and the effects of chosen environmental factors on the human body work and workload

PEU_W02: knowing the basic ergonomic principles, tools and methods for the assessment of workload and the legal and normative basis for occupational safety and ergonomics

The scope of skills: able to organize work in accordance with the principles of ergonomics and safety at work, taking into account the physical factors of the work environment

PEU_U01: assessment the prevailing workload type and applying the basic methods of ergonomics

PEU_U02: determining the legal and standard conditions of environment factors and ergonomics in Poland and the European Union on the basis of relevant documents

The scope of social competence: Acquisition and consolidation of competence involving the ability to cooperate in a group of students. Education work habits with regard to ergonomic principles.

PEU_K01: development the skills of team cooperation to the optimal solution of problems assigned

PEU_K02: preparation to build the capacity of self-determination, decision making and their implementation in the enterprise.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Introduction. Work environment and work environment physics - definition. Ergonomics - the history, aims and objectives, methods of ergonomic	4
Lec 2	Human being in the work environment. Directive 89/391/EEC (minimal requirements for work safety and ergonomics). Human-machine-work environment system. Fundamentals of design of work environment.	4
Lec 3	Work environment factors and their impact on human productivity. Microclimate - basic concepts, the impact on the human body and work productivity. Physical parameters of microclimate. Methods of optimization of thermal comfort of employee.	4
Lec 4	Lighting. Eyesight and eye anatomy. Basic physical lighting and illumination parameters affecting the employee. The impact of lighting on worker productivity. Methods of optimization of lighting comfort of employee.	4
Lec 5	Sound - the basic physical parameters. Noise. Structure and function of the organ of hearing. The impact of noise on humans. Prevention of noise.	4
Lec 6	Workspace of man. Variability of human anthropometric measurements. Recommendations for ergonomic work space design. Layout of workstation elements. Posture at work. Factors determining the awkward postures. The consequences of awkward posture.	4

Lec 7	Working at the computer workstation. The recommended posture. Workspace organization. Requirements and recommendations for computer workstation.	2
Lec 8	Psychological stress and biomechanical workload. Methods for evaluation of workload and workload reduction	2
Lec 9	Written test	
	Total hours	30
Classes		Number of hours
Cl 1	Introduction. Presentation of the aim and scope of team work (case study analysis) and criteria of student evaluation. Task 1: Selection of the object of the research (a specific workstation). Task 2: Presentation of the object of the research and formal tools to its evaluation. Task 3: Diagnostic research of object – environmental parameters of work (noise, lighting, thermal comfort), physical parameters of workstation (dimensions, layout) Task 4: Written report about the research results and their evaluation in context of formal requirements and principles of ergonomics. Task 5: Presentation of research results.	1
Cl 2	Consultations related to the selection of the research object, work environment factors and workload diagnostic tools. Brief (5-minute) group presentations of research objects (workstations), key environmental parameters and main workload factors.	4
Cl 3	Work in groups - consultations about problem issues, evaluation of the students' work progresses, preparing the final report and presentation.	4
Cl 4	Presentation of the results of the diagnostic research - case studies, discussion and evaluation of presentation.	4
Cl 5	Summing up classes: discussing conclusions related to the assessment of written reports, students' presentations and their team work. The summary about diagnostic tools, analysis results	2
	Total hours	15
Laboratory		Number of hours
Lab 1	Microclimate - computer simulation of microclimate factors for human thermal comfort. The results can be applied for classes team work.	2
Lab 2	Designing a computer workstation - computer analysis of the geometric parameters of the workstation computer. The results can be applied for classes team work.	2
Lab 3	Design of layout of work elements. Lighting - simulation of lighting parameters in the workplace. The results can be applied for classes team work.	4
Lab 4	Noise - computer simulation of noise protection and its influence on humans. The results can be applied for classes team work.	2
Lab 5	Biomechanical workload - methods for assessing. Laboratory testing of the man – machine system. The experiments should be provided in pairs. The results can be applied for classes team work.	4

Lab 6	Summary. The review of diagnostic tools and methods. Evaluation of students' work made individually and in pairs.	1
	Total hours	15
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	
TEACHING TOOLS USED		
<p>N1. Lecture with multimedia presentation</p> <p>N2. Laboratory - computer software, specialized research stations constructed in the Laboratory of Ergonomics</p> <p>N3. Working in groups during the classes and laboratories</p> <p>N4. Presentation of the research results during classes</p> <p>N5. Tutorial</p> <p>N6. Case study analysis</p> <p>N7. Group and individual activity tools (online quizzes, problematic questions)</p>		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating educational effect achievement
F1	PEU_W01 – PEU_W02 PEU_U01 - PEU_U02 PEU_K01 – PEU_K02	Individual activity
F2	PEU_W01 – PEU_W02 PEU_U01 - PEU_U02 PEU_K01 – PEU_K02	Group work results
F3	PEU_W01 – PEU_W02 PEU_U01 - PEU_U02 PEU_K01 – PEU_K02	Self-prepared presentation
F4	PEU_W01 – PEU_W02 PEU_U01 - PEU_U02 PEU_K01 – PEU_K02	Report evaluation
P1 (laboratory)	PEU_W01 – PEU_W02 PEU_U01 - PEU_U02 PEU_K01 – PEU_K02	Final mark consists of F4 (80%), and F1-F2 (20%)
P2 (classes)	PEU_W01 – PEU_W02	Final mark consists of F4 (60%), F3 (20%), and F1-F2 (20%)

	PEU_U01 - PEU_U02 PEU_K01 – PEU_K02	
P3 (lecture)	PEU_W01 – PEU_W02 PEU_U01 - PEU_U02	Written test

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Course material available at eportal and teachers' websites
- [2] Guastello S.G., Human factors engineering and ergonomics : a systems approach. Lawrence Erlbaum Associates, 2006.
- [3] Karwowski W. (ed.) at al., Human factors and ergonomics in consumer product design: methods and techniques, Boca Raton [etc.] : Taylor & Francis, 2011.
- Kroemer, Karl H. E., Ergonomics: how to design for ease and efficiency, Prentice Hall, 2001.
- [4] Lehto M. R., Introduction to human factors and ergonomics for engineers Boca Raton, FL, CRC Press, 2013.
- [5] McCauley-Bush P., Ergonomics: foundational principles, applications, and technologies, Boca Raton, FL, CRC Press, 2012.
- [6]
- [7] Salvendy, Gavriel (ed), Handbook of Human Factors and Ergonomics, John Wiley & Sons, 2006; electronic access

SECONDARY LITERATURE:

- [1] Articles available in databases (ProQuest, Google Scholar etc.)
- [2] McKeown C., Office ergonomics: practical applications, Boca Raton, FL, CRC Press, 2008.
- [3] Nato Symposium on Theory and Measurement of Mental Workload, Mental workload: its theory and measurement, New York, Springer Science+Business, 2014.
- [4] Norman D., The design of everyday things, Currency and Doubleday, 1990
- [5] Nowak E., Atlas antropometryczny populacji polskiej - dane do projektowania. The Anthropometric Atlas of Polish Population - Data for Design, IWP Warszawa, 2001
- [6] Torma-Krajewski J., Steiner Lisa J., Burgess-Limerick R., Ergonomics Processes - Implementation Guide and Tools for the Mining Industry, U.S. Department of Health and Human Services, CDC/NIOSH Office of Mine Safety and Health Research (electronic access)

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Katarzyna Jach, katarzyna.jach@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish Technologie informacyjne****Name of subject in English Information Technology****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management****Profile: academic****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code IEZ1148****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30		15		
Number of hours of total student workload (CNPS)	60		60		
Form of crediting	crediting with grade		crediting with grade		
For group of courses mark final course with (X)					
Number of ECTS points	2		2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4		0.7		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

None.

SUBJECT OBJECTIVES

C1 To acquire knowledge of the tools and methods used to support gathering, processing, analyzing, presenting data and their applications in organizations.

C2 To acquire knowledge of the IT fundamentals, functions and applications of modern IT devices and networks and software..

C3 To acquire knowledge of the threats, security and protecting data and the intellectual property.

C4 To acquire skills in text processing, gathering, analyzing, presenting business data.

C5 To acquire skills in using advanced software tools to support business operations.

SUBJECT LEARNING OUTCOMES

relating to knowledge:

PEU_W01 Knows the appropriate IT tools and methods of text processing and their applications in organizations.

PEU_W02 Knows the appropriate IT tools and methods of calculating, analyzing, visualization and presenting data and their applications in organizations.

PEU_W03 Knows the mechanisms of inter-application data exchange and task automation techniques.

PEU_W04 Understands the principles of operation and functions of the computer hardware and software.

PEU_W05 Has elementary knowledge of the computer networks and their applications in organizations.

PEU_W06 Has elementary knowledge of the network, data and intellectual property security and protection.

relating to skills:

PEU_U01 Can use appropriate functions of selected software tools to solve business text processing problems.

PEU_U02 Can use appropriate functions of selected software tools to solve business data calculation, analysis and visualization problems.

PEU_U03 Can use appropriate functions of selected software tools to solve business data integration and presentation problems.

PROGRAM CONTENT

Lectures		Number of hours
Lec 1	Introduction	1
Lec 2	Tools and methods of text processing	3
Lec 3	Advanced functions of text processing. Mail merge.	2
Lec 4	Tools and methods used to support data calculating, analysis and visualization.	6
Lec 5	Advanced functions and methods of data analysis in a spreadsheet	2
Lec 6	Tools and techniques of preparing and conducting a business presentation.	1
Lec 7	Exchanging data objects between applications – the OLE technique	1
Lec 8	Automating tasks in Microsoft Office	1
Lec 9	Overview of the IT fundamentals. Basic terms. Data vs. information. History, generations and types of computers.	2
Lec 10	The digital technology. Data encoding and binary system.	2
Lec 11	Operating systems and file systems. Virtual machines and remote computing.	1
Lec 12	Telecommunications, computer networks and the Internet. Web browsers.	2
Lec 13	Applications and cloud computing. E-commerce and hosting services.	1
Lec 14	Intellectual property and copyright issues. File sharing and computer piracy.	1
Lec 15	Network, systems and data security.	2
Lec 16	Grading, remarks and conclusions.	2
	Total hours	30
Laboratory		Number of hours
Lab 1	Introduction to the subject, the computer lab environment and safety rules.	1
Lab 2	Tools and methods of text processing.	4
Lab 3	Advanced functions and methods of data gathering, analysis and visualization in a spreadsheet.	6

Lab 4	Tools and techniques of preparing and conducting a business presentation (alternatively: cloud services)	2
Lab 5	Failed assignments retake and final remarks.	2
	Total hours	15

TEACHING TOOLS USED

- N1. Traditional lecture with overhead slides
N2. Demonstration of selected features and functions of software tools using a PC and an overhead projector
N3. Short movies demonstrating selected features of software tools
N4. Assignments to carry out individually in the computer lab
N5. Discussion of the achievements (causes of failures if applicable) during each presentation of students' results

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating learning outcomes achievement
F1	PEU_W01–PEU_W06	Answers to questions (written or at a computer)
F2	PEU_W01–PEU_W06	Lecture attendance (bonus credits)
F3	PEU_U01–PEU_U03	Assessment of the tasks carried out
F4	PEU_U01–PEU_U03	Assessment of the understanding of the solutions
F5	PEU_U01–PEU_U03	Lab class attendance
Lecture: P=F1+F2 Laboratory: P=F3+F4+F5		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Stair R., Reynolds G., Principles of Information Systems, Course Technology, 2013.
[2] Chaffey D., White G., Business information management: improving performance using information systems, Pearson Education, 2011.
[3] Stallings W., Case T., Business data communications: infrastructure, networking and security, Pearson, 2013.
[4] Kizza J.M., Guide to Computer Network Security, Springer, 2013.
[5] VanHuss S.H., Forde C.M., Woo D.L., Advanced Word Processing, South Western Educ Pub, 2010.
[6] Grus J., Thinking Spreadsheet: An Opinionated Guide to Problem Solving and Data Analysis Using Microsoft Excel (or Your Favorite Alternative), Brightwalton, 2011.

SECONDARY LITERATURE:

- [1] Weixel S., Wempen ., Learning Microsoft Office 2010. Advanced Student Edition, Prentice Hall 2010.
[2] Laudon K.C., Jane P. Laudon J.P., Management information systems: managing the digital firm, Pearson Education, 2012.
[3] Oates B.J., Researching information systems and computing, Sage, 2012.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Wiesław Dobrowolski, wieslaw.dobrowolski@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT DEPARTMENT OF
OPERATIONS RESEARCH, FINANCES AND COMPUTER APPLICATIONS

SUBJECT CARD

Name of subject in Polish: Technologia przetwarzania danych
Name of subject in English: Data processing technology
Main field of study (if applicable): Management
Specialization (if applicable): Organizational management
Level and form of studies: 1st level, full-time
Kind of subject: optional
Subject code: IEZ1208
Group of courses: NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15		30		
Number of hours of total student workload (CNPS)	60		60		
Form of crediting	crediting with grade		crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	2		2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7		0.7		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knows the functional and hardware structures of computers, the concept and the classification of computer software.
2. Capable of using computers, working in the operation system graphical environment using application programs.

