# **STUDY PROGRAM**

#### **BASIC INFORMATION**

Study Program	Modern Business Management
Level of Studies	Second degree
Study Profile	general academic
Language of Instruction	English
Form of Study	Full-time
No of Semesters	4
Degree Level	Master's
Concentration (if applicable)	

### ASSIGNMENT OF THE PROGRAM TO FIELDS AND DISCIPLINES

DISCIPLINE	Social Sciences					
Scientific Discipline(s):  if the field of study is related to two or more disciplines, it is  also required to specify the percentage share of the number of	Discipline	ECTS	% ECTS			
	Management and quality					
ECTS points for each discipline in the total number of ECTS	sciences	79	75%			
points necessary to complete the studies - indicating the main	(the main discipline)					
discipline	Economic and financial					
	sciences	27	25%			
	(supporting discipline)					

# PROGRAM CHARACTERISTICS

concepts and learning objectives / relationship with the University mission and strategy / socio-economic needs

The Modern Business Management major, at master's degree, develops the analytical skills of a student who is getting prepared to manage a modern and innovative business. Tools in the field of statistics, econometrics and economic calculation will enable the graduate to accurately analyze the financial condition of the enterprise and manage it appropriately.

In accordance with the mission of KUE, the Modern Business Management field is an example of a modern field of study at home and abroad. At the same time, it strengthens the academic status of the university providing high-quality education and contributes to achieving a significant position in the country and abroad. This direction is particularly in line with key program No. 2 of the CUE Strategy, related to, among others, in point 7 with expanding the offer of classes conducted in English and successively creating a new offer.

The aim of the major is to improve managerial competences related to quantitative methods and techniques in the context of a competitive and dynamically developing market. Obtaining qualifications proposed within the Modern Business Management, at Master's level, gives a manager a competitive advantage on the labor market.

# NO OF CLASSROOM HOURS

Total no of classroom hours 800	Total no of classroom hours	800
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# NO OF ECTS POINTS:

necessary for graduation	120
which a student must earn during classes with the direct participation of faculty members or other persons conducting classes	61
which a student must earn during internships (if applicable)	-
which a student must earn during foreign language classes	5
which a student may earn through distance learning activities	89

# INTERNSHIPS (if applicable):

No of hours	-
Objective	-
Rules and a mode of accomplishing	-
Rules and a mode of completion	-

# LEARNING OUTCOMES

The level of the Polish	n Qualifications Framework	7th level		
Symbol of a learning outcome for the study program	Description of the le	arning outcomes	Reference to the characteristics of learning outcomes (universal second degree characteristics)	
	P_W (KNOWLEDGE) A grad	luate knows and understa	nds:	
WZ-ST2-MB-W01	WZ-ST2-MB-W01 in a deepened degree of macroeconomic phenomenor and relations between them.			
WZ-ST2-MB-W02	in a deepened degree of theo concepts and methods of management.	P7S_WG		
WZ-ST2-MB-W03	in a deepened degree of a corporate finance.	P7S_WG		

WZ-ST2-MB-W04	the theory and methods of project management.	P7S_WG
WZ-ST2-MB-W05	the theory and methods of managing human and intellectual capital.	P7S_WG
WZ-ST2-MB-W06	statistical and econometric methods used in social, economic and management research.	P7S_WG
WZ-ST2-MB-W07	the fundamental dilemmas of modern civilization.	P7S_WK
WZ-ST2-MB-W08	economic, legal and other conditions for various business activities, including cultural and ethical conditions.	P7S_WK
WZ-ST2-MB-W09	at a deepened level the concepts, scientific theories and research methodology used in the field of humanities.	P7S_WG
WZ-ST2-MB-W10	knows and understands to an in-depth degree the contemporary development trends of organizational management methods and the creation of innovative business models.	P7S_UW
	P_U (SKILLS) A graduate is able to:	
WZ-ST2-MB-U01	use the acquired knowledge to analyze and forecast socio-economic phenomena, including solving unusual problems through proper selection of sources and information from them.	P7S_UW
WZ-ST2-MB-U02	use mathematical, statistical and econometric methods in business management.	P7S_UW
WZ-ST2-MB-U03	use modern methods and management tools in practice.	P7S_UW
WZ-ST2-MB-U04	use modern methods and ICT tools in practice.	P7S_UW
WZ-ST2-MB-U05	effectively manage human resources, solving complex and unusual problems in an intercultural environment.	P7S_UW
WZ-ST2-MB-U06	use a foreign language at the B2 + of the European Framework of Reference for Languages.	P7S_UK
WZ-ST2-MB-U07	fluently use business language and communicate with various stakeholder groups.	P7S_UK
WZ-ST2-MB-U08	conduct a debate in English on topics related to socio- economic issues occurring in the modern world, with particular emphasis on their forecasting and using quantitative data in their analysis.	P7S_UK
WZ-ST2-MB-U09	perform various organizational tasks, including recruit employees and manage teams of various sizes, using innovative methods and technologies.	P7S_UO
WZ-ST2-MB-U10	prepare projects and use them in the practice of business.	P7S_U0
WZ-ST2-MB-U11	independently plan and implement own learning throughout life and guide others in this area.	P7S_UU
WZ-ST2-MB-U12	correctly use possessed knowledge to formulate and solve unusual problems in the field of humanities.	P7S_UW
WZ-ST2-MB-U13	how to initiate modern forms of entrepreneurship in practice and develop innovative business models.	P7S_UW
	P_K (SOCIAL ATTITUDES) A graduate is ready to:	
WZ-ST2-MB-K01	critically evaluate the content of statements regarding socio-economic phenomena occurring in the modern economy.	P7S_KK

WZ-ST2-MB-K02	recognize the importance of knowledge in solving cognitive and practical problems related to socioeconomic phenomena.	P7S_KK
WZ-ST2-MB-K03	act in an entrepreneurial manner and to initiate activities for the public interest.	P7S_KO
WZ-ST2-MB-K04	fulfil social obligations, inspire and organize activities for the social environment.	P7S_KO
WZ-ST2-MB-K05	perform professional roles, including managerial roles and functions in the organization related to the analysis of quantitative data, while maintaining the principles of sustainable development.	P7S_KR
WZ-ST2-MB-K06	develop the profession and maintain his ethos.	P7S_KR
WZ-ST2-MB-K07	initiate actions in the public interest in issues related to the field of humanities.	P7S_KO

# Explanation of symbols:

- MB\_(before underscore) study program learning outcomes
- 01, 02 and more (after underscore) indication of the next learning outcome
- P7S learning outcomes according to the Polish Qualifications Framework in relation to the following detailed characteristics (knowledge skills social attitudes):
- WG -depth; WK context
- UW usage; UK communicating; UO organizing; UU learning
- KK critical approach; KR professional role; KO responsibility