SUBJECT OBJECTIVES

- C1 To get knowledge about relational data bases and ways of creating and using them in practice.
- C2 To acquire capability to create and use of relational database systems for getting information ad hoc for company management purposes.
- C3 To acquire social competences specific for the applications of database systems in management information systems.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01. Knows the relational data base structure and basic problems of their creating and using.

PEU_W02. Knows operations of the relational algebra as a basis of the relational database system functioning. in data gathering, memorizing and distributing.

PEU_W03. Knows a data base graphical user interface.

relating to skills:

PEU_U01 Capable to implement a simple relational data base system.

PEU_U02 Capable to get information ad hoc from the relational database system by defining in the data base graphical user interface data retrieval processes.

relating to social competences:

PEU_K01 Capable unaided to develop her/his knowledge and skills, to collaborate and to work in groups, ready to identify, analyze and solve problems in the area of the application of the database systems in management problems solving.

PEU_K02. Capable professionally to find and chose problem solving methods, to take the responsibility for them, pass over, convince and defend own views connecting with the application of the database systems in management problems solving.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Relational database technology. Data base management system. Relational data base and its structure. Update data operations. Integrity constraints.	2
Lec 2	Definition, application and implementation of operation on tables: selection, projection, equi-join. Superposition of selection, projection and equi-join operations.	2
Lec 3	Definition, application and implementation of operation on tables: set-theoretic operations: union, intersection, unsymmetrical difference, complement.	2
Lec 4	Definition, application and implementation of operation on tables: division and theta-join.	2
Lec 5	Interpretation of queries given in a natural language and planning of the data processing process. Optimizing of the data processing process.	2
Lec 6	Update anomalies. Table decomposition, schema decomposition.	2
Lec 7	Functional dependences between data in tables and their types. Use of the functional dependences in data base schema design.	2
Lec 8	Written test (P)	1
	Total hours	15
Classes		Number of hours
Cl 1		
Cl 2		
Cl 3		

CI 4		
..		
	Total hours	
Laboratory		Number of hours
Lab 1	Sample database management system and its functions; creating a data base; defining of the data base table structures.	2
Lab 2	Defining of the data properties, primary and additional keys. Applying of integrity constraints in the data base design and verifying the data base management system control functions.	2
Lab 3	Forms, their application, types and structure. Form implementation.	2
Lab 4	Practical test (F1).	2
Lab 5	Trading company data base case study. Tables and relationships. Primary and additional keys.	2
Lab 6	Select and make table queries. Defining queries. Query properties.	2
Lab 7	Defining of the one table search process. Implementation of the selection and projection operations.	2
Lab 8	Defining of the many tables search process. Defining of the virtual columns, data grouping, selecting and aggregating, aggregation functions.	2
Lab 9	Practical test (F2).	2
Lab 10	Defining of the tables union processes. Append queries. The set-theoretic union operation implementation.	2
Lab 11	Defining of the tables intersection processes. The set-theoretic intersection operation implementation.	2
Lab 12	Defining of the tables difference processes. Delete queries. The set-theoretic difference operation implementation.	2
Lab 13	Implementation of the complement operation. Reports, their application, types and structures. Report implementation.	2
Lab 14	Practical test (F3).	2
Lab 15	Summary. Credit.	2
	Total hours	30
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
Proj 4		
...		
	Total hours	
Seminar		Number of hours
Sem 1		

Sem 2		
Sem 3		
...		
	Total hours	

TEACHING TOOLS USED

- N1. Lecture
- N2. Multimedia presentation
- N3. Laboratory instruction
- N4. Instruction during classes
- N5. Attitude and behavior of the teacher
- N6. Workstation with graphical operation system MS Windows and MS Access
- N7. Practical test
- N8. Written test

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_W01 PEU_U01	Practical test
F2	PEU_W02 PEU_W03 PEU_U01 PEU_U02	Practical test
F3	PEU_W02 PEU_W03 PEU_U01 PEU_U02	Practical test
P	PEU_W01 PEU_W02 PEU_W03 PEU_K01(partialy) PEU_K02(partialy)	Written test

P lec = P

P lab = x*F1+y*F2+z*F3 (x+y+z=1)

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Jeffrey D. Ullman, Jennifer Widom. A first course in database systems. Upper Saddle River : Prentice Hall, 1997.
- [2] Witold Rekuć Laboratory instruction
- [3] Witold Rekuć Multimedia presentation

SECONDARY LITERATURE:

- [1] C. J. Date. An introduction to database systems. Boston [etc.] : Pearson Addison Wesley, cop. 2004

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Yash Chawla, yash.chawla@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish PROGRAMOWANIE APLIKACJI****Name of subject in English PROGRAMMING APPLICATIONS****Main field of study (if applicable): MANAGEMENT****Specialization (if applicable): ORGANIZATIONAL MANAGEMENT (OM)****Profile: academic / practical*****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code IEZ1211****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30		30		
Number of hours of total student workload (CNPS)	60		60		
Form of crediting	crediting with grade		crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	2		2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4		1.4		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knows the functional and hardware structures of computers, the concept and the classification of computer software.
2. Capable of using computers, working in the operation system graphical environment using application programs.

SUBJECT OBJECTIVES

C1. To acquire capability to create internet information systems and basic computer programs.

C2. To acquire social competencies specific for the applications of web services and application development in information systems in organizations.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01. Knows the rules for designing and developing websites and the basics of HTML and CSS.

PEU_W02. Knows the basic principles of design and development of computer programs and knows how to automate tasks using software applications and programming languages.

relating to skills:

PEU_U01. Capable to perform a simply information system.

PEU_U02. Capable to implement a simply computer subprogram and capable take advantage of the programming elements to extend the functionality of computer utility package.

relating to social competences:

PEU_K01. Capable unaided to develop her/his knowledge and skills, to collaborate and to work in groups, ready to identify, analyze and solve problems in the area of the use of Internet services and utilities in the organization

PEU_K02. Capable professionally to find and chose problem solving methods, to take the responsibility for them, pass over, convince and defend own views related to the application of the computer programming.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1-3	Internet information system. Create HTML documents.	5
Lec 3,4	Using CSS to create web pages.	3
Lec 5	Basic concepts of computer programming.	1
Lec 5	Creating and using macros.	1
Lec 6	Procedures and functions - defining and using.	2
Lec 7	Data types, variables and constants. Standard types. Algebraic expression: construction, types, valuation expressions. Basic instructions.	2
Lec 8-10	Structural instructions.	5
Lec 10,11	Structural types: table, string	3
Lec 12,13	Automating tasks and create and use forms.	4
Lec 14	Create and use a library. Object-oriented programming.	2
Lec 15	Summary.	2
	Total hours	30
Classes		Number of hours
	Total hours	
Laboratory		Number of hours
Lab 1-3	Create HTML documents	5
Lab 3,4	Creating a website using HTML and CSS.	3
Lab 5	Practical test (F1).	2
Lab 6	Automating tasks. Defining of the subroutines.	2
Lab 7-9	Using basic and structural instructions.	5
Lab 9,10	Structural types.	3

Lab 11	Practical test (F2).	2
Lab 12,13	Automating tasks with macros and subroutines, creating forms in the computer utility package.	4
Lab 14	Practical test (F3).	2
Lab 15	Summary. Credit.	2
	Total hours	30
Project		Number of hours
	Total hours	
Seminar		Number of hours
	Total hours	
TEACHING TOOLS USED		
<p>N1. Lecture. N2. Multimedia presentation. N3. Instruction during classes. N4. Workstation with graphical operation system MS Windows and web browser. N5. Workstation with graphical operation system MS Windows and MS Office / OpenOffice. N6. Practical test. N7. Written test.</p>		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_W01 PEU_U01	Practical test
F2	PEU_W02(partially) PEU_U02(partially)	Practical test
F3	PEU_W02(partially) PEU_U02(partially)	Practical test
P	PEU_W01 PEU_W02 PEU_K01(partially) PEU_K02(partially)	Written test
P lec = P P lab = F1+F2+F3 (according to scale)		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Freeman Er., Freeman El.: Head First HTML with CSS & XHTML.
- [2] Jelen B., Syrstad T.: VBA and Macros: Microsoft Excel.
- [3] Walkenbach J., Programming in VBA.
- [4] Knuth D.E.: The Art of Computer Programming.

SECONDARY LITERATURE:

- [1] Aho A.V., Ullman J.D., Hopcroft J.E.: Data Structures and Algorithms.
- [2] Wirth N.: Algorithms and Data Structures.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Jerzy Pieronek, jerzy.pieronek@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish Badanie wymagań dotyczących systemów informacyjnych					
Name of subject in English Investigation of MIS requirements					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational management					
Profile: academic					
Level and form of studies: 1 st level full-time					
Kind of subject: optional					
Subject code IEZ1237					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	25	25			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	1	1			
including number of ECTS points for practical (P) classes		1			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic knowledge about the management essentials and organizational science.

SUBJECT OBJECTIVES

- C1 To understand the relations between information system and the enterprise.
- C2. To understand the role of requirements analysis in project of information system.
- C3. To use different techniques of gathering and documenting information requirements.
- C4. To acquire social competences specific for analyzing the management information systems and identifying information requirements for such systems.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 Student knows selected methods of organization information systems identification and analysis.

PEU_W02 – Student knows selected methods of gathering the information requirements for planning computer systems for the organization.

relating to skills:

PEU_U01 – Student can identify and analyze the needs of organization information systems users.

PEU_U02 – Student knows how to gather the information from users.

PEU_U03 – Student knows how to analyze the decisions and documents in the organization.

relating to social competences:

PEU_K01 – Student can search for and choose professional methods to solve problems, take responsibility for their choices, communicate, persuade and defend their views related to the analysis of information systems.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Information about the content, the crediting rules etc.	1
Lec 2	Organization and its information system: Information system definition. Elements that determine information requirements of information systems users: organizational goals, problems and critical success factors identification.	2
Lec 3	Classification of computer systems. Information requirements analysis in project management.	2
Lec 4	Planning and conducting business interviewing/survey	2
Lec 5	Document analysis: identification method of information requirements.	2
Lec 6	Decision making processes as sources of dynamic (semi- or non-measurable) requirements.	2
Lec 7	Information requirements engineering methodology.	1
Lec 7	Written test (P)	1
Lec 8	Other techniques for gathering and analyzing information requirements: brainstorming, prototyping, interface analysis, etc.	1
Lec 8	Retake	1
	Total hours	15
Classes		Number of hours
Cl 1	Information about content, crediting rules etc.	1
Cl 2	Information system environment (organization).	2
Cl 3	Information subsystems identification. Processes in the subsystems. Identification of problems with information flow.	2
Cl 4	Preparing information investigation plan for subsystem.	2
Cl 5	Questionnaires. Documents analysis	2
Cl 6	Analysis of organizational documents.	2
Cl 7	Decision tables. Analysis of organizational decisions	2
Cl 8	.Grading and retakes	2
	Total hours	15

Laboratory		Number of hours
Lab 1		
...		
	Total hours	
Project		Number of hours
Proj 1		
...		
	Total hours	
Seminar		Number of hours
Sem 1		
...		
	Total hours	
TEACHING TOOLS USED		
N1. Lecture N2. Multimedia presentation N3. Attitude and behavior of the teacher N4. Group discussion during classes N5. Home works N6. Written test		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_W01 PEU_W02	Written test
F2	PEU_W01 PEU_W02 PEU_U01 PEU_U02 PEU_U03 PEU_K01(partialy)	Evaluation of home works and class works
F3	PEU_U01 PEU_U02 PEU_U03 PEU_K01(partialy)	Evaluation of the group discussion during classes
F4	PEU_U01 PEU_U02 PEU_U03 PEU_K01(partialy)	Activity
PL = F1,		

PCI = F2+F3+F4 according to the scale

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

[1] Kendall, K.E., Kendall, J.E., Systems Analysis and Design, 9th ed., Pearson, 2013.

[2] Robertson S., Robertson J., Mastering the Requirements Process: Getting Requirements Right, 3rd ed., Addison-Wesley, Boston 2012

SECONDARY LITERATURE:

[1] Hickman L., Longman C., Business Interviewing, Addison-Wesley Publishing Co., 1994.

[2] DeMarco T. et al., Adrenaline Junkies and Template Zombies, Dorset House, New York, 2008

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish Metody Modelowania SIZ****Name of subject in English Methods of MIS Modeling****Main field of study (if applicable):** Management**Specialization (if applicable):** Organizational Management**Profile:** academic**Level and form of studies:** 1st level, full-time**Kind of subject:** optional**Subject code** IEZ1238**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15		15		
Number of hours of total student workload (CNPS)	25		25		
Form of crediting	crediting with grade		crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	1		1		
including number of ECTS points for practical (P) classes			1		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7		0.7		

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knowledge of the information system of the organization
2. Basic knowledge and skills of the computer using.