# DESCRIPTION OF THE PROCESS LEADING TO ACHIEVING LEARNING OUTCOME

# Explanation of symbols:

L – lecture

T – tutorial

E – Exam

Z - Credits

NoZiJ - Management and quality sciences

NEiF – Economic and financial science

O – Compulsory class

W - Elective class

I – Diploma seminar

	Year:								
	Semester:			First					
	Total number of classroom hours:			210					
	Total ECTS:			30					
Lp.	Course (title)	Class	No of	Form of	ECTS		ECTS/disc	ipline(s)	Compulsory class (O)
	course (title)	Form	teaching hrs.	Completion	LCIS	NoZiJ	NEIF	Other	/ Elective class (W)
	Contemporary								
1	Management Concepts/	L	30	E	6	6	-	-	W

	Business Process Management								
2	Cross Culture Management	L T	15 15	Z	4	1	-	3 culture and religion studies	0
3	Foreign Language 1.1	Т	30	Z	2	2	-	-	W
4	Mathematics	L T	30 30	E	9	4	-	5 mathemat ics	0
5	Statistics	L T	15 45	E	9	6	-	3 mathemat ics	0
6	Total semester		210		30	20		10	

	Year:			First					
	Semester:			Second					
	Total number of classroom hours:			225					
		Tota	I ECTS:	30					
Lp.	Course (title)	Class	No of teaching	Form of	ECTS	ECTS/discipline(s)			Compulsory class (O)
	course (title)	Form	hrs.	completion	LCIS	NoZiJ	NEiF	Other	/ Elective class (W)
	Business in								
1	Knowledge	L	15	Z	3	3	-	-	0
	Economy								
2	Data Analysis in	L	15	Z	4	4	_	_	0
	Management	T	15		7				
3	Econometrics	L	30	E	8	4	4	_	0
	Leonometries	L	30	-					
4	Foreign Language 1.2	T	30	Е	3	3	-	-	W
5	Macrosconomics	L	30	Е	8		8		0
5	Macroeconomics	Т	30	<u> </u>	٥	-	0	-	O
	Methodology of	L	15	_		2	2		
6	Economics and Social Research	Т	15	E	4	2	2	-	0
7	Total semester		225		30	16	14	0	

	Year:								
	Semester:								
	Total number of classroom hours:			180					
	Total ECTS:								
Lp	p. Course (title) Class No of teaching		Form of	ECTS		ECTS/disc	Compulsory class (O)		
, .	course (title)	Form hrs.	completion	LCIS	NoZiJ	NEiF	Other	/ Elective class (W)	

1	Business Law in UE	L T	15 15	E	4	3	-	Legal scien ce	0
2	Economics and Corporate Finance	L T	15 30	E	7	1	7	-	0
3	Human Resources Management	L T	15 15	Z	4	2	-	2 culture and religion studies	0
4	Intellectual Capital Management	L T	15 15	E	4	4	-	-	0
5	Elective Lecture sem. 3	L	15	E	4	4	-	-	W
6	Diploma seminar	I	30	Z	7	7	-	-	W
7	Total semester		180		30	20	7	3	

			Year:	Second					
		Sen	nester:	Fourth					
	Total number of cla	ssroom	hours:	185					
		Tota	I ECTS:	30					
Lp.	Course (title)	Class	No of teaching	Form of	ECTS	ECTS/discipline(s)			Compulsory class (O)
	course (title)	Form	hrs.	completion	2013	NoZiJ	NEiF	Other	/ Elective class (W)
1	Econometrics Methods in Risk Management	L T	15 15	Z	4	2	2	-	0
2	Managerial Accounting	L T	15 15	Е	4	2	2	-	0
3	Project Management	Т	45	Z	5	5	-	-	0
4	Time Series Analysis	L	20	E	3	1	2	-	0
5	Elective Lecture sem. 4	L	30	E	6	6	-	-	W
6	Diploma seminar	I	30	E	8	8			W
7	Total semester		185		30	24	6		

#### METHOD OF VERIFICATION AND EVALUATION OF LEARNING OUTCOMES

Verification and documentation of student learning outcomes takes place through:

- in terms of knowledge credit and examination papers, project papers, presentations (electronic documentation), reflective writing (requiring critical analysis of the literature of the subject confronted with one's own experiences), paper texts. Course credit grades are documented in the examination/assessment reports;
- in terms of skills project work, task completion reports, individual and collective task result sheets, case studies, essays (verifying the ability to collect, select and critically analyse sources, the ability to use theoretical knowledge in practice, the ability to apply the tools learnt in practice), outlines of group work, also examination / pass protocols;
- in terms of social competence project work, presentations (electronic documentation documenting the attitude of students towards the analysed phenomena, processes, problems, communication and social skills), scoring sheets for activity in classes (the way of communicating, involvement in cooperation, quality of applied argumentation and justification), reflective writing.

The PRK system determines the workload of an average student necessary to achieve the learning outcomes; it determines the weight (importance) of the knowledge, skills and social competence outcomes. In the case of subjects taught in various forms (lecture and classes), the final grade is made up of partial grades for each form of course, taking into account the weights (importance) determined by the lecturer. This information, together with information on the requirements and criteria for passing the subject, is communicated before the commencement of classes, in particular by making the course syllabus available. The assessment of the achievement of the learning outcomes is based in particular on the various forms of assignments (papers, reports, case studies), credit and examination papers, as well as on the ability to discuss, interpret, select arguments, etc. Course grades are recorded in the electronic system. A pass mark based solely on the student's attendance in class is not accepted. A special kind of measure of the realisation of the assumed learning outcomes in the first degree programme is the bachelor's thesis and the final examination conducted. An anti-plagiarism system is used to verify the independence of the written thesis.

#### **GRADUATION REQUIREMENTS**

The degree programme is completed on the day of passing the diploma
examination.
A prerequisite for taking the diploma examination is:
1. attainment of positive final grades in all subjects, including the seminar,
professional practice subject to differences resulting from studies taken in the
individual educational path mode,
2. submission of a diploma dissertation which is admitted to further
proceedings by the supervisor after the dissertation has been checked using the
Uniform Anti-Plagiarism System,
3. obtaining positive grades for the diploma thesis from both the thesis
supervisor and the reviewer.

#### LEARNING OUTCOMES AND COURSE CONTENT ASSIGNED FOR THE CLASSES

#### Nazwa przedmiotu

# **Business in Knowledge Economy**

#### Język prowadzenia zajęć

angielski

#### Realizowane efekty uczenia się

**E1** (W) Student knows the concepts related to Knowledge Economy and building sustainable competitive advantage.

```
\c L wz - st2 - mb - w01 - 24/25z \ (\ P7s\_wg \ )
```

**E2** (U) Student understands the characteristics and mechanisms of businesses operating in Knowledge Economy.

```
L WZ-ST2-MB-U03-24/25Z ( P7S UW )
```

**E3** (K) Student is able to plan and assess business activities specific for organizations operating in Knowledge Economy

$$\c L = \c WZ-ST2-MB-K05-24/25Z \c ( \c P7S_KR \c )$$

#### Treści programowe przedmiotu

- **W1** Context and definitions, characteristics of the Knowledge Economy and knowledge-based organisations.
  - Knowledge as a key resource in contemporary economy. Indicators used to assess the level of knowledge in Knowledge Economies.
  - **W2** Resource based view of competitive advantage development
  - w3 Problems of routines development
  - W4 Dynamic capabilities concept and development
  - w5 Practical examples of how companies developed their sustainable competitive advantage
  - W6 Balanced scorecard a tool used to plan and assess performance of knowledge-based organizations

# Nazwa przedmiotu

# **Business Law in UE**

### Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

**E1** (W) Graduate knows and understands basic rules of creation and development of diverse forms of entrepreneurship in chosen EU member states.

$$\c L wz - st2 - mb - w01 - 24/25z \ (\ P7s wg \ )$$

**E2** (U) Graduate can appropriately select the sources and gather legal information on entrepreneurship regulations in EU.

```
\c L + WZ-ST2-MB-U01-24/25Z \c ( P7S_UW \c)
```

**E3** (K) Graduate is ready to critically assess the knowledge and received content of Business Law, and recognize the importance of knowledge in solving cognitive and practical problems, as well as seek expert opinions on Business Law in the event of difficulties with solving a problem independently - on the area of EU member states.

 $\downarrow$  WZ-ST2-MB-K02-24/25Z ( P7S\_KK )

# Treści programowe przedmiotu

- W1 Introduction to the EU business law the concept of business regulations, business law sources.
  - **w2** Basic rules of EU business law, elements of international business law, definitions business activity, entrepreneur, enterprise. Register and registration of business activity. Freedom of economic activity.
  - **W3** Organizational and legal forms of entrepreneurs in in the EU countries.
  - **W4** Types of partnerships in detail in different EU countries.
  - **W6** Basic regulations of commercial contracts.
  - W7 EU contract law. Concluding a contract, form, content and interpretation of the contract. Examples
  - **W8** Elements of EU competition and consumer protection law.
  - C1 Examples of basic business law regulations, working on texts
  - **C2** Setting up a business in Poland.
  - **C3** Commercial companies differneces.
  - **C4** Commercial contracts how to prepare such a contract.

#### Nazwa przedmiotu

# **Business Process Management**

# Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

E1 (W) Student knows and understands contemporary concepts in management

```
\downarrow WZ-ST2-MB-W02-24/25Z ( P7S_WG )
```

E2 (W) Student knows and understands how to think about business processes in an open, systemic way

```
L, WZ-ST2-MB-W02-24/25Z ( P7S WG )
```

E3 (U) Student can apply current, advanced management methods in practice

```
L, WZ-ST2-MB-U03-24/25Z ( P7S UW )
```

**E4** (K) Student is ready to see the importance of ethics, including the need for true and fair analysis and provision of reliable data

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L, WZ-ST2-MB-K05-24/25Z ( P7S KR )
```

 $\c L = ST2-MB-K06-24/25Z \ (\ P7S_KR \ )$ 

E5 (K) Student is ready to operate in a team, both in managing as well as executive capacity

L, WZ-ST2-MB-K05-24/25Z ( P7S KR )

#### Treści programowe przedmiotu

- **W1** Systems thinking
  - **W2** Principles of system approach
  - **w3** Process approach
  - **W4** Process management main concepts
  - w5 Process concepts based on continuous improvement
  - **W6** Process concepts based on ideal system approach
  - **w7** Basics of BPMN notation
  - **W8** Advanced BPMN notation
  - w9 Process design using BPMN
  - **W10** Process monitoring
  - **W11** Process optimization
  - **W12** Dynamic process management
  - **W13** Advanced aspects of process management
  - **W14** Summary of the lectures

# Nazwa przedmiotu

### **Contemporary Management Concepts**

### Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

E1 (W) Student knows and understands contemporary concepts in management

```
\c L wz - st2 - mb - w02 - 24/25z \ (\ P7s\_wg \ )
```

E2 (W) Student knows and understands how to think about business processes in an open, systemic way

$$\downarrow$$
 WZ-ST2-MB-W02-24/25Z ( P7S WG )

E3 (U) Student can apply current, advanced management methods in practice

```
\downarrow WZ-ST2-MB-U03-24/25Z ( P7S_UW )
```

$$\c L + WZ-ST2-MB-U04-24/25Z \c ( P7S_UW \c)$$

**E4** (K) Student is ready to see the importance of ethics, including the need for true and fair analysis and provision of reliable data

```
L, WZ-ST2-MB-K05-24/25Z ( P7S KR )
```

E5 (K) Student is ready to operate in a team, both in managing as well as executive capacity

- w1 A survey of history of management thought
  - w2 Determinants of modern management
  - **W3** Neopositivism versus interpretative interpretations of organization
  - **W4** Modern management theory nad practice
  - **w5** Network organizations
  - **W6** Learning organization and knowledge management
  - w7 Modern strategic management
  - **w8** System thinking
  - w9 Game theory in business
  - **W10** Scenario planning
  - **W11** Process-based management
  - **W12** Business Process Reengineering
  - **W13** Quality management
  - **W14** Benchmarking

#### **Cross Culture Management**

#### Język prowadzenia zajęć

angielski

#### Realizowane efekty uczenia się

**E1** (W) Graduate knows and understands at a deepened level the concepts, scientific theories and research methodology used in the field of humanities

```
\downarrow ZZ-ST2-MB-W09-24/25Z ( P7S_WG )
```

**E2** (U) Graduate is able to correctly use possessed knowledge to formulate and solve unusual problems in the field of humanities.

```
L, ZZ-ST2-MB-U12-24/25Z ( P7S UK )
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**E3** (K) Graduate is ready to initiate actions in the public interest in issues related to the field of humanities.

 $\downarrow$  ZZ-ST2-MB-K07-24/25Z ( P7S\_KO )

- **W1** Intercultural communication as management tool basic concepts and theories: Three-dimensional structure culture and various models of culture
  - **W2** The process of socialisation culture specific expectations and attribution processes that affect management
  - W3 Taxonomy of cultures within the model of Hall and Hosftede
  - W4 Taxonomies of cultures within the models of Trompenaars and Lewis
  - **w5** Intercultural communication as management tool basic concepts and theories: Non-verbal barriers to intercultural communication: (e.g. mimics, proxemics, chronometrics, olphatics)

- **w6** Verbal barriers to intercultural communication, e.g. culture specific use of prosodic features, Saphir-Whorf Hypohothesis
- W7 Stereotypes: facilitators or barriers to effective international management
- **w8** The concept of an alien, adaptation, integration and multiculturality, enculturation and acculturation (Oberg, Bennett)
- W9 The concept of transculturality as proposed by Wolfgang Welsch
- **w10** Cross-cultural leadership, organisation, hierarchy and communication channels in companies (J. Mole's approach); supervisory styles
- **W11** Corporate cultures: different models of companies and the influence of cultural background on behaviour and decision making processes taxonomies of Charles Handy, Geert Hofstede and Trompenaars- Hampden-Turner
- **W12** The specifity of international meetings source of cross-cultural misunderstandings or area of potential creativity (reaction to critical situations)
- **W13** Advertising across cultures (consumer behaviour, product meaning, expectations of audiences, taboos in multinational advertising)
- **W14** Intercultural conflicts (conflict management styles acc. to Thomas Killman and Mitchell, conflict solving styles in various regions of the world)
- **W15** Intercultural negotiations analysis of major culture components that affect the process of negotiations, how to overcome cross-cultural barriers during negotiations, traditional, principled and synergetic approaches to negotiation process
- **C1** Exercises raising students' cultural self-awareness and their level of intercultural competence (including values and norms recognition)
- **C2** John Lewis' visual approach categories of culture and concept of culture horizons
- **C3** Approach to human resources management across cultures including managing multicultural teams and the role of global managers (case studies)
- **C4** Culture-specific aspects of presentations from the listeners' and performers' point of view, analysis of potential areas of conflict
- **C5** Polish culture paradigm: influences on its present state, who is a stranger in Poland, how Poles solve their problems, what are their listening habits and business communication
- C6 Ethics in intercultural business and management (case studies)
- C7 Intercultural negotiations (analysis of critical incidents)
- C8 Intercultural competence self assessment exercises