SUBJECT OBJECTIVES

C1 Getting knowledge on skills building models of management information systems in different functional areas of the organization.

C2 Getting the skills to apply the right tools for computer-aided modeling of management information systems.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 - student has ordered knowledge of the methods and techniques of building models of systems management functions with the structural approach.

PEU_W02 - student has ordered knowledge of the methods and techniques of building data models of information systems management at the structural approach.

relating to skills:

PEU_U01 - student can create a models of simple computer systems to support management solutions to common problems and issues in the various functional areas of the organization.

PEU_U02 - student can use software tools to support the design of computer systems models. relating to social competences:

PROGRAMME CONTENT		
Lectures		Number of hours
Lec 1	Introduction. Repository.	2
Lec 2	Business function modeling -FHD.	2
Lec 3	Function dependency and events – FDD.	2
Lec 4	Basic rules and definitions for entities, relationships, attributes. Multiple and recursive relationship, generalization, aggregation.	2
Lec 5	Entity Relational Model – ERD. Classical structures and generic patterns.	1
Lec 6	Consistence and completeness of the structured model checking methods. CRUD method.	2
Lec 7	Rules of the Transformation from ERD to logical relational database design.	2
Lec 8	Test	2
	Total hours	15
Classes		Number of hours
Cl 1		
Cl 2		
Cl 3		
Cl 4		
..		
	Total hours	
Laboratory		Number of hours
Lab 1	Analysis of case study “Hydraulics”. Preparing new one case study (business story) about the customer business needs from organization perspective. Create a repository with important terms	2
Lab 2	The functional areas extraction. Decomposition and grouping functions (FHD).	2
Lab 3	Analysis of the interdependencies between functions and the events – process model building (FDD).	2
Lab 4	Analysis of information needs: an entity type identification. Analysis of the business relationship – definition and representation (ERD)	2
Lab 5	ERD cont. Consistency and completeness checking.	2
Lab 6	Using the basic technique of logical relational database design	2
Lab 7	Analysis of rules and details of business functions – the usage of an entity type by a function (CRUD method).	2
Lab 8	Signing indexes	1
	Total hours	15
Project		Number of hours
Proj 1		

Proj 2		
Proj 3		
Proj 4		
...		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
...		
	Total hours	
TEACHING TOOLS USED		
N1. computer N2. projector N3. Ms PowerPoint, Ms Word, Ms Visio N4. blackboard or whiteboard		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_W01, PEU_U01	report
F2	PEU_W02, PEU_U02	report
P	PEU_W01, PEU_W02	test
PLab = F1+F2 PLec = P		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Barker R., CASE*Method – Entity Relationship Modelling, Addison-Wesley PC , 1989
 [2] Barker R., Longman C., CASE*Method – Function and Process Modelling, Addison-Wesley PC , 1989

SECONDARY LITERATURE:

- [1] Gane C., Sarson T., Structured Systems Analysis - Tools and Techniques, Prentice-Hall, Englewood Cliffs, New Jersey, 1989
 [2] Robertson S. and J., Mastering the Requirements Process, Addison-Wesley, 2006

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish** Analiza systemów informacyjnych**Name of subject in English** Information Systems Analysis**Main field of study (if applicable):** Management**Specialization (if applicable):** Organizational Management**Profile:** academic**Level and form of studies:** 1st level, full-time**Kind of subject:** optional**Subject code** IEZ1239**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15			15	
Number of hours of total student workload (CNPS)	25			25	
Form of crediting	crediting with grade			crediting with grade	
For group of courses mark (X) final course					
Number of ECTS points	1			1	
including number of ECTS points for practical classes (P)				1	
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7			0.7	

*delete as not necessary

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic knowledge about the management essentials and information and communication technologies (ICT).

SUBJECT OBJECTIVES

C1 To provide an organizational context and background for the information system.

C2 To introduce the concepts of information systems, methods of their analysis and tools used for this purpose.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 Knows and understands the business context of information system.

PEU_W02 Knows the methods of information requirements gathering

PEU_W03 Knows a typical Information Systems Development Life Cycle (SDLC) and principles of information strategy planning.

relating to skills:

PEU_U01 Can identify, analyse and solve problems related to information systems.

PEU_U02 Can gather and analyse the information requirements for systems and state the direction of their changes.
relating to social competences:
PEU_K01 – Can choose professional methods to solve problems, take responsibility for their choices, communicate, persuade and defend her/his opinion related to the analysis of information systems.

PROGRAMME CONTENT

Lecture		Number of hours
Lec 1	Information about content, crediting rules, etc.	1
Lec 2	Introduction to information systems. Components of information system and its business context.	2
Lec 3	Information Systems Development Life Cycles (SDLC) models. Information system architecture.	2
Lec 4	Alternative perspectives of information system analysis. Different types of requirements.	2
Lec 5	Methods of information requirements gathering.	2
Lec 6	Information requirements analysis and specification process.	2
Lec 7	Information strategy planning.	2
Lec 8	Test	2
	Total hours	15
Classes		Number of hours
Cl 1		
Cl 2		
Cl 3		
Cl 4		
..		
	Total hours	
Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
Lab 4		
Lab 5		
...		
	Total hours	
Project		Number of hours
Proj 1	Information about content, crediting rules, etc.	1
Proj 2	Information system components identification for organisations. Information system analysis from the stakeholder and analytics perspective.	2

Proj 3	Project for system requirements identification in the organisations.	2
Proj 4	Development of the tools for information requirements gathering.	2
Proj 5	Requirements analysis.	2
Proj 6	Requirements specification.	2
Proj 7	Information strategy planning.	2
Proj 8	Project outcomes presentation.	2
	Total hours	15
Seminar		Number of hours
Semin 1		
Semin 2		
Semin 3		
...		
	Total hours	
TEACHING TOOLS USED		
N1. Lecture with multimedia presentations N2. Acceptance test N3. Student's home work N4. Discussion during project N5. Project outcomes presentation		

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming during semester), P – concluding (at semester end)	Learning outcomes code	Way of evaluating learning outcomes achievement
F1	PEU_W01-PEU_W03	Acceptance test
F2	PEU_U01, PEU_U02, PEU_K01	Preparation for each task
F3	PEU_K01	Project outcomes presentation
PL(lecture) = F1 PP(project) = x*F2+y*F3 (x+y = 1)		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Kendall, K.E., Kendall, J.E., Systems Analysis & Design, 10th ed., Pearson, 2019.
[2] Chaffey, D., White, D., Business Information Management, 2nd ed., Pearson Education, 2011.

SECONDARY LITERATURE:

- [1] Cadle J., Paul D., Turner P., Business Analysis Techniques, British Informatics Society, Swindon, 2010
[2] Maciaszek, L., Requirements Analysis and Systems Design, 3rd ed. Pearson Education, 2007.
[3] Stair R., Reynolds G., Principles of Information Systems, Course Technology, 2013.

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish** Przedsięwzięcia informatyczne w zarządzaniu**Name of subject in English** Software Project in Management**Main field of study (if applicable):** Management**Specialization (if applicable):** Organizational Management**Profile:** academic**Level and form of studies:** 1st level, full-time studies**Kind of subject:** optional**Subject code** IEZ1240**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30		15		
Number of hours of total student workload (CNPS)	60		60		
Form of crediting	crediting with grade		crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	2		2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4		0.7		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knowledge of methods of analysis and modeling of management information systems

SUBJECT OBJECTIVES

- O1 Obtaining detailed knowledge of selected traditional and modern methods of project management.
- O2. Gaining knowledge of software sizing and estimation of expenditures.
- O3. Acquire the skills of computer-aided project management.
- O4. Acquiring the ability of computer-aided modeling of computer application.

SUBJECT LEARNING OUTCOMES

relating to knowledge:

PEU_W01 – obtain the knowledge of the methods of planning and control of the project computer.

PEU_W02 - knows the possibility of using tools in project management.

PEU_W03 - knows the basic modeling of management information systems to support management solutions to common problems and issues in the particular areas of functional organization.

PEU_W04 – obtain the knowledge of the measurement of the size and complexity of software relating to skills:

PEU_U01 - knows how to develop a WBS structure and timetable of the project information.

PEU_U02 - is able to create using the tools of computer models of simple applications.

PEU_U03 - can use the tools to support the planning and monitoring of the the project.

PEU_U04 - knows how to determine the size and complexity of the software, as well as estimate the amount of expenditures.

PEU_U05 - can present adopted and developed solutions, participate in discussions and justify solutions developed

PROGRAMME CONTENT

Form of classes - lecture		Number of hours
Lec 1	Introduction to the project management. Layers and management roles in the project. WBS.	2
Lec 2	Models of the life cycle of an IT project. Key products stages information enterprises.	2
Lec 3	The starting stage of the project. Critical success factors of the project	2
Lec 4	Planning of information enterprise: CPM, CCS. Control of the project information (using EVM)	2
Lec 5	Tools to support project management - MS Project	2
Lec 6	Aspects of computer application design: the database design data, the application menu	2
Lec 7	Size and complexity metrics of the software	2
Lec 8	FP and UCP methods- examples of applications	2
Lec 9	Project expenditure estimation methods Part 1	2
Lec 10	Project expenditure estimation methods Part 2	2
Lec 11	Change in project management. Communication and documentation of the project.	2
Lec 12	Traditional methodologies and standards in the management of IT projects (PMI, Prince, RUP, CMM model, ISO 9000, IEEE)	2
Lec 13	Adaptive and agile methodologies (Crystal, XP, Scrum,)	2
Lec 14	Attributes and models of software quality	2
Lec 15	Assessment	2
	Total hours	30

Form of classes - class		Number of hours
Cl 1		
Cl 2		
Cl 3		
	Total hours	

Form of classes - laboratory		Number of hours
Lab1	Establish the topic of the work and the range of applications. Presentation of computer-aided modeling and management application tools	2
Lab2	Building detailed models (users' needs)	2
Lab3	Preparing the schedule. First checkpoint	2
Lab4	EV method. Second checkpoint	2
Lab5	Verification of the model - development of DFD. Calculation of size of applications (FP method). Third checkpoint	2
Lab6	Project development and application report. The creation of RDB. 4 th checkpoint	2
Lab7	Presentation	2
Lab8	Summary, Assessment	2
	Total hours	15

Form of classes - project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	

Form of classes – seminar		Number of hours
Sem1		
Sem2		
Sem3		
	Total hours	

TEACHING TOOLS USED
N1. computer N2. multimedia projector N3. PC utility applications: Ms PowerPoint, Ms Word, Ms Excel, Ms Access, Ms Visio, Ms Project N4. blackboard

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_U02	report
F2	PEU_U01	report

F3	PEU_U02, PEU_U03, PEU_U04	report
F4	PEU_U03, PEU_U05	report
P1	PEU_W01, PEU_W02, PEU_W03, PEU_W04	test
PW (lecture) = P1		
PL (laboratory) = F1+F2+F3+F4, evaluation according to a spot marking scale		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Schwalbe K., Managing Information Technology Projects, CENGAGE Learning
- [2] Cockburn A., Agile Software Development, McGraw-Hill
- [3] Capers Jones, Applied software measurement - assuring productivity and quality, McGraw-Hill

SECONDARY LITERATURE:

- [1] Hp.Clements, R.Kazman, M.Klein., Evaluating software architectures - methods and case studies, Addison-Wesley
- [2] Garmus D., Herron D., Function Point Analysis, Addison-Wesley 2001
- [3] Womack S., Jones D., Lean thinking., ProdPress 2008

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish Informatyczne narzędzia zarządzania projektami					
Name of subject in English IT Tools in Project Management					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management					
Profile: academic					
Level and form of studies: 1st level studies, full-time studies					
Kind of subject: optional					
Subject code IEZ1241					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30		15		
Number of hours of total student workload (CNPS)	60		60		
Form of crediting	crediting with grade		crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	2		2		
including number of ECTS points for practical classes (P)			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4		0.7		

*delete as not necessary

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knowledge of project management methods.
2. Knowledge of methods of analysis and modeling of management information systems.

SUBJECT OBJECTIVES

- C1 Knowledge of the functionality of traditional and modern IT project management tools.
 C2 Knowledge of the principles of using tools and ways to assess their usefulness.
 C3 Ability to manage project schedule using IT tools.
 C4 Teamwork skills.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 knows the basic engineering techniques, methods and technologies useful for managing IT projects.

PEU_W02 knows the functionality of IT tools used in solving IT project management problems.

relating to skills:

PEU_U01 is able to use information and communication techniques appropriate to carry out tasks typical of management information systems implementation

PEU_U02 is able to assess the usefulness and apply the selected IT tool to solve IT project management problems

PEU_U03 is able to identify and formulate the specification of the simple task of managing the implementation of management information systems.

relating to social competences:

PEU_K01 is able to interact and work in a team, assuming different roles.

PROGRAMME CONTENT

Lecture		Number of hours
Lec 1	Discussion of the purpose and structure of the lecture. Defining requirements. Organizational matters. Basic concepts in IT project management.	2
Lec 2	Traditional and modern methods in IT project management.	2
Lec 3	Portfolio / project management.	2
Lec 4	Classification of IT tools. Functionality of computer-aided project management tools.	2
Lec 5-6	Selected tools to support project management.	4
Lec 7	Criteria for choosing methods and tools for project management.	2
Lec 8	Defining the project plan: scope, resources, cost and quality.	2
Lec 9	Controlling of project realization	2
Lec 10-11	Estimating the complexity of the project	4
Lec 12	Contradiction and change management.	2
Lec 13	Internal and external communication.	2
Lec 14	Successes and failures of IT projects	2
Lec 15	Assessment	2
	Total hours	30
Laboratory		Number of hours
Lab 1	Determining the subject of work and organization of the team	1
Lab 2	Defining the project. Conditions for adapting to the needs of the project environment.	2
Lab 3	Choice of project management methodology and tools.	2
Lab 4	Elements of the project management plan. Project WBS structure (scope). Milestone No. 1	2
Lab 5	Calendar. Schedule construction (milestones, resource allocation, baseline). Defining a baseline. Milestone No. 2.	2
Lab 6	Network Diagram. Critical path / critical chain. Resource load reporting.	2
Lab 7	Recording of actual values. Control of progress. Correcting the schedule. Milestone 3.	2
Lab 8	Flashback meeting. Team productivity / speed indicator. Milestone No. 4. Final assessment.	2
	Total hours	15

TEACHING TOOLS USED

N1. computer
 N2. multimedia projector
 N3. PC utility applications: PowerPoint, Word, Excel, Project
 N4. blackboard

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming during semester), P – concluding (at semester end)	Learning outcomes code	Way of evaluating learning outcomes achievement
F1	PEU_U01 PEU_U02 PEU_K01	report
F2	PEU_U01 PEU_U02 PEU_U03 PEU_K01	report
F3	PEU_U02 PEU_K01	report
F4	PEU_U02 PEU_K01	report
F5	PEU_W01	test
F6	PEU_W02	test
PW (lecture) = (F5 + F6)/2, evaluation according to a spot marking scale		
PL (laboratory) = F1+F2+F3+F4, evaluation according to a spot marking scale		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Chatfield C., Johnson T., Microsoft Project, Krok po kroku, APN Promise 2013
- [2] Kompendium wiedzy o zarządzaniu projektami, PMBOK Guide, 2000 Edition – przekład, MT&DC 2003
- [3] PichlerR., Zarządzanie projektami ze Scrumem, Helion 2014
- [4] Snedaker S., Zarządzanie projektami IT, Helion 2007
- [5] Wilczewski S., Ms Project 2013 i Ms Project Server 2013: efektywne zarządzanie projektem i portfelem projektów, Helion 2009
- [6] Wilczewski S., Ms Project 2007: ćwiczenia praktyczne, Helion 2014

SECONDARY LITERATURE:

- [1] Bradley K., Podstawy metodyki PRINCE2, CRM S.A., W-wa 2005.
- [2] Schwaber K., Sprawne zarządzanie projektami metodą Scrum, Microsoft Press 2005

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FACULTY Computer Science and Management

SUBJECT CARD**Name of subject in Polish Systemy informatyczne w zarządzaniu****Name of subject in English Information Systems in Management****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management****Profile: academic****Level and form of studies: 1st level, full-time studies****Kind of subject: obligatory****Subject code IEZ1242****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30		15		
Number of hours of total student workload (CNPS)	60		60		
Form of crediting	crediting with grade		crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	2		2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4		0.7		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

Knowledge about:

1. information systems,
2. theory of organisation and management
3. essentials of enterprise management

SUBJECT OBJECTIVES

C1 Knowledge of management information systems (MIS)

C2 Ability to use MIS

C3 Ability to selection of MIS

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 – knowledge of MIS definitions and classifications

PEU_W02 – knowledge of basic functions in business areas of MIS

PEU_W03 – knowledge of MIS history and new approaches

PEU_W04 – knowledge of rules of selecting MIS

relating to skills:

PEU_U01 – ability to classify a MIS

PEU_U02 – ability to analyze functionality of MIS system
 PEU_U03 – ability to model business process
 PEU_U04 – ability to prepare and present own approach to the MIS implementation

relating to social competences:

PEU_K01 – ability to searching for information and analyzing
 PEU_K02 – developing ability to think independently and creatively
 PEU_K03 – understand the importance of business requirements in the design and implementation of information systems
 PEU_K04 – developing entrepreneurial thinking
 PEU_K05 – developing the skills of group working

PROGRAMME CONTENT

Form of classes - lecture		Number of hours
Lec 1	Introduction	2
Lec 2	Basics of management information systems	2
Lec 3	Classifications of information systems	2
Lec 4	Financial functions in MIS	2
Lec 5	Logistics functions in MIS	2
Lec 6	Productionl functions in MIS	2
Lec 7	CRM and PRM systems	2
Lec 8	BI systmes	2
Lec 9	WFM systems	2
Lec 10	Introduction to implementation of MIS	2
Lec 11	The proces of implementation	2
Lec 12	Methods of MIS selection	2
Lec 13	Methods of describing organization’s requirements	2
Lec 14	Business process modeling in the organization	2
Lec 15	Conclusion	2
	Total hours	30
Form of classes - class		Number of hours
Form of classes - laboratory		Number of hours
Lab 1	Introduction	1
Lab 2	Organization’s requirements	2
Lab 3	Description of selected MIS	2
Lab 4	Analysis of functionality of MIS	2
Lab 5	Selection criteria	2
Lab 6	Comparasion of selected MIS	2
Lab 7	Selection of the best MIS for the organization	2
Lab 8	Conlusion	2
	Total hours	15

TEACHING TOOLS USED

- N1. Traditional lecture
 N2. Using MIS tool
 N3. Work with the teacher
 N4. Self-learning – for labs
 N5. Self-learning – for lectures

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_W01 – PEU_W04 PEU_U01 - PEU_U02 PEU_K01 PEU_K03	Test
F2	PEU_U02 –PEU_U04 PEU_K01 PEU_K02 PEU_K04 PEU_K05	Evaluation of the lab work

$P = F1 + F2$

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] James O'Brien, George Marakas: Management Information Systems, McGraw-Hill/Irwin, 2010
 [2] Ken Laudon, Jane Laudon: Management Information Systems, Prentice Hall; 11 edition, 2009
 [3] R. Kelly Rainer, Hugh J. Watson: Management Information Systems, Moving Business Forward, Wiley, 2012

SECONDARY LITERATURE:

- [1] Computerworld magazine

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish: Matematyka****Name of subject in English: Mathematics 1 for Economists****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management****Profile: academic****Level and form of studies: first level, full-time****Type of subject: obligatory****Subject code: MAT1448****Group of courses: YES**

	Lecture	Exercise class	Laboratory	Project	Seminar
Number of hours of organized University classes (ZZU)	30	30			
Number of hours of total student workload (CNPS)	270				
Form of crediting	Examination				
For a group of courses mark the final course (X)	X				
Number of ECTS points	9				
including number of ECTS points for practical (P) classes	4				
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	7				

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. High school graduation at basic level.

SUBJECT OBJECTIVES

- C1. Acquiring basic knowledge related to solving equations and inequalities involving elementary functions such as polynomials and rational functions, exponential and logarithmic functions.
- C2. Study of the basic concepts of algebra with the purpose of solving systems of linear equations.
- C3. Learning the basic concepts, theorems, methods and applications of calculus of functions of one and two variables .
- C4. Constructing mathematical models with the aim of applications in economy and technology.

SUBJECT EDUCATIONAL EFFECTS

Relating to knowledge, the student:

PEU_W01 possesses basic knowledge essential for solving equations and inequalities involving absolute value, polynomials, and rational, exponential and logarithmic functions

PEU_W02 possesses elementary knowledge essential for solving systems of linear equations

PEU_W03 knows basic properties of elementary functions and basics of differential calculus and integral calculus of function of one variable

PEU_W04 possesses basic knowledge of calculus of functions of two variables.

Relating to skills, the student:

PEU_U01 is capable of solving equations and inequalities involving absolute value, polynomials, and rational, exponential and logarithmic functions

PEU_U02 is capable of solving systems of linear equations

PEU_U03 can calculate limits of sequences and functions, can determine asymptotes of functions, can calculate derivatives of functions and interpret calculation results, can calculate and interpret indefinite and definite integrals

PEU_U04 is capable of finding extrema of functions of two variables.

Relating to social competences, the student:

PEU_K01 can, without assistance, search for necessary information in the literature

PEU_K02 understands the need for systematic and independent work on mastery of course material.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Absolute value; equations and inequalities. Geometric interpretation. Economy based examples.	2
Lec 2	Polynomials and rational functions; equations and inequalities. Graphical interpretation.	2
Lec 3	Exponential and logarithmic functions. Natural logarithm. Graphs of functions. Simplifying algebraic expressions involving exponentials and logarithms. Economy based examples.	2
Lec 4	Systems of linear equations. Gaussian elimination method.	4
Lec 5	Limits of sequences, basic properties of limits. Applications of a geometric sequence and arithmetic sequence in economy.	2
Lec 6	Limit of a function. Continuity. Asymptotes. Examples of applications in economy.	2
Lec 7	The derivative of a function; geometric and physical interpretation. Rules of differentiation. Chain rule. Higher order derivatives. Applications in economy.	2
Lec 8	Intervals of monotonicity of a function. Local and global extrema. Intervals of convexity and concavity. Study of graphs of functions.	4
Lec 9	Indefinite integral, definition and basic properties. Indefinite integral of certain classes of functions, including polynomials and exponential functions. Integration by parts and by substitution.	2
Lec 10	Definite integral; definition and basic properties. Geometric interpretation. Connection between definite and indefinite integral.	2
Lec 11	Applications of integral calculus. Area of a flat region.	2
Lec 12	Functions of two or more variables. Partial derivatives; geometrical interpretation. Partial derivatives of composite functions. Local extrema of functions of two variables. Applications in economy.	4
	Total hours	30

Classes		Number of hours
Ex 1	Absolute value: solving equations and inequalities.	2
Ex 2	Decomposition of a polynomial into irreducible components. Solving polynomial and rational (functions) equations and inequalities.	2
Ex 3	Equations and inequalities with exponential and logarithmic functions.	2
Ex 4	Finding inverse matrices. Solving systems of linear equations using matricial methods.	4
Ex 5	Computing proper and improper limits of sequences.	2
Ex 6	Computing proper and improper limits of functions. Asymptotes. Verifying continuity of functions.	2
Ex 7	Computing derivatives of various functions using rules of differentiation. Tangent line to the graph.	2
Ex 8	Determining local and global extrema of a function. Examination of a function.	4
Ex 9	Indefinite integral of elementary functions, including polynomials and exponentials. Integration by parts and by substitution.	2
Ex 10	Calculating definite integrals. Area of a flat region as an application of definite integral.	2
Ex 11	Calculating partial derivatives. Finding local and global extrema of functions of two variables.	2
Ex 12	Tests	2
	Total hours	30

TEACHING TOOLS USED

- N1. Lecture – traditional method
N2. Exercise class – traditional method (problems sessions and discussion)
N3. Office hours
N4. Student's individual work – preparation for the classes

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation F – forming (during semester), P – final (end of semester)	Educational effect number	Way of evaluating educational effect achievement
F - Ex	PEU_U01-PEU_U04 PEU_K01-PEU_K02	oral presentations, quizzes, tests
F - Lec	PEU_W01-PEU_W04 PEU_K02	Exam
P	PEU_U01-PEU_U04 PEU_W01-PEU_W04 PEU_K01-PEU_K02	Rules set by the lecturer

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] F. Ayres, E. Mendelson: Calculus, 5th edition, McGraw Hill, 2009.
- [2] T. Bednarski, Elementy matematyki w naukach ekonomicznych, Oficyna Ekonomiczna, Kraków 2004.
- [3] J. Banaś, Podstawy matematyki dla ekonomistów, WNT, Warszawa 2005.
- [4] M. Zakrzewski, Markowe wykłady z matematyki. Analiza. Oficyna Wydawnicza GiS, Wrocław 2013.
- [5] T. Jurlewicz, Z. Skoczylas, Algebra liniowa 1. Definicje, twierdzenia, wzory, Oficyna Wydawnicza GiS, Wrocław 2007.
- [6] T. Jurlewicz, Z. Skoczylas, Algebra liniowa 1. Przykłady i zadania, Oficyna Wydawnicza GiS, Wrocław 2007.
- [7] M. Gewert, Z. Skoczylas, Analiza matematyczna 1. Definicje, twierdzenia, wzory, Oficyna Wydawnicza GiS, Wrocław 2007.
- [8] M. Gewert, Z. Skoczylas, Analiza matematyczna 1. Przykłady i zadania, Oficyna Wydawnicza GiS, Wrocław 2007.
- [9] Mike Rosser, Basic mathematics for economists, Second edition, Routledge, 2003.