Nazwa przedmiotu
Data Analysis in Management
Język prowadzenia zajęć
angielski
Realizowane efekty uczenia sie

E1 (W) Student has knowledge about selected basic and advanced concepts and issues in the field of data analysis. Student knows and can list, classify and discuss selected basic and advanced techniques and methods of multivariate data analysis used to solve problems occuring in management of modern organizations

# $\downarrow$ WZ-ST2-MB-W06-24/25Z ( P7S WG )

**E2** (U) Student can effectively use the acquired knowledge in the field of data analysis to solve practical problems of enterprise management. Student is able to select and use appropriate basic and advanced procedures, techniques and methods of multivariate data analysis to solve problems occuring in management of modern organizations.

#### L WZ-ST2-MB-U02-24/25Z ( P7S UW )

E3 (K) Student is ready to identify the practical problems of business management. Student is ready to present, discuss and interpret obtained results. Student is ready to solve problems by yourself. Student is ready to cooperate and work in a team, assuming different roles and is able to participate in preparing data analysis projects. Moreover, student is aware of the importance of continual upgrading knowledge and skills in the field of economic data analysis and sharing it.

$$\downarrow$$
 WZ-ST2-MB-K02-24/25Z ( P7S\_KK )

- **W1** The basic concepts and issues of multivariate data analysis in economics and management. Basic methods of data analysis (including descriptive statistics and data visualization). Application of basic selected methods of multivariate data analysis in management and marketing research
  - **W2** Correspondence analysis.
  - **W3** Cluster analysis (hierarchical clustering methods, k-means method).
  - **w4** Methods of data classification: k-nearest neighbour algorithm, classification and/or regression trees. Measures of predictive accuracy for classification tasks.
  - **C1** Correspondence analysis.
  - C2 Cluster analysis: hierarchical clustering methods.
  - C3 Cluster analysis: k-means method.
  - **C4** Methods of data classification: k-nearest neighbour algorithm. Measures of predictive accuracy for classification tasks.
  - **C5** Methods of data classification: classification trees and/or regression trees. Measures of predictive accuracy for classification tasks.

Nazwa przedmiotu
Econometrics
Język prowadzenia zajęć
angielski
Realizowane efekty uczenia się

**E1** (W) The student knows and understands the econometrics analysis of relationships between observed categories.

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\downarrow WZ-ST2-MB-W06-24/25Z ( P7S_WG )
```

**E2** (U) The student can apply the quantitative methods in empirical analysis of economic processes.

```
L, WZ-ST2-MB-U01-24/25Z ( P7S UW )
```

**E3** (K) The student is ready to analyse the economic issues with econometric tools.

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\downarrow WZ-ST2-MB-K02-24/25Z ( P7S_KK )
```

L, WZ-ST2-MB-K05-24/25Z ( P7S KR )

- **W1** A concise statistical theory of linear regression model: 1. Point estimation of structural parameters, 2. Normality of the error term.
  - **w2** A concise statistical theory of linear regression model: 3. Confidence intervals of structural parameters, 4. Statistical testing of significance of structural parameters.
  - **W3** A concise statistical theory of linear regression model: 5. Prediction
  - **W4** Econometric production functions: 1. Theoretical economic model of technology, 2. Definition of a production function.
  - **w5** Econometric production functions 3. Characteristics of a production process. 4. A review of production functions.
  - **W6** Theory of estimation in simultaneous equation models 1. The structure and the reduced form. 2. Two-stage least squares.
  - W7 Theory of estimation in simultaneous equation models: 3. Multiplier analysis in SEM models
  - **W8** Theory of estimation in simultaneous equation models: 5. Klein's model description, estimation and multiplier analysis
  - **C1** Application of the linear regression model: 1. Point estimation of structural parameters 2. Empirical testing of the Normality of the error term
  - **c2** Application of the linear regression model: 3. Practical interpretation of confidence intervals of structural parameters, 4. Application of statistical testing of significance of structural parameters
  - C3 Application of the linear regression model: 5. Prediction
  - **C4** Econometric production functions: A review of production functions (Cobb-Douglas, CES, translog function).
  - **C5** Econometric production functions: 2. Application of production functions in analysing production processes.
  - **C6** Estimation and analysis of Klein's model of economy: 1. Application of the 2OLS.
  - **c7** Estimation and analysis of Klein's model of economy: 2. Interpretation of multipliers for US economy.
  - **C8** Estimation and analysis of Klein's model of economy: 3. Prediction.

### **Econometrics Methods in Risk Management**

#### Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

**E1** (W) Student is familiar with basic and advanced concepts, methods and models of econometric risk analysis.

```
, wz-st2-mb-w06-24/25z ( P7s_wg )
```

**E2** (U) Student is able to perform basic and more advanced econometric risk analysis, using relevant models and methods, implemented in a statistical software.

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L, WZ-ST2-MB-U02-24/25Z ( P7S_UW )
L, WZ-ST2-MB-U04-24/25Z ( P7S_UW )
```

**E3** (K) Student understands the pros and cons of various statistical and econometric risk management tools. They are aware of a constant need and ready to improve their knowledge and skills in the area. Student interprets and communicates risk analysis results in a transparent way.

```
L, WZ-ST2-MB-K01-24/25Z ( P7S_KK )
L, WZ-ST2-MB-K02-24/25Z ( P7S_KK )
L, WZ-ST2-MB-K05-24/25Z ( P7S_KR )
L, WZ-ST2-MB-K06-24/25Z ( P7S_KR )
```

#### Treści programowe przedmiotu

- **W1** Introduction to risk analysis
  - **W2** Financial time series and volatility
  - w3 Econometric models of volatility on financial markets
  - **W4** Financial risk measures (Value at Risk, Expected Shortfall)
  - **W5** Risk models diagnostics and evaluation (backtesting, loss functions)
  - **W6** Conditional Autoregressive Value at Risk by Quantile Regression
  - w7 Capital requirements for market risk
  - C1 Empirical analysis of financial time series
  - C2 Volatility models estimation and forecasting
  - C3 Non-parametric estimation of Value at Risk
  - C4 Parametric volatility models in estimation of VaR and ES
  - C5 Risk models diagnostics and evaluation (backtesting, loss functions)
  - C6 Calculating capital requirements for market risk

# Nazwa przedmiotu

# **Economics and Corporate Finance**

# Język prowadzenia zajęć

angielski

### Realizowane efekty uczenia się

**E4** (W) Graduate knows and understands in a deepened degree of macroeconomic phenomenon and relations between them. Graduate knows and understands in a deepened degree of theories in the field of selected concepts and methods of modern organizations management. Graduate knows and understands the theory and methods of project management. Graduate knows and understands the theory and methods of managing human and intellectual capital. Graduate knows and understands the fundamental dilemmas of modern civilization.

```
L, WZ-ST2-MB-W01-24/25Z ( P7S_WG )
L, WZ-ST2-MB-W02-24/25Z ( P7S_WG )
L, WZ-ST2-MB-W04-24/25Z ( P7S_WG )
L, WZ-ST2-MB-W05-24/25Z ( P7S_WG )
L, WZ-ST2-MB-W07-24/25Z ( P7S_WK )
```

**E5** (U) Graduate is able to use the acquired knowledge to analyse and forecast socio-economic phenomena, including the formulation of research problems and their solution through the appropriate selection of sources, information and research methods. Graduate is able to use mathematical, statistical and econometric methods in business management. Graduate is able to use modern methods and management tools in practice. Graduate is able to use modern methods and ICT tools in practice. Graduate is able to perform various organizational tasks, including recruit employees and manage teams of various sizes, using innovative methods and technologies. Graduate is able to prepare team projects and use them in the practice of business.

```
L, WZ-ST2-MB-U01-24/25Z ( P7S_UW )
L, WZ-ST2-MB-U02-24/25Z ( P7S_UW )
L, WZ-ST2-MB-U03-24/25Z ( P7S_UW )
L, WZ-ST2-MB-U04-24/25Z ( P7S_UW )
L, WZ-ST2-MB-U09-24/25Z ( P7S_UO )
L, WZ-ST2-MB-U10-24/25Z ( P7S_UO )
```

**E6** (K) Graduate is ready to critically evaluate the content of statements regarding socio-economic phenomena occurring in the modern economy. Graduate is ready to recognize the importance of knowledge in solving cognitive and practical problems related to socioeconomic phenomena. Graduate is ready to fulfil social obligations, inspire and organize activities for the social environment. Graduate is ready to perform professional roles responsibly, including managerial roles and functions in the organization related to the analysis of quantitative data, while maintaining the principles of sustainable development.

```
L, WZ-ST2-MB-K01-24/25Z ( P7S_KK )
L, WZ-ST2-MB-K02-24/25Z ( P7S_KK )
L, WZ-ST2-MB-K04-24/25Z ( P7S_KO )
L, WZ-ST2-MB-K05-24/25Z ( P7S_KR )
```

#### Treści programowe przedmiotu

**W1** The economics of business enterprise – the basic aspects.

**w2** Finance Management – the essence of finance management and its circumstances.

- **W3** Organization objectives and the basic financial rules
- **W4** Financing methods in enterprises
- w5 Organization of assets and capitals
- **w6** Working Capital Management
- **w7** Financial Strategies
- **C1** Time value of money
- C2 Capital within the enterprise
- C3 Cost of capital
- **C4** Investment of the enterprise
- C5 Investment project evaluation
- **C6** Return on equity
- **C7** Net working capital management
- **C8** Assets within the enterprise
- **C9** Current assets management

# Foreign Language 1.1

#### Język prowadzenia zajęć

Foreign language on offer at the CUE Language Centre

# Realizowane efekty uczenia się

**E1** (W) The student knows and understands the target language accordingly to their language level as described in the CEFR (Common European Framework of Reference for Languages) which allows them for both comprehension and communication in the target language in speech and writing within the thematic scope of their major of studies

```
L, WZ-ST2-MB-W05-24/25Z ( P7S_WG )
L, WZ-ST2-MB-W06-24/25Z ( P7S_WG )
L, WZ-ST2-MB-W07-24/25Z ( P7S_WK )
```

**E2** (U) The student can adequately to their language level express and describe essential aspects of the problems presented in complex texts including elements of the specialized discussion with the thematic scope of their professional field. The student can present professional topics in the format of a presentation or when participating in a business meeting.

```
L, WZ-ST2-MB-U05-24/25Z ( P7S_UW )
L, WZ-ST2-MB-U06-24/25Z ( P7S_UK )
```

**E3** (KThe student can both establish a communicative interaction in English so as to initiate and maintain business contacts and resolve conflict situations. The student can work in a team, also in an international environment. The student can consciously carry out the process of self-education and share their knowledge with others

```
L, WZ-ST2-MB-K03-24/25Z ( P7S_KO )
L, WZ-ST2-MB-K04-24/25Z ( P7S_KO )
```

#### Treści programowe przedmiotu

- C1 Basic issues of economics, finance and business (recruitment, management, marketing, sales, ICT, organization and company finances, corporate culture, business ethics) in accordance with the syllabus available on the CJ website and the language level according to the CEFR scale.
  - **C2** Elements of the English language system knowledge (grammar, sentence structure, phraseology and phonetics) in accordance with the syllabus available on the CJ website and the language level according to the CEFR scale.
  - **C3** Business writing and business correspondence in accordance with the syllabus available on the CJ website and the language level according to the CEFR scale.
  - **C4** Soft skills and elements of intercultural communication in accordance with the syllabus available on the CJ website and the language level according to the CEFR scale.

# Nazwa przedmiotu

#### Foreign Language 1.2

#### Język prowadzenia zajęć

Foreign language on offer at the CUE Language Centre

# Realizowane efekty uczenia się

**E1** (W) The student knows and understands the target language accordingly to their language level as described in the CEFR (Common European Framework of Reference for Languages) which allows them for both comprehension and communication in the target language in speech and writing within the thematic scope of their major of studies

```
L, WZ-ST2-MB-W05-24/25Z ( P7S_WG )
L, WZ-ST2-MB-W06-24/25Z ( P7S WG )
```

**E2** (U) The student can adequately to their language level express and describe essential aspects of the problems presented in complex texts including elements of the specialized discussion with the thematic scope of their professional field. The student can present professional topics in the format of a presentation or when participating in a business meeting.

```
L, WZ-ST2-MB-U05-24/25Z ( P7S_UW )
L, WZ-ST2-MB-U06-24/25Z ( P7S_UK )
```

**E3** (K) The student can both establish a communicative interaction in English so as to initiate and maintain business contacts and resolve conflict situations. The student can work in a team, also in an international environment. The student can consciously carry out the process of self-education and share their knowledge with others

```
L, WZ-ST2-MB-K03-24/25Z ( P7S_KO )
L, WZ-ST2-MB-K04-24/25Z ( P7S KO )
```

#### Treści programowe przedmiotu

**c1** Basic issues of economics, finance and business (recruitment, management, marketing, sales, ICT, organization and company finances, corporate culture, business ethics) in accordance with the syllabus

available on the CJ website and the language level according to the CEFR scale.

- **C2** Elements of the English language system knowledge (grammar, sentence structure, phraseology and phonetics) in accordance with the syllabus available on the CJ website and the language level according to the CEFR scale.
- **c3** Business writing and business correspondence in accordance with the syllabus available on the CJ website and the language level according to the CEFR scale
- **C4** Soft skills and elements of intercultural communication in accordance with the syllabus available on the CJ website and the language level according to the CEFR scale

# Nazwa przedmiotu

#### **Human Resources Management**

# Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

E1 (W) Student knowledges and understanding of HRM basic terms, areas, activities.