SECONDARY LITERATURE:

- [1] A. C. Chiang, Podstawy ekonomii matematycznej, PWE, Warszawa 1994.
- [2] M. Dobija, W. Smaga, Podstawy matematyki finansowej i ubezpieczeniowej, PWN, Warszawa-Kraków 1995.
- [3] A. Ostoja-Ostaszewski, Matematyka w ekonomii-modele i metody 1. Elementarny rachunek różniczkowy, PWN, Warszawa 1996.
- [4] A. Ostoja-Ostaszewski, Matematyka w ekonomii-modele i metody 1. Algebra elementarna, PWN, Warszawa 1996

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

dr hab. Maciej Wilczyński (Maciej.Wilczynski@pwr.edu.pl)

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Wydziałowa komisja programowa ds. kursów ogólnouczelnianych

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish: Statystyka Opisowa****Name of subject in English: Descriptive Statistics****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management****Profile: academic****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code MAZ1130****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	120	60			
Form of crediting	Examination	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	4	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knowledge of mathematical analysis: extremes of functions, differential and integral calculus of functions with a single variable.
2. Knowledge of basic matrix algebra
3. Ability to use computer packages for data management

SUBJECT OBJECTIVES

- C1 To gain knowledge of the fundamentals of probability theory
 C2 To learn to use common methods of describing data
 C3 To be able to carry out statistical analysis based on empirical data
 C4 Appreciation of the potential of probabilistic models when events have uncertain outcomes

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 The student will know the basic tools of descriptive statistics and understand the fundamental concepts of probability theory.

relating to skills:

PEU_U01 The student will be able to analyze statistical data and interpret the results of such analysis.

PEU_U02 The student will be able to construct simple probabilistic models useful in the

management process
 PEU_U03 The student will understand the need to consider appropriate probabilistic models in the analysis of statistical data.

relating to social competences:
 PEU_K01 The student will be able to make a critical appraisal of a probabilistic model describing simple socio-economic processes.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	General population, sample, representative sample, random sample, precision and bias	2
Lec 2	Graphical methods of describing samples. Measures of centrality and dispersion. Skewness.	2
Lec 3-4	Frequency interpretation of probability and axioms of probability. Conditional probability. Probability trees. Bayes' theorems. Independence of events	4
Lec 5-6	Discrete random variables and their distributions	4
Lec 7	Continuous random variables and their distributions	2
Lec 8	The normal distribution	2
Lec 9-10	The central limit theorem and its applications. Distribution of the sample mean and proportion. Normal approximation to the binomial distribution	4
Lec 11	Joint distributions of two discrete random variables. Correlation coefficient	2
Lec 12	Conditional distributions. Probabilistic regression	2
Lec 13-14	Estimation of the parameters of a distribution. Method of moments and maximum likelihood estimation.	4
Lec 15	Interval estimation. Confidence intervals.	2
	Total hours	30

Classes		Number of hours
Cl 1	Types of variable. Sampling. Precision and bias.	1
Cl 2	Graphical and numerical methods of describing samples	2
Cl 3	Conditional probability. Probability trees. Bayes' theorems. Independence of events	2
Cl 4	Discrete distributions: 0-1, binomial, Poisson and the applications	2
Cl 5	Continuous distributions: uniform, exponential, Pareto, normal distribution and their applications	2
Cl 6	Joint distributions. Correlation coefficient and its interpretation. Conditional distributions	2
Cl 7	Point estimation (method of moments and maximum likelihood estimation) and confidence intervals.	2
Cl 8	End of course test	2
	Total hours	15

TEACHING TOOLS USED

- N1. Lists of exercises for the problems classes
- N2. Lists of additional exercises for studying

N3. Examples of applications in everyday problems, management and economics. Presentation of data in the media.

N4. Written test.

N5. Presentation of additional problems and applications

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end)	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_U01	Assessment of a report based on the numerical and graphical presentation of statistical data in the middle of the semester
F2	PEU_U02	Assessment of solutions to additional problems
F3	PEU_U03	Assessment of solutions to problems considered in the problems classes
F4	PEU_K01	Assessment of students' ability to independently apply concepts of probabilistic modelling
P1	PEU_W01	Written test
P2	PEU_U01	Written test

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

[1] Sinaj J. G. *Probability theory: an introductory course*. Springer-Verlag, Berlin

[2] Weiers R. M. *Introduction to business statistics*. Thompson Brooks/Coole, Belmont

[3] Kvanli A. H., Pavur R. J. And Guynes C. S. *Introduction to business statistics: a computer integrated, data analysis approach*. South-Western College Publishing, Cincinnati

SECONDARY LITERATURE:

[1] Ross S. M. *Introduction to probability and statistics for engineers and scientists*. Academic press, Burlingto.

[2] Lewis M. *Applied statistics for ecocomists*. Routledge, London.

[3] Wilcox R. R., Boca R. *Modern statistics for the social and behavioral sciences: a practical introduction*. CRC press, Raton, Fla.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

David Ramsey, david.ramsey@pwr.edu.pl

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish: Mathematical Economics					
Name of subject in English: Mathematical Economics					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management (OM)					
Profile: academic					
Level and form of studies: 1st level, full-time studies					
Kind of subject: obligatory					
Subject code: MAZ1146					
Group of courses: NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	120	60			
Form of crediting	Examination	crediting with grade			
For group of courses mark final course with (X)					
Number of ECTS points	4	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knowledge of exponential functions, basic calculus and probability theory.

SUBJECT OBJECTIVES

C1 Knowledge of mathematical methods and tools used in economics in the following areas

- C1.1 The theory of the change in value of money over time
- C1.2 The future expected lifetime of an individual and models of life insurance
- C1.3 Preferences, utility and expected utility
- C1.4 Theory of production and demand
- C1.5 Game theory

C2 The ability to interpret and analyze the following subject areas

- C2.1 The theory of the change in value of money over time
- C2.2 The future expected lifetime of an individual and models of life insurance
- C2.3 Preferences, utility and expected utility
- C2.4 Theory of production and demand
- C2.5 Game theory

SUBJECT LEARNING OUTCOMES

relating to knowledge:

PEU_W01 – broad knowledge of the application of mathematics to economics

PEU_W02 knowledge and application of methods of discounting the nominal value of money over time

PEU_W03 knowledge of the factors affecting the price of insurance premiums and ability to calculate simple life insurance premiums

PEU_W04 ability to apply mathematical theories relations to utility theory, decision making under uncertainty, theory of demand and supply

PEU_W05 understanding of the mathematical theory of conflict and cooperation (game theory) and application to the economic world

relating to skills:

PEU_U01 ability to use formal models and assess offers from financial institutions in the fields of investments, loans and mortgages

PEU_U02 ability to calculate the appropriate price of life insurance premiums based on an appropriate set of assumptions

PEU_U03 ability to use utility theory and decision theory to construct models of choice between a discrete set of options

PEU_U04 – can formulate decision problems, such as cost-benefit analysis, choice under uncertainty and choice under competition (game theory) and solve them

relating to social competences:

PEU_K01 ability to critically assess solutions to economic problems in everyday life and business and justify such assessments via the use of mathematical tools

PROGRAM CONTENT

Lectures		Number of hours
Lec 1	Simple and compound interest. Continuous compounding and regular capitalization. Annual and periodic interest rates	2
Lec 2	Inflation. Discounting. Annual and periodic discount rates. Investment and purchasing power	2
Lec 3	Loans and mortgages. Annuities	2
Lec 4	Cost-Benefit analysis. Bonds.	2
Lec 5	Mortality tables. Life insurance premiums. Short and long-term policies	2
Lec 6	Theory of demand. Elasticity of demand. Consumer surplus	2
Lec 7	Theory of supply. Types of market. Cost functions. Fixed, variable, marginal and average costs	2
Lec 8	Equilibrium between supply and demand in competitive and monopolistic markets	2
Lec 9	Taxation. Income tax. The effect of purchase taxes in competitive and monopolistic markets	2
Lec 10	Mathematical models of decision under uncertainty and risk	2
Lec 11	Utility theory. Optimisation of utility functions with a single variable in the face of risk. Optimisation of utility functions with two variables based on a budget constraint	2
Lec 12	Introduction to game theory. Constant-sum games and non-constant-sum games. Games in extensive form (decisions made in succession)	2
Lec 13	Games in matrix form (simultaneous moves). Minimax solutions. Mixed strategies	2

Lec 14	Pure and mixed Nash equilibria. Dominated strategies	2
Lec 15	Game theoretic models in economics. Cournot and Stackelberg models	2
	Total hours	30

Classes		Number of hours
Cl 1	Simple and compound interest. Continuous compounding and regular capitalization. Annual and periodic interest rates	1
Cl 2	Inflation. Discounting. Annual and periodic discount rates. Investment and purchasing power. Loans and mortgages. Annuities	2
Cl 3	Cost-Benefit analysis. Obligations. Mortality tables. Life insurance premiums. Short and long-term policies	2
Cl 4	Theory of demand. Elasticity of demand. Consumer surplus. Theory of supply. Cost functions. Fixed, variable, marginal and average costs	2
Cl 5	Equilibrium between supply and demand in competitive and monopolistic markets Income tax. The effect of purchase taxes in competitive and monopolistic markets	2
Cl 6	Decision making under uncertainty and risk. Optimisation of utility functions with a single variable in the face of risk. Optimisation of utility functions with two variables based on a budget constraint	2
Cl 7	Derivation of minimax solutions and Nash equilibria for matrix games and simple games in extensive form	2
Cl 8	End of term test	2
	Total hours	15

TEACHING TOOLS USED

- N1. Slide Presentations
N2. Step-by-step solutions of examples
N3. Set of exercises to be solved during the problems classes
N4. Set of exercises for individual study

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating learning outcomes achievement
F1	PEU_U01 – PEU_U04	Solution of problems during the tutorial
F2	PEU_U01 – PEU_U04	Written test
P	PEU_W01 – PEU_W05	Written test

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Wainwright K., Chiang A. (2005) *Fundamental Methods of Mathematical Economics*. McGraw-Hill/Irwin
- [2] Kellison S. G. (2008) *The Theory of Interest*, McGraw-Hill/Irwin
- [3] Durlauf S. N., Blume L. E. (2010) *Game Theory*. Palgrave MacMillan, Basingstoke.
- [4] Werner F., Sotskov Y. (2006) *Mathematics of Economics and Business*, Routledge

SECONDARY LITERATURE:

- [1] Bowers N. L., Gerber H. U., Hickman J. C., Jones D. A., Nesbitt C.J. (1997), *Actuarial Mathematics*, Society of Actuaries.
- [2] Taha H. (2017), *Operations Research: An Introduction*, Pearson

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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*delete if not necessary

Faculty of Computer Science and Management**SUBJECT CARD****Name of subject in Polish Prawo cywilne i handlowe****Name of subject in English Civil and commercial law****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management****Profile: academic****Level and form of studies: 1st full-time****Kind of subject: obligatory****Subject code PRZ1121****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	15			
Number of hours of total student workload (CNPS)	60	60			
Form of crediting	Written examination	Charging for the assessment			
For group of courses mark (X) final course					
Number of ECTS points	2	2			
including number of ECTS points for practical (P) classes		2			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knowledge bases rights

OBJECTIVES

C1 The object is to illustrate the importance of civil law and commercial in economic activity

C2 In the course courses explanation of the grounds of civil law and commercial, guided by the study within the scope and the future professional practice graduates

C3 In the course courses in detail the content of the general part on civil law, right in rem, the rights and obligations of commercial law

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 - it knows and it explains essence of modern change in marketing strategies and problems and challenges with development of (evolution of) information society valid , development of (evolution of) new communication technology and appearance new kind of consumer (proconsumers)

relating to skills:

PEU_U01 - it can identify, interpret and assess developments of our civilization, technological and cultural changes in organization and its surroundings and seize acquired knowledge to solving the problems of management and marketing in the organization

relating to social competences:

PEU_K01 - is aware of the need to develop their professional knowledge and skills. In the sciences of the organization and management. It can on its own develop the knowledge and improve skills.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	General characteristics of civil law. Source of civil law	2
Lec 2	The standards of civil law. The use of civil law. Natural persons. Legal Persons	2
Lec 3	Ownership and other rights in rem. Legal protection of intellectual	2
Lec 4	Commitments-the nature and nature legal obligations. Types of commitments. Agreement as a source commitments	2
Lec 5	The concept of commercial law and its source	2
Lec6	The economic activity-basic concepts statutory	2
Lec7	Commercial Companies personal and economic capital on the market	2
Lec8	Characteristics other major types of enterprises	2
Lec9	Cease existence legal business-bankruptcy procedures and remedial action	2
Lec10	Securities-types and characteristics	2
Lec11	Legal protection fair competition in economic activity	2
Lec12	Judicial settlement of economic affairs	2
Lec13	The legal basis of the business environment in the European Union	2
Lec14	The conditions and procedures legal establishment and operation of economic activities in the countries of the European Union	2
Lec15	Benefits and costs associated with setting up of economic activities in the selected countries of the European Union	2
	Total hours	30