```
L, WZ-ST2-MB-W01-24/25Z ( P7S_WG )
L, WZ-ST2-MB-W02-24/25Z ( P7S WG )
```

**E2** (U) Student has skills in area of employees' recruitment and selection, appraisal, development and motivation processes.

```
L, WZ-ST2-MB-U03-24/25Z ( P7S_UW )
L, WZ-ST2-MB-U04-24/25Z ( P7S_UW )

E3 (K) Student is ability to work with the group in
```

E3 (K) Student is ability to work with the group in the area of HRM.

```
L, WZ-ST2-MB-K04-24/25Z ( P7S_KO )
L, WZ-ST2-MB-K06-24/25Z ( P7S_KR )
L, ZZ-ST2-MB-K07-24/25Z ( P7S_KO )
```

- **w1** Introduction (lectures plan and modules, assignment methods, requirements and grades). The essence and character of HRM. Recruitment process: job analysis and design (differences in qualifications and competencies), job profiling, methods and tools of recruitment process, introduction to the concept of Employer Branding (EB). Selection process: methods of selection specially dedicated to behavioural event interview and Assessment Center. On-boarding process (role, steps).
  - **W2** Performance appraisal: role of appraisal, appraisal process, importance and process of feedback, failures in employees' appraisal.
  - **W3** Development process: character of andragogy, role of employees' development, methods and tools specially dedicated to on-the-job trainings eg. mentoring, coaching, job rotation, action learning, methods and tools specially dedicated to off-the-job training (organization oftrainings and workshops), career management and paths.
  - W4 Employees' motivation: selected theories of employees' motivation, research results in area of

motivational factors, - practical examples of employees motivation increase.

- w5 Compensation and benefit systems. Employees' exit experience.
- C1 Introduction (classes plan and modules). Recruitment process: job analysis, design and job profiling,
- methods and tools of recruitment process, introduction to the concept of Employer Branding (EB).

Case study. Selection process: - methods of selections specially dedicated to telephone interview, behavioural event interview and Assessment Center. Candidate experience in recruitment and selection process. Case study. On-boarding process – best practice.

- **C2** Performance appraisal: role of appraisal, appraisal process, importance and process of feedback (role playing). Case study.
- **C3** Development process: methods and tools specially dedicated to on-the-job trainings eg. mentoring, coaching, job rotation, action learning, methods and tools specially dedicated to off-the-job training (organization of trainings and workshops), career management and paths. Case study.
- **C4** Employees' motivation: selected theories of employees' motivation, practical examples of employees motivation increase.
- C5 Compensation and benefit systems. Employees' exit experience. Case study.

#### Nazwa przedmiotu

#### **Intellectual Capital Management**

### Język prowadzenia zajęć

angielski

### Realizowane efekty uczenia się

E1 (W) Student knows and understands the phenomena of organization's intellectual capital.

```
L, WZ-ST2-MB-W02-24/25Z ( P7S_WG )
```

 $\c L, wz-st2-mb-w05-24/25z \ (\ p7s\_wg \ )$ 

**E2** (U) Student can analyze the structure of the organization's intellectual capital.

```
L, WZ-ST2-MB-U03-24/25Z ( P7S UW )
```

L WZ-ST2-MB-U09-24/25Z ( P7S UO )

 ${f E3}$  (U) Student can use particular methods to measure the organization's intellectual capital.

```
L, WZ-ST2-MB-U01-24/25Z ( P7S UW )
```

 $\c L + \c WZ - ST2 - MB - U03 - 24/25Z \c ( \c P7S UW \c)$ 

 ${f E4}$  (K) Student is ready to apply the rules for getting credit. Student is ready to realize projects, develop and deliver multimedia presentations in the form of teamwork.

```
L, WZ-ST2-MB-K02-24/25Z ( P7S KK )
```

L, WZ-ST2-MB-K04-24/25Z ( P7S KO )

# Treści programowe przedmiotu

**W1** Increase the importance of the organization's intangible resources and build and maintain competitive advantage. Intangible resources and intellectual capital - relationships of concepts. The intellectual capital of the organization - the roots of the concept.

- **w2** The essence and specificity of intellectual capital. Static and dynamic perspective on the perception and definition of the organization's intellectual capital. Structure of the organization's intellectual capital. Sub-capitals and their interdependencies within the framework of selected concepts of intellectual capital management.
- **W3** Valuing the organization's intellectual capital. Evolution of methods for measuring intellectual capital. External and internal measures. Methods for assessing an organization's intellectual capital based on market capitalization and asset return. Direct methods of measuring intellectual capital and point card methods.
- **W4** Employees in a knowledge-based economy. Fourth industrial revolution and its consequences. Towards the human capital of the new economy. Subpopulations of knowledge-based organizations employees. Professionals and their characteristics. Work environment knowledge worker.
- **C1** Classification of tangible and intangible assets of organizations. Case study. Simulation for a selected service and production company.
- C2 Practical analysis of the organization's intellectual capital based on MCM and ROA methods.
- **c3** Analysis and diagnosis of the key competences of the organization. Case study. Shaping the work environment of knowledge workers.
- C4 Practical analysis of the organization's intellectual capital based on DIC and SC tools.

#### **Macroeconomics**

#### Język prowadzenia zajęć

angielski

### Realizowane efekty uczenia się

**E4** (W) Graduate knows and can explain macroeconomic phenomena and processes occurring in closed and open economies.

```
\downarrow WZ-ST2-MB-W01-24/25Z ( P7S WG )
```

**E5** (U) Graduate is able to identify and interpret economic processes referring to theoretical and empirical argumentation.

```
\c L + \c WZ - ST2 - MB - U01 - 24/25Z \c ( \c P7S UW \c)
```

**E6** (K) Graduate is convinced about the necessity for upgrading his knowledge on socio-economic phenomena and knows how to achieve this objective, and is ready to critically evaluate macroeconomic environment for doing business in the modern economy.