Classes		Number of hours
Cl 1	The concept and types legal acts. Legal form. The Delegation and representation in the rules of civil law	2
Cl 2	Right Commission-types rights. Law enforcement personal	2

Cl 3	Starting a business - legal conditions and procedures	2
Cl 4	The establishment of economic activities-legal conditions and procedure	2
C5	Commercial companies and their personal characteristics	2
C6	The company partnership,, the company limited-SE-conditions for the formation and economic activity	2
C7	Conditions and methods of preparation which may give rise starting a trading company and strong capital-specificity contractual forms and records	3
	Total hours	15

Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	

Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	

Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		

TEACHING TOOLS USED
N1. lecture by information N2. multimedia presentation N3. lecture by whole problem

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_K01	Lecture with the multimedia presentation
F2	PEU_W01 PEU_U01	Written test
P=F2		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] „The Commercial Companies Code”, Wyd. C.H.Beck, Warszawa 2010
- [2] Bińkowska M., Niemirska-Fido K., Richard A. Walawader, The Bankruptcy and Reorganisation Law, Wyd. C.H. Beck, Warszawa 2010
- [2] Konieczna-Purchała A., Practical english for lawyers, Wyd. C.H. Beck, Warszawa 2009
- [3] Ożga E., The great dictionary of law and economic, Wyd. C.H.Beck, Warszawa 2009
- [4] Jaślan H., Jaślan J., Słownik terminologii prawniczej i ekonomicznej angielsko-polski, Wyd. C.H. Beck, Warszawa 2009
- [5] Frankowski S., *Introduction to the Polish Law*, Wyd. Kluwer Law International, Warszawa 2005
- [6] Kienkowska D. (Ed.), *The Polish Law Collection. Business Law*, Warszawa 2004
- [7] Gil I., Marszałkowska-Krześ E., Code of civil procedure, Wyd. Wolters Kluwer Warszawa 2011
- [8] *Handbook of Polish Law*”, Wyd. szkolne PWN Warszawa 2011
- [9] Dereń A.M., Zarys prawa cywilnego w pytaniach i odpowiedziach, Oficyna Wydawnicza PWSZ Nysa 2008

SECONDARY LITERATURE:

- 1] Kodeks cywilny Civil Code – wydanie dwujęzyczne , Wyd. Wolters Kluwer warszawa 2011
- [2]The Commercial Companies Code – wydanie dwujęzyczne, Wyd. C.H.Beck Warszawa2010
- [3] Rossini C., English as a legal Language, London 1998

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

Aldona Małgorzata Dereń aldona.deren@pwr.edu.pl

Faculty of Computer Science and Management**SUBJECT CARD****Name of subject in Polish** Przedsiębiorstwo na rynku UE**Name of subject in English** Business on the EU market**Main field of study (if applicable):** Management**Specialization (if applicable):** Organizational Management (OM)**Profile:** academic**Level and form of studies:** 1st level, full-time**Kind of subject:** optional**Subject code** PRZ1181**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	25	25			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	1	1			
including number of ECTS points for practical (P) classes		1			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. General orientation regarding the validity of the laws and their importance for the functioning of the State and the economy

SUBJECT OBJECTIVES

C1. The acquisition of basic knowledge in the field of International Law

C2. Conquest of ability of awareness and, in sphere of international law interpretation norms obligatory

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 - it knows and it explains essence of modern change in marketing strategies and problems and challenges with development of (evolution of) information society valid, development of (evolution of) new communication technology and appearance new kind of consumer (proconsumers)

relating to skills:

PEU_U01 - it can identify, interpret and assess developments of our civilization, technological and cultural changes in organization and its surroundings and seize acquired knowledge to solving the problems of management and marketing in the organization

relating to social competences:

PEU_K01 –In the sciences of the organization and management. It can on its own develop the knowledge and improve skills.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Conditions of existing companies on the area of the Internal European Market. <ul style="list-style-type: none"> a) Economic politics of the UE in comparison to the conditions of existing of companies. b) The influence of a internal market program on the functioning of companies. c) Processes of adaptation companies to the conditions of the Internal European Market. 	1
Lec 2	Internal market program and physical, technical and fiscal barrier action.	1
Lec 3	Influence of the internal market program on the production organization. Asymmetrical disproportion of benefits.	1
Lec 4	The influence of several picked sector politicks on the functioning of companies. <ul style="list-style-type: none"> d) Politics of competition and industrial politics. e) Politics in sphere of Building and Agriculture. f) Politics of protection of environment and transportation politics. g) Politics of energy. h) Politics of protection of consumers. 	2
Lec 5	Business surroundings in the conditions of the Integral European Market. <ul style="list-style-type: none"> i) Elements of the surrounding. j) Homogeneous European Market as a element of the external surrounding. k) Analysis of the strategic external surrounding. 	2
Lec 6	Analysis of the positions of companies on the European Market. <ul style="list-style-type: none"> l) Methods of marketing examinations and the information system of European marketing. m) Qualification of the European market potential. n) Analysis of the competitiveness potential of the company in the conditions of integration. 	2
Lec 7	Basis conceptions of the strategic of the European marketing. <ul style="list-style-type: none"> o) The foundations of creating a strategy of existing on the European market. p) Conceptions of the European marketing strategy (strategy of the internationalization and delivery strategy). q) Qualification of European marketing cells. r) Analysis of choice and methods of entering the european market. 	2
Lec 8	Strategies of functioning of companies on the EU market. <ul style="list-style-type: none"> s) Strategies of competition: <ul style="list-style-type: none"> i) Concentration product-market, ii) Cost orientation, iii) Quality orientation iv) Pioneering orientation t) Strategies of cooperation. u) Strategies of allocation. v) Strategies of segmentation. 	2
Lec 9	Marketing mix on the UE market. <ul style="list-style-type: none"> w) Strategy of product and price. <ul style="list-style-type: none"> i) Strategy of the European Product (marketing decisions relating to the product, formatting the product symbol and the strategy of quality). ii) Strategy European price (determinants of the price on the European market; differentiation and standardization of the European price). 	2

	x) Strategy of European distribution and European promotion. i) Creating distribution channels on the European market (concentration and Europeanizing trade structures, European logistics). Promotion (law regulations relating to the European promotion; European advertising agencies; medias exploited in promotion; campaigns and styles of actions in promotion).	
	Total hours	15
Classes		Number of hours
Cl 1	Analysis of the strategic external surrounding. Analysis of the positions of companies on the European market; analysis of the potential and superiorities competitiveness on the UE market.	2
Cl 2	Study establishments creating the strategy of functioning on the UE market.	2
Cl 3	Analysis of choice and methods of entering the European market.	2
Cl 4	Marketing decisions relating to the product (strategy of the European product, product quality strategy).	2
Cl 5	Decisions connected with the formation of the price Decisions related to formatting the price (strategy of the European Price).	2
Cl 6	Entering establishments strategies of distribution with regard of specificity of the European market.	2
Cl 7	Entering establishments promotion campaign with regard of law adjustment relating to the European promotion, campaign and style of promotion on the UE market.	3
	Total hours	15
Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	
TEACHING TOOLS USED		
N1. lecture by information N2. multimedia presentation N3. lecture by have problem		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_W01	test
F2	PEU_U01 PEU_K01	project
P = 0,5 F1 + 0,5 F2		
PRIMARY AND SECONDARY LITERATURE		
<u>PRIMARY LITERATURE:</u>		
<ol style="list-style-type: none"> 1. N. Moussis, Access to European Union: Law, Economics, Policies, 2009 2. R. Baldwin, The Economics of European Integration, McGraw Hill Higher Education, 2009. 3. D.M.W.N. Hitchens, M. Trainor, J. Clausen, S. Thankappan, B. De Marchi, Small and Medium Sized Companies in Europe: Environmental Performance, Competitiveness and Management: International EU Case Studies, Springer-Verlag Berlin and Heidelberg GmbH & Co. K, 2003. 4. E. Kaynak, P.N. Ghauri, Euromarketing: Effective Strategies for International Trade and Export, Publisher: Routledge, 1994. 5. M. Kotabe, K. Helsen, Global Marketing Management, second edition, John Wiley&Sons, Inc. 2001. 		
<u>SECONDARY LITERATURE:</u>		
<ol style="list-style-type: none"> 1. D. Peppers, M. Rogers, Managing Customer Relationships. A Strategic Framework, John Wiley&Sons, Inc. 2004. 2. G.L. Mazzi, G.i Savio (Eds.), Growth and Cycle in the Euro-zone, Palgrave Macmillan, 2006 		
SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)		
Aldona Dereń, aldona.dereń@pwr.edu.pl		

Faculty of Computer Science and Management**SUBJECT CARD****Name of subject in Polish: Prawo międzynarodowe****Name of subject in English: International law****Main field of study (if applicable): Management****Specialization (if applicable): ORGANIZATIONAL MANAGEMENT (OM)****Profile: academic****Level and form of studies: 1st level, full-time studies****Kind of subject: optional****Subject code: PRZ1182****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	25	25			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	1	1			
including number of ECTS points for practical (P) classes		1			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7			

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. General orientation regarding the validity of the laws and their importance for the functioning of the State and the economy

SUBJECT OBJECTIVES

C1. The acquisition of basic knowledge in the field of International Law

C2. Conquest of ability of awareness and, in sphere of international law interpretation norms obligatory

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 - it knows and it explains essence of modern change in marketing strategies and problems and challenges with development of (evolution of) information society valid , development of (evolution of) new communication technology and appearance new kind of consumer (proconsumers)

relating to skills:

PEU_U01 - it can identify, interpret and assess developments of our civilization, technological and cultural changes in organization and its surroundings and seize acquired knowledge to solving the problems of management and marketing in the organization

relating to social competences:

PEU_K01 – In the sciences of the organization and management. It can on its own develop the knowledge and improve skills.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	International law and its sources. The rules in modern international relation	1
Lec 2	The processes and structure of the international	1
Lec 3	International agreements and their relevance for international integration processes and of globalization	1
Lec 4	Legal ownership of international organization	1
Lec 5	Sources and principles of the international protection of human rights	1
Lec6	Civil law and commercial international trading	1
Lec7	Privacy economic freedom in international law	1
Lec8	The status of business organizations in the rules of international law	1
Lec9	Protection of intellectual property rights in international law	1
Lec10	Taxonomy international convention protecting industrial property	1
Lec11	International procedures to protect intellectual property rights	1
Lec12	Legal foundations of international marketing	1
Lec13	Protection of consumers in international law	1
Lec14	International standards for the protection and safety of products	1
Lec15	Responsibility and settlement of disputes in international law	1
	Total hours	15
Classes		Number of hours
CI1	Taxonomy and review international trade agreements	2
CI2	The contract of sale in international law	2
CI3	International standards contracts	2
CI4	The contractual liability in international law	2
CI5	International standards for the protection free competition	2
CI6	The legal bases for international cooperation in trade	2
CI7	Prospects for development of international law	3
	Total hours	15

Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	

TEACHING TOOLS USED

N1. lecture by information
 N2. multimedia presentation
 N3. lecture by have problem

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_W01	written test
F2	PEU_U01, PEU_K01	
$P = 0,5 * F1 + 0,5 * F2$		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] “*Polish Yearbook of International Law*”, Wydawnictwo Instytutu nauk Prawnych Warszawa 2010.
 [2] I. Brownlie, *Principles of Public International Law*, (OUP 2008).
 [3] I. Slomanson, W. William, *Fundamental Perspectives on International Law*, Boston 2011.
 [4] The Free Dictionary Definition of Human Rights”, The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000 by Houghton Mifflin Company. Updated in 2009.. Retrieved 13 September 2011.
 [5] R. FiliPEU, *Protection of Human Rights in the EU – Meeting the Standards of a European Human Rights System?*, A. Bodnar et al. (red.) The Emerging Constitutional Law of the European Union. German and Polish Perspectives, Heidelberg 2003,

SECONDARY LITERATURE:

- [1] L. Antonowicz, *Podręcznik prawa międzynarodowego*, Wydawnictwo LexisNexis Warszawa 2003.
 [2] W. Czapliński, A. Wyrozumska, *Prawo międzynarodowe publiczne, Warszawa 2010.*
 [3] „*Przegląd prawa europejskiego i międzynarodowego*”, Wydawnictwo Wolters Kluwer Polska – ABC, Warszawa 2011.
 [4] A. Przyborowska-Klimczak, D. Pyć, *Leksykon prawa międzynarodowego publicznego*, Wydawnictwo C.H. Beck Warszawa 2012
 [5] J. Ciszewski, *Obrót prawny z zagranicą w sprawach cywilnych i karnych*, Wydawnictwo LexisNexis Warszawa 2012.

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish Zarządzanie i ochrona własności intelektualnej w działalności biznesowej					
Name of subject in English Management and protection of intellectual property in business operations					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management					
Profile: academic					
Level and form of studies: 1st level studies, full-time					
Kind of subject: optional					
Subject code PRZ1183					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	25	25			
Form of crediting	crediting with grade	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	1	1			
including number of ECTS points for practical classes (P)		1			
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	0.7	0.7			

*delete as not necessary

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic knowledge of business management terminology

SUBJECT OBJECTIVES

C1 Characteristics of intellectual property categories

C2 To provide knowledge on the importance of intellectual resources in running a business

C3 Characteristics of the basic methods and strategies for securing intellectual property resources in business

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:
 PEU_W01
 knows and understands the basic concepts and principles from the scope of the protection of intellectual property, including industrial property

relating to skills:
 PEU_U01
 he knows and understands basic concepts and principles from the extent of protection of the intellectual property, in it of industrial property

PEU_U02
 able to interpret, explain and evaluate the nature and importance of intellectual relating to social competences

relating to social competences:
 PEU_K01
 it can rely on the sources of knowledge and to argue their views and beliefs in a way using communicative knowledge of managerial studies (economics, law, financial management).

PROGRAMME CONTENT

Lecture		Number of hours
Lec 1	The concept of intellectual property - an overview of the basic categories of intellectual property	2
Lec 2	Subject of intellectual property protection. Sources of rights on intangible assets	2
Lec 3	Protection of intellectual property under current (national) legislation	2
Lec 4	Subject of industrial property law. The content of industrial property law. Instruments for the protection of industrial property in the enterprise. Patent and protection of innovation.	2
Lec 5	Protection of know-how and commercial information in the enterprise	2
Lec 6	Management of intellectual property resources in a company. Copyright management in the enterprise. Copyright turnover - review and characteristics of selected contracts. Transfer of copyrights as part of the business	3
Lec 7	Final test	2
	Total hours	15
Classes		Number of hours
Cl 1	Preparation of an innovative solution project and development of a strategy for its commercialization.	2
Cl 2	Preparation of selected types of contracts in the field of trade in intellectual property	2
Cl 3	Non-disclosure agreement – NDA and its importance in the company's market activity	3
Cl 4	Nondisclosure Agreement (NDA) and business secret	2
Cl 5	Liability for damages and criminal liability for breach of the confidentiality agreement (NDA)	2

CI 6	Institutional and non-institutional means of securing intellectual resources - synergy effect	2
CI 7	Final credit - presentation of projects	2
	Total hours	15

TEACHING TOOLS USED

N1. Traditional lecture using transparencies and slides
N2. Consultations
N3. Own work - independent studies

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming during semester), P – concluding (at semester end)	Learning outcomes code	Way of evaluating learning outcomes achievement
F1	PEU_W01 PEU_U01 PEU_U02 PEU_K01	Lecture with multimedia presentation
F2	PEU_W01	Final test. Final credit - presentation of project.
P = F1 + F2		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Hart Tina, Intellectual Property, Wyd. Palgrave Macmillan Higher Ed, 2013
[2] Benty Lionel, Intellectual Property Law, Oxford Univeristy Press, 2018.
[3] Pila Justine, European Intellectual property Law, Oxford Univeristy Press, 2019.

SECONDARY LITERATURE:

- [1] Adam D. Moore, "Privacy, Intellectual Property, and Hacking: Evaluating Free Access Arguments," in Internet Security Hacking, Counterhacking, and Society, Ken Himma Ed. (Jones & Bartlett Publishers, 2007),
[2] Deborah E. Bouchoux, Intellectual Property: The Law o f Trade Marks, Copyrights, Patents and Trade Secrets, 2, Ed., West Legal Studies, Canada, 2000

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish Psychology					
Name of subject in English Psychologia					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management					
Profile: academic					
Level and form of studies: 1st full-time					
Kind of subject: obligatory					
Subject code PSZ1119					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30				
Number of hours of total student workload (CNPS)	30				
Form of crediting	crediting with grade				
For group of courses mark (X) final course					
Number of ECTS points	1				
including number of ECTS points for practical (P) classes					
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4				

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES
1. Intermediate to higher English language skills

SUBJECT OBJECTIVES	
C1 Acquiring knowledge related to basic psychological terminology, principals, and phenomena	
C2 Understanding the mechanisms of human behavior and diagnosing methods	
C3 Learning how to interpret human behavior in the natural context	
SUBJECT EDUCATIONAL EFFECTS	
relating to knowledge:	
PEU_W01 The student has the primary knowledge about the science of psychology; can interpret basic conceptions of human behavior	
PEU_W02 The student has knowledge of, understands and is able to explain key psychological research studies and experiments that impacted our understanding of human behavior	
PEU_W03 The student is able to understand and evaluate the nature of social interactions	
...	
relating to social competences:	
PEU_K01 The student is prepared to act ethically and empathetically towards others	
PROGRAM CONTENT	
Lectures	Number of hours

Lec 1	Psychology as a science of human behavior.	2
Lec 2	Learning: behaviorism and behavior analysis	2
Lec 3	Personality: theories and assessment	
Lec 4	The role of temperament and personality in regulating behavior.	2
Lec 5	The role of emotions and motivation in regulating behavior.	2
Lec 6	Sensory knowledge of the world: perception processes (identification and recognition, focus, and memory)	2
Lec 7	Memory: structures and functions	2
Lec 8	Intelligence and mental processes	2
Lec 9	Problem solving, reasoning, judgement and decision making	2
Lec 10	Psychopathology of human behavior. Stress of living and health	2
Lec 11	Psychopathology of human behavior. Mechanism of dysregulation; psychological disorders	2
Lec 12	Human development across lifespan	2
Lec 13	Positive psychology and well-being	2
Lec 14	Social relationships and group dynamics	2
Lec 15	Summary and test	2
	Total hours	30

TEACHING TOOLS USED

N1. Lecture
N2. Multimedia presentation
N3. Q&A sessions

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1 class participation	PEU_W01; PEU_W02	Verbal feedback
F2 active participation in Q&A sessions	PEU_W03; PEU_K01	Verbal feedback
P – test with open-ended questions and multiple choice format		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Gerrig, R.J. (2013). *Psychology and life* (20th Edition). Pearson Education, Inc.
[2] Aronson, E., Wilson, T.D., Akert, R.M., Sommers, S.R. (2015). *Social Psychology* (9th Edition). Harlow: Pearson Education Limited

SECONDARY LITERATURE:

- [1] Hewstone, M., Fincham F.D., Foster, J. (2005). *Psychology*. Blackwell Publishing
[2] Rathus, S.A. (1999). *Psychology in the new millennium* (7th Edition). Wadsworth
[3] Hock, R. (2009). *Forty studies that changed psychology. Explorations into the history of psychological research* (6th Edition). New Jersey: Prentice Hall

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish KOMUNIKACJA W ZARZĄDZANIU****Name of subject in English COMMUNICATION IN MANAGEMENT****Main field of study (if applicable): MANAGEMENT****Specialization (if applicable): ORGANIZATIONAL MANAGEMENT****Profile: academic****Level and form of studies: 1st level, full-time studies****Kind of subject: optional****Subject code PSZ1181****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)					30
Number of hours of total student workload (CNPS)					75
Form of crediting					crediting with grade
For group of courses mark (X) final course					
Number of ECTS points					3
including number of ECTS points for practical (P) classes					3
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)					1.4

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Intermediate and higher English language skills
2. Basic understanding of management and functioning of organizations
3. Basic public speaking skills; verbal delivery of coherent message on a given subject matter; group communication skills

SUBJECT OBJECTIVES

C1 Plan and prepare effective communication strategy using current media; communication strategy shall be context specific and context adequate

C2 Create professional presentations which shall be proficiently delivered

C3 Give reasonable feedback and evaluation, and receive constructive criticism about communication to improve your own and others' skills

C4 Discern between in-group and out-of-group communication differences: multicultural approach

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 The student has knowledge about communication in organizations

PEU_W02 The student understands how to think strategically about communication and comprehends best practices guidelines for effective managerial communication

relating to skills:

PEU_U01 The student is able to formulate ideas in concise ways, prepare a written message for

diverse groups of receivers, deliver powerful, convincing speech
 PEU_U02 The student can communicate effectively in groups, is able to defend her argument and convince others into her ideas
 PEU_U03 The student has listening skills and understands importance of appropriate behaviors in order to communicate effectively
 relating to social competences:
 PEU_K01 The student can cooperate with the team members
 PEU_K02 The student can think critically and is able to evaluate her own and others' skills and abilities

PROGRAMME CONTENT		
Lectures		Number of hours
Lec 1		
Lec 2		
Lec 3		
	Total hours	
Classes		Number of hours
Cl 1		
Cl 2		
Cl 3		
	Total hours	
Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours
Sem 1	Communication in the work organization	2
Sem 2	How communication influences organizational strategy	2
Sem 3	Supportive communication and its impact on organizational performance	2
Sem 4	Persuasive communication: how power and authority change communication process	2
Sem 5	Communication in multicultural companies	2
Sem 6	Communication and technology: writing, speaking, listening	2
Sem 7	Business meeting that work; how managers should conduct business meetings	2
Sem 8	Dealing with news and media from the managerial perspective	2

Sem 9	Ethics and managerial communication	2
Sem 10	Managerial communication in crisis	2
Sem 11	Interview, listening, and feedback	2
Sem 12	Barriers to effective communication	2
Sem 13	Conducting organizational audits; The International Communication Association Survey	2
Sem 14	Summary and final discussion	2
Sem 15	Assessment of student's work including team report	2
	Total hours	30

TEACHING TOOLS USED

- N1. Multimedia presentations (teacher)
 N2. Multimedia presentations (students)
 N3. Discussions, sharing opinions and ideas about subject matter, providing feedback
 N4. Team projects

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1 Interactive presentation of a topic with Q&A and discussion	PEU_W01; PEU_W02; PEU_U01; PEU_U02; PEU_U03; PEU_K02	Assigning points and verbal feedback
F2 Case study presentation and discussion	PEU_W01; PEU_W02; PEU_U01; PEU_U02; PEU_U03; PEU_K02	Assigning points and verbal feedback
F3 Team report on topics relevant to effective managerial communication based on interviews conducted by student with organizational management	PEU_W01; PEU_W02; PEU_U01; PEU_U02; PEU_U03; PEU_K01; PEU_K02	Assigning points and verbal feedback

P = F1+F2+F3

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Daft, R.L., (2015) The leadership experience, Stanford, CT: Cengage Learning
 [2] Bovee, C.L. & Thill, J.V. (2014). Business communication essentials (6th). Boston: Pearson.
 [3] Whetten, D.A., Cameron K.S. (2011). Developing Management Skills. New Jersey: Prentice Hall
 [4] Zelazny, G. (2001). From data to chart. Say it with charts: The executive's guide to visual communication. McGraw-Hill ISBN: 9780071369978.
 [5] Harvard Business Review case studies

SECONDARY LITERATURE:

- [1] Robbins S. P., Judge, T.A. (2013) Organizational Behavior, New Jersey: Pearson Education, Inc.
 [2] Downs, C. W., Adrian, A. D. (2004) Assessing Organizational Communication New York, London: The Guilford Press

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT					
SUBJECT CARD					
Name of subject in Polish Zarządzanie potencjałem własnym					
Name of subject in English Management of own potential					
Main field of study (if applicable): Management					
Specialization (if applicable): Organizational Management (OM)					
Profile: academic					
Level and form of studies: 1st level , full-time studies					
Kind of subject: optional					
Subject code: SCZ1118					
Group of courses NO					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)					30
Number of hours of total student workload (CNPS)					75
Form of crediting					crediting with grade
For group of courses mark final course with (X)					
Number of ECTS points					3
including number of ECTS points for practical (P) classes					3
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)					1.4

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Due to the basic and broadening nature of the subject, no special prerequisites are required. The student should have general humanistic knowledge in the field of secondary school.

- C1. To acquaint students with the basic issues related to personal development and career planning;
- C2 To acquaint students with ways of building their own potential and skills that should be developed in specific work environments;
- C3. To acquaint students with the importance of a personal brand in achieving professional success.
- C4. Indication of the possibilities of using knowledge in the field of management in the process of achieving professional goals.