```
\c L, wz-st2-mb-k01-24/25z \ (\ p7s\_kk \ )
```

# $\c L = ST2-MB-K02-24/25Z \ (\ P7S_KK \ )$

- **w1** The Data of Macroeconomics: a. System of National Accounts, b. Measuring the Cost of Living and Inflation, c.Labour Market Indicators
  - w3 The Goods and Services Market a short-run perspective

- w5 Money, Central Banks, and Financial Markets in Macroeconomics
- **w6** IS-LM Model; Fiscal and Monetary Policy in the Short Run
- **W7** Labour Market labour demand, labour supply, and wage-adjustment process.
- **W8** Economic Growth
- **W8** The AD/AS Model, Business Fluctuations, and Price Adjustments
- w9 The Phillips Curve, and the Natural Rate of Unemployment
- **W9** The open economy: exchange rate regimes, balance of payments, and the channels of external shocks transmission
- **C1** Basic Tools of Macroeconomic Analysis; The Circular Flow Diagrams; Measuring a Nation's Income (calculations of GDP, GNP, NI, and so on); Nominal and Real Values; Calculations of the CPI and GDP deflators
- **c2** Demand for Goods and Services, The Keynesian Cross, The Equilibrium Output in the Short Run, Fiscal Multipliers
- **C4** Creation of Money and Money Multipliers; Money Market Diagrams; Quantity Equation of Money; Fisher Equation
- C5 Inflation sources, costs, and consequences of inflation.
- C6 Fiscal and monetary policy in the open economy: IS-LM-BP model
- **c7** The Economy in the Long Run: Sources of Economics Growth. From Growth Theory to Growth Empirics empirical evidence from developed and developing countries.
- $\textbf{C8} \ \, \text{Derivation of the AD and AS Curves; AD/AS Model; Supply and Demand Shocks-market adjustments and stabilization policy } \\$
- C9 Macroeconomic Policy Dilemmas; Review of the Course
- C9 Labour market: Job Loss, Job Findings, and the labour market policy

# **Managerial Accounting**

# Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

**E1** (W) The student has knowledge regarding methods and techniques useful in the operational management of the business unit. He/she knows these tools, their positives and negatives, and the difficulties related to their practical use.

```
L, WZ-ST2-MB-W03-24/25Z ( P7S WG )
```

**E2** (U) The student is able to foresee and evaluate possible results of decisions regarded the operational activity of the business unit. He/she is skilled in selecting and using proper accounting methods and techniques.

```
L WZ-ST2-MB-U03-24/25Z ( P7S UW )
```

E3 (K) The student is ready to assess his/her knowledge critically, recognize the importance of

knowledge in accounting and consult experts and inspire activities for the benefit of the public.

L, WZ-ST2-MB-K02-24/25Z ( P7S KK )

#### Treści programowe przedmiotu

- **W1** Accounting information requirements and different types of information systems used for strategic planning, management control and operational control and decision-making. Principal internal and external sources of management accounting information.
  - **W2** Essence of costs and cost classification criteria.
  - **W3** Methods of fixed and variable cost elements extraction.
  - **w5** Contribution to sales ratio in multi-product situations, break even charts and profit volume charts, their interpretation including multi-product situations.
  - **w6** Limiting factors in a scarce resource situation, determination of optimal production plan (single limiting factor) within the context of "make" or "buy" decisions.
  - **W7** Limitations of CVP analysis for planning and decision making, the impact of cost structure and price changes.
  - **w8** Pricing decisions: price elasticity of demand, total cost function, optimum selling price and quantity, evaluation of a decision to increase production and sales levels.
  - **C1** Cost terms and classification.
  - **C2** Methods of fixed and variable cost elements extraction.
  - **C3** CVP analysis in single product settings.
  - **C4** CVP analysis in multi-product settings.
  - **C5** Limiting factors in a scarce resource situation, determination of optimal production plan single and multiple limiting factor(s).
  - C6 Pricing decisions: price elasticity of demand, total cost function, optimum selling price and quantity.
  - C7 Assesment test.

Nazwa	przedmiotu
I TUL WU	przedmota

#### **Mathematics**

# Język prowadzenia zajęć

angielski

#### Realizowane efekty uczenia się

 ${f E1}$  (W) Student knows and understands mathematical tools and methods used in economic modelling - in description of phenomena, solving a model and interpreting results.

```
, WZ-ST2-MB-W06-24/25Z ( P7S WG )
```

**E2** (U) Student is able to approach actively the solution of mathematical problem, to use his knowledge in the analysis of the problem and to make a proper choice of tools leading to the assumed goals.

```
L WZ-ST2-MB-U01-24/25Z ( P7S UW )
```

E3 (K) Students is ready to perform systematic, consequent, reliable and ethical actions in order to solve

the problems.

```
L, WZ-ST2-MB-K01-24/25Z ( P7S_KK )
L, WZ-ST2-MB-K02-24/25Z ( P7S KK )
```

### Treści programowe przedmiotu

# **W1** Elements of logic

- **W2** Complex numbers
- **w3** Linear Algebra (1)
- 3.1 Matrices, determinants, inverse matrix properties
- 3.2 Systems of linear equations solvability
- 3.3 Leontief model
- **W4** Linear Algebra (2) Theory of Eigenvalues and Eigenvectors
- 4.1 Eigenvalues and eigenvectors
- 4.2 Diagonalisation of matrices, power of matrix
- 4.3 Difference equations
- **w5** Multivariate calculus (1) Economic applications
- 5.1 Derivative and partial derivative of function
- 5.2 Economic interpretation of derivatives
- 5.3 Taylor's approximation
- **W6** Multivariate calculus (2) Optimization
- 6.1 Local extrema of functions of several variables
- 6.2 The least squares method
- 6.3 Constrained extrema (functions of three and more variables with one or more constraints)
- **w7** Integration
- 7.1 Indefinite integration definition, methods
- 7.2 Definite integration properties, average value
- **W8** Random variables and probability distributions.
- **C1** Elements of logic
- **C2** Complex numbers
- **C3** Linear Algebra (1)
- 3.1 Matrices, determinants, inverse matrix properties
- 3.2 Systems of linear equations solvability
- 3.3 Leontief model
- **C4** Linear Algebra (2) Theory of Eigenvalues and Eigenvectors
- 4.1 Eigenvalues and eigenvectors
- 4.2 Diagonalisation of matrices, power of matrix
- 4.3 Difference equations
- C5 Multivariate calculus (1) Economic applications
- 5.1 Derivative and partial derivative of function
- 5.2 Economic interpretation of derivatives
- 5.3 Taylor's approximation

- **C6** Multivariate calculus (2) Optimization
- 6.1 Local extrema of functions of several variables
- 6.2 The least squares method
- 6.3 Constrained extrema (functions of three and more variables with one or more constraints)
- **C7** Integration
- 7.1 Indefinite integration definition, methods
- 7.2 Definite integration properties, average value
- C8 Random variables and probability distributions.

#### Methodology of Economics and Social Research

### Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

E1 (W) Student know and understand the principles of social and economic research

L WZ-ST2-MB-W04-24/25Z ( P7S WG )

E2 (U) Student is able to analyze existing data secondary data

L, WZ-ST2-MB-U02-24/25Z ( P7S UW )

E3 (K) Student is ready to demonstrate the ability to work in a task-groups

L, WZ-ST2-MB-K02-24/25Z ( P7S KK )

# Treści programowe przedmiotu

- **W1** Types of reasoning and explanations. Types of research design. Emic and etic perspectives. Causality and counterfactuals. Causal and correlational research
  - **w2** Experimental and quasiexperimental designs. Randomized experiments. Quasi-experimental design. Interrupted time-series. Regression discontinuity.
  - **W3** Natural experiments. Experiment ex post facto. Correlational designs. Corss-sexctional and longitudinal designs.
  - **W4** Research process. Problem definition. Hypothesis formulation. Constructs and indicators.

Measurement scales. Validity and reliability. Latent and manifest variables.

- **C1** Problem formulation. Research design. Secondary and primary data. Sources of information and databases. Social and economic indicators. Index numbers.
- **C2** Primary data. Research designs. Steps in research project. Problem formulation. Research questions and hypothesis. Concept maps.
- **C3** Questionnaire design. Types of questions. Wording. Response scales. Likert and Guttman scales. Scale validity and reliability. Social desirable responses.
- **C4** Issues in collecting primary data: sampling and data collection Sampling process Probability and nonprobability samples Sample size Data collection Weighting and poststratification

Nazwa przedmiotu
Project Management
Język prowadzenia zajęć
angielski
Realizowane efekty uczenia się
E1 (W) Graduate knows and understands in a deepened degree of theories in the field of project management
Treści programowe przedmiotu
C1 Introduction to project management. Presentation of requirements for a final project.  C2 Statement of Work (SOW)  C3 Business Case (BC)  C4 Feasibility Study (FS)  C5 Project Charter (PC)  C6 Risk management. Failure Mode and Effects Analysis (FMEA)  C7 Time estimation. Scheduling.  C8 Resource estimation. Budgeting.  C9 Computer Aided Scheduling  C10 Computer Aided Budgeting and Monitoring  C11 Project Quality Management  C12 Project team management  C13 Stakeholders relations management  C14 Agile project management  C15 Presentation of students' projects

Nazwa przedmiotu
Statistics
Język prowadzenia zajęć
angielski
Realizowane efekty uczenia się
E1 (W) Knowledge of multivariate statistical methods.  L, WZ-ST2-MB-W06-24/25Z ( P7S_WG )  L, ZZ-ST2-MB-W09-24/25Z ( P7S_WG )