SUBJECT LEARNING OUTCOMES

relating to knowledge:

PEU_W01 has systematic knowledge of the factors of personal and professional development, personal brand, image

PEU_W02 knows the basic types of career paths as well as the methods and techniques supporting its development and methods and tools for motivating oneself and others to act

relating to skills:

PEU_U01 is able to carry out a self-diagnosis of strengths and weaknesses and make an

assessment of his own development
 PEU_U02 is able to formulate a strategy to achieve personal goals and develop a development plan
 PEU_U03 is able to use various techniques of creativity to generate ideas for a solution problem
 relating to social competences:
 PEU_K01 is aware of the importance of relations with the environment in the process of personal development and consciously and purposeful shapes them
 PEU_K02 is ready to prioritize and stimulate activity and creativity within own and team work

PROGRAM CONTENT

Seminar		Number of hours
Sem 1	Introduction - conditioning the process of managing oneself and one's own potential.	2
Sem 2	Contemporary labor market and managing oneself and one's own potential. Work styles and your own potential.	2
Sem 3	Identifying your own strengths and weaknesses. Self-motivation.	2
Sem 4	Values and goals. Formulating and implementing personal goals. Personal development strategies.	2
Sem 5	Individual personal development plan. Control and measurement of the effects of activities.	2
Sem 6	Models of career development and career paths.	2
Sem 7	The importance of coaching and mentoring as forms of supporting personal development.	2
Sem 8	The value of time. Time budget. Efficient use of time. Work-personal life balance.	2
Sem 9	Shaping professional competences. Decision making methods and attitude towards risk.	2
Sem 10	Creativity techniques, change management in the context of managing one's own potential.	2
Sem 11	Planning of professional development within the corporation.	2
Sem 12	Individual entrepreneurship as a career path.	2
Sem 13	Leadership. Sources of advantage over competitors. Influencing others.	2
Sem 14	Relational capital and its formation in the process of self-management. Activity in social media - goals and effects.	2
Sem 15	Building a personal brand. Shaping your own image.	2
	Total hours	30

TEACHING TOOLS USED

- N1. multimedia techniques (presentation)
- N2. discussion
- N3. own work (literature studies, essays)
- N4. group work
- N5. case studies

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Learning outcomes number	Way of evaluating learning outcomes achievement
F1	PEU_W01, PEU_W02	Measurement of activity through attendance
F2	PEU_W01, PEU_W02, PEU_U03, PEU_K02	Presentation preparation measurement
F3	PEU_W01, PEU_W02, PEU_U03, PEU_K02	Measurement of preparations for the panel discussion
F4	PEU_U01, PEU_U02, PEU_K01	Measurement of the value of own studies

$$P = 0,25F1 + 0,25F2 + 0,25F3 + 0,25F4$$

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Cialdini Robert B., Wywieranie wpływu na ludzi. Teoria i praktyka, GWP, Gdańsk 2016
- [2] Gut R., Piegowska M., Wójcik B., Zarządzanie sobą. Książka o działaniu, myśleniu i odczuwaniu, Warszawa 2008.
- [3] Rampersad Hubert K., TY – marka inna niż wszystkie. Sztuka autentycznego branding'u osobistego, Helion Gliwice 2010
- [4] Morreale S., Spitzberg B., Barge J., Komunikacja między ludźmi, PWN, Warszawa 2015
- [5] R. Gut, M. Piegowska, B. Wójcik, Zarządzanie sobą. Książka o działaniu, myśleniu i odczuwaniu, Warszawa 2008.

SECONDARY LITERATURE:

- [6] (praca zbior.) Zarządzanie samym sobą, Harvard Business Review, Helion Gliwice 2006
- [7] D. Kahneman, Pułapki myślenia. O myśleniu szybkim i wolnym, Poznań 2012.
- [8] M. Buckingham, Standout. Innowacyjny test do oceny silnych stron, Warszawa 2014.

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*delete if not necessary

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT**SUBJECT CARD****Name of subject in Polish: Socjologia****Name of subject in English: Sociology****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management (OM)****Profile: academic****Level and form of studies: 1st level, full-time studies****Kind of subject: obligatory****Subject code: SCZ1120****Group of courses: NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30				
Number of hours of total student workload (CNPS)	50				
Form of crediting	crediting with grade				
For group of courses mark (X) final course					
Number of ECTS points	2				
including number of ECTS points for practical (P) classes					
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4				

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. In view of the elementary and widening character of the subject matter is not required specific prerequisites. The student should have a general knowledge in the field of high school.

SUBJECT OBJECTIVES

- C1 Transfer of general knowledge about the mechanisms of social life
 C2 Transfer of general knowledge about social and professional roles and their circumstances.
 C3 Getting acquainted with the methods and techniques of sociological research

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 student understands and can describes the mechanisms of social construction of personality, presents requirements and conflicts of social roles, understands the role of culture in the functioning of society and social groups

PEU_W02 student identifies and classifies social ties, indicates levels of social integration, understands the essence of the concept of social capital

PEU_W03 student understands the role of indicating the consequences of belonging to a social network

PEU_W04 student identifies basic social processes, understands the nature of conflict, change and social adaptation

PEU_W05 student identifies the basic tools of sociological research and knows the rules of construction

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Introduction to sociology	2
Lec 2	The concepts of sociology and sociology of organizations	2
Lec 3	Culture and its social significance. Culture of organization	2
Lec 4	Sociological theories of society	2
Lec 5	Sociological theories of organization	2
Lec 6	Microsociology - social actions, interactions and social relationships, role and social status	2
Lec 7	Mezosociology - social groups, social interactions in the work process, the team in the organization	2
Lec8	Macrosociology- social classes, social inequalities, state, types of social order and the nature of the economic system	2
Lec 9	Social processes-factors and the theory of social change, contemporary processes of changing social life and culture, collective activity	2
Lec 10	Economy- individual as a producer, the consumer and the holder in sociological perspective , the social dimension of management, homo economicus and homo socius	2
Lec 11	Social aspects of work	2
Lec 12	Sociological study of reality.	2
Lec 13	Tools of sociology. Research methods and techniques	2
Lec 14	Practical application of sociology: diagnosis of social problems, social policy, social ethic and responsibility	2
Lec 15	Selected problems of modern societies and organizations	2
	Total hours	30
Classes		Number of hours
Cl 1		
Cl 2		
Cl 3		
	Total hours	

Laboratory		Number of hours
Lab 1		
Lab 2		
Lab 3		
	Total hours	
Project		Number of hours
Proj 1		
Proj 2		
Proj 3		
	Total hours	
Seminar		Number of hours
Sem 1		
Sem 2		
Sem 3		
	Total hours	
TEACHING TOOLS USED		
N1.		
N2.		
N3.		

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1=P		
P	PEU_W01 PEU_W02 PEU_W03 PEU_W04 PEU_W05	Written exam-test

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Babbie E., *Badania społeczne w praktyce*, PWN, Warszawa 2003
- [2] Berger, P. L., *Zaproszenie do socjologii*, Wydawnictwo Naukowe PWN, Warszawa 1995
- [3] Giddens A., *Socjologia*, PWN, Warszawa 2004.
- [4] Szacka B., *Wprowadzenie do socjologii*, Oficyna Naukowa, Warszawa 2003
- [5] Szacki J., *Historia myśli socjologicznej*. Wydanie nowe, PWN, Warszawa 2002
- [6] Sztompka P., *Socjologia analiza społeczeństwa*, Znak, Kraków 2002

SECONDARY LITERATURE:

- [1] J. Turowski, *Socjologia: małe struktury społeczne*, KUL, Lublin 2000.

- [2] J. Turowski, Socjologia: wielkie struktury społeczne, KUL, Lublin 2000.
- [3] P. Śpiewak, Klasyczne teorie socjologiczne, PWN, Warszawa 2006.
- [4] A. Elliot, Współczesna teoria społeczna, PWN, Warszawa 2010.
- [5] W. Morawski, Konfiguracje globalne, PWN, Warszawa 2010.
- [6] A. Jasińska-Kania, Współczesne teorie socjologiczne, t. 1 i 2, Wydawnictwo Naukowe Scholar, Warszawa, 2006.
- [7] P. Sztompka, Socjologia zmian społecznych, Znak, Kraków 2005.
- [8] P. Sztompka, Socjologia wizualna, PWN, Warszawa 2005.
- [9] A. Giddens, Nowe zasady metody socjologicznej, Zakład Wydawniczy Nomos, Kraków, 2001.
- [10] G. Ritzer, Klasyczna teoria socjologiczna, Wyd. Zysk i S-ka, Poznań 2004.

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FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD**Name of subject in Polish: Podstawy zarządzania****Name of subject in English: Essentials of Management****Main field of study (if applicable): Management****Specialization (if applicable): Organizational Management (OM)****Profile: academic****Level and form of studies: 1st level, full-time****Kind of subject: obligatory****Subject code: ZMZ1242****Group of courses: NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	30	-	-	-
Number of hours of total student workload (CNPS)	120	60	-	-	-
Form of crediting	exam	crediting with grade	-	-	-
For group of courses mark (X) final course	-	-	-	-	-
Number of ECTS points	4	2	-	-	-
including number of ECTS points for practical (P) classes	-	2	-	-	-
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)	1.4	1.4	-	-	-

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

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SUBJECT OBJECTIVES

To ensure fundamental knowledge (including application aspects) about:

C1. characteristics, elements and types of organizations, and the impact of the environment on organizational operations,

C2. management processes, functions, principles and tools,

C3. key management issues,

C4. organizational effectiveness.

To ensure fundamental skills to:

C5. analyze and evaluate selected characteristics of the organization,

C6. analyze and evaluate selected internal and inter-organizational relationships.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

- PEU_W01 - has a basic knowledge about the characteristics, elements and types of organizations
- PEU_W02 – understands basic management processes, functions, principles and tools
- PEU_W03 - explains and illustrates the impact of the environment on the operations of the organization
- PEU_W04 – identifies the basic management issues
- PEU_W05 – understands the organizational efficiency concept

relating to skills:

- PEU_U01 - analyzes and evaluates (at a basic level) the objectives, characteristics and elements of the organization
- PEU_U02 - analyzes and evaluates (at a basic level) internal and inter-organizational relationships
- PEU_U03 - identifies and analyzes basic management issues

relating to social competences:

- PEU_K01 - is aware of the need to develop knowledge and skills in the science of organization and management
- PEU_K02 - is aware that manager’s job is to continuously identify, analyze and resolve issues in organizations
- PEU_K03 - is prepared to express and defend his/her views, and to persuade others to his/her views
- PEU_K04 – is aware that managers have to comply with appropriate – professional and ethical standards.

PROGRAMME CONTENT

Lectures		Number of hours
Lec 1	Introduction to management and organization	2
Lec 2-3	Definition of organization. The model of organization. Organization and its environment	4
Lec 4	Definition of management and management process	2
Lec 5	Manager and foundations of decision making	2
Lec 6-7	Planning as a management function	4
Lec 8-9	Organizing as a management function: building organizational structure, structure-creating factors, typology of organizational structures	4
Lec 10	Organizing as a management function: staffing and human resource management	2
Lec 11	Leading as a management function: power in organizations, essence of managers’ job, managerial roles and skills, leadership styles	2
Lec 12	Leading as a management function: motivating	2
Lec 13	Controlling as a management function.	2
Lec 14	Organization and organizational effectiveness	2
Lec 15	Operations Management	2
	Total hours	30
Classes		Number of hours

Cl 1	Introduction to classes	2
Cl 2-3	Elements of organizational model – case studies	4
Cl 4	Goals formulating, organizational goals hierarchy	2
Cl 5	Foundations of Individual Behavior	2
Cl 6	Understanding Groups and Managing Work Teams	2
Cl 7	Organizational culture definition	2
Cl 8	Organizational culture changing	2
Cl 9	Organizational structure – key dimensions I	2
Cl 10	Organizational structure – key dimensions II	2
Cl 11	Organizational structure building	2
Cl 12	Technology	2
Cl 13	Organizational environment	2
Cl 14	Managing organizational effectiveness	2
Cl 15	Final assessment	2
	Total hours	30

TEACHING TOOLS USED

- N1. Traditional lecture with multimedia presentations
N2. Questions to students during lecture
N3. Case studies presented during lecture
N4. Discussion of selected issues
N5. Case studies solving (independently by student or jointly with other students)
N6. Self-study: classes preparation and final assessment preparation
N7. Presentations prepared by students

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEU_U01-3	Quizzes (during classes)
F2	PEU_U01-3, PEU_K01-4	Scoring students' involvement and presentations (during classes)
P1	Final mark consists of F1(60%) and F2 (40%)	
P2	PEU_W01-5	Exam

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Robbins S.P., Coulter M., DeCenzo D.: Fundamentals of management, Pearson/Prentice Hall, 2017.
- [2] Hatch M.J., Cunliffe A.L.: Organization Theory: Modern, Symbolic and Postmodern Perspectives, Oxford University Press, Oxford 2013.
- [3] Robbins S.P., Barnwell N.: Organization Theory, Person, 2006.

SECONDARY LITERATURE:

- [1] Griffin R.W.: Management, Houghton Mifflin Company, New York 2008.
- [2] Jones G.R., George J.M., Essentials of contemporary management, McGraw-Hill Irwin, Boston 2007.

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*delete if not necessary