```
E2 (U) Competence in use of statistical software (Microsoft Excel and R CRAN).
```

- L, WZ-ST2-MB-U02-24/25Z ( P7S UW )
- L, WZ-ST2-MB-U03-24/25Z ( P7S UW )
- **E3** (K) Readiness to solve problems related to socio-economic phenomena using multivariate statistical methods.
- $\c L + \c WZ-ST2-MB-K01-24/25Z \c ( \c P7S_KK \c)$
- L, WZ-ST2-MB-K02-24/25Z ( P7S KK )

# Treści programowe przedmiotu

- **W1** Analysis of variance, Welch's F-test, and Kruskal–Wallis test by ranks
  - **W2** Linear and non-linear ordering
  - **W3** K-means clustering
  - **W4** Principal component analysis
  - **w5** Factor analysis
  - **w6** Reliability analysis
  - **W7** Analysis of spatial data, including spatial autocorrelation
  - **w8** Linear regression analysis
  - w9 Logistic regression analysis
  - **C1** Data preparation and pre-processing in Microsoft Excel and R CRAN. Data retrieval from open-data sources
  - **C2** Distribution testing
  - C3 Analysis of variance, Welch's F-test, and Kruskal–Wallis test by ranks
  - C4 Linear and non-linear ordering
  - **C5** K-means clustering
  - C6 Principal component analysis with metric indicators
  - C7 Factor analysis with categorical indicators
  - **C8** Reliability analysis
  - C9 Analysis of spatial data, including spatial autocorrelation
  - C10 Linear regression analysis
  - C11 Logistic regression analysis

# Nazwa przedmiotu

# **Time Series Analysis**

# Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

**E2** (U) Students can apply standard time series models

$$\c L + WZ-ST2-MB-U02-24/25Z \c ( P7S_UW \c)$$

E3 (K) A graduate is equipped to critically assess the content of statements about socio-economic

phenomena in the contemporary economy.

L, WZ-ST2-MB-K01-24/25Z ( P7S KK )

**E4** (W) A graduate is familiar with and understands statistical and econometric methods applied to time series data.

L, WZ-ST2-MB-W06-24/25Z ( P7S WG )

### Treści programowe przedmiotu

- **W1** Introduction to forecasting
  - **w2** Basic forecasting methods
  - **W3** Time series decomposition
  - **W4** Exponential smoothing method
  - **w5** ARIMA and SARIMA models

Vazura	przedmiotu
vazwa	przeamion

#### Diploma seminar

#### Język prowadzenia zajęć

angielski

### Realizowane efekty uczenia się

- 1. Student has knowledge of methods of collecting information, compiling results, deriving conclusions.
- WZ-ST2-MB-W01 (P7S\_WG); WZ-ST2-MB-W02(P7S\_WG)
- 2. Student will be able to establish research objectives, problems and hypotheses. Student is able to identify sources of information, select and use methods of their collection and application. Student is able to verify research hypotheses and derive conclusions WZ-ST2-MB-U01 (P7S\_UW); WZ-ST2-MB-U02 (P7S\_UW)
- 3. Student has mastered the technique of writing the thesis. He/she is proficient in the use of computer technology in the process of presentation and processing of data and editing of the thesis. Is able to use the acquired conceptual system of economics and management. Is able to use the developed material in the thesis during the diploma examination- WZ-ST2-MB-U04 (P7S\_UK); WZ-ST2-MB-U06 (P7S\_UK);
  - 4. Student is aware of the need to respect intellectual property rights. Student consciously applies the process of continuous learning WZ-ST2-MB-K01 (P7S\_KK); WZ-ST2-MB-K06 (P7S\_KR)

- 1. Construction and principles of thesis preparation and writing.
- 2. Basic elements of the workshop of scientific and research work.
- 3. Technique of writing the thesis.
- 4. Sources of acquiring knowledge. Ways of use from the subject literature.
- 5. Development of the objectives and plan of the thesis. Presentation.
- 6. Presentation of the subsequent theoretical chapters of the thesis with discussion.
- 7. Development of research methodology aims, objectives, research problems and hypotheses.
- 8. Selection or development of research methods.
- 9. Presentation of research results and conclusions.
- 10. Presentation of the edited thesis as a whole.

# Elective Lecture sem. 3; sem. 4

# Język prowadzenia zajęć

angielski

# Realizowane efekty uczenia się

The course charter covers at least three learning outcomes (maximum six) - at least one each of knowledge (W), skills (U) and social competence (K):

- (W): WZ-ST2-MB-W01, WZ-ST2-MB-W02, WZ-ST2-MB-W03; WZ-ST2-MB-W04; WZ-ST2-MB-W05; WZ-ST2-MB-W06 WZ-ST2-MB-W07; WZ-ST2-MB-W08; WZ-ST2-MB-W09; WZ-ST2-MB-W10;
- (U): WZ-ST2-MB-U01; WZ-ST2-MB-U02; WZ-ST2-MB-U03; WZ-ST2-MB-U04; WZ-ST2-MB-U05; WZ-ST2-MB-U06; WZ-ST2-MB-U07; WZ-ST2-MB-U09; WZ-ST2-MB-U010; WZ-ST2-MB-U011; WZ-ST2-MB-U012; WZ-ST2-MB-U013;
- (K): WZ-ST2-MB-K01; WZ-ST2-MB-K02; WZ-ST2-MB-K03; WZ-ST2-MB-K04; WZ-ST2-MB-K05; WZ-ST2-MB-K06; WZ-ST2-MB-K07.

# Treści programowe przedmiotu

Scope of the curriculum content of the subjects includes issues related to the scope of organisational management issues.