COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Analysis of Enterprises' Market Position (analiza pozycji rynkowej przedsiębiorstw) (PODSTAWOWE)**	Course code: **EFZ71AIJ3432_43S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 2 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	2	discussion classes	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**prof. dr hab. IGA RUDAWSKA**
Course instructor	**prof. dr hab. IGA RUDAWSKA**
Course / module objectives	**To make students familiar with the principles of analysis of market position of enterprise.** **To make students able to practice skills referring analysis of market position of company.**
Prerequisites	**Regarding knowledge: a student knows principles of macroeconomics and principles of management.** **Regarding skills: a student can interpret basic market mechanisms.** **Regarding social competencies: a student can work in a team.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student has a basic knowledge about purposes, specifics and structure of market position analysis of an enterprise.**	K_W01
	2	EP2	**Student knows principles of methods and tools of market position analysis of an enterprise.**	K_W05
skills	1	EP3	**Student can give the proper solutions to typical problems encountered in analysis of market position of an enterprise.**	K_U05
	2	EP4	**Student can apply basic methods and tools of market position analysis.**	K_U04
social competences	1	EP5	**Student is ready to take part in preparing projects regarding analysis of market position.**	K_K01
	2	EP6	**Student is ready to formulate opinions and views referring different aspects of analysis of market position in entrepreneurship.**	K_K04

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Analysis of Enterprises' Market Position (analiza pozycji rynkowej przedsiębiorstw)**			
Format of instruction: **lecture**			
1. **Domain of market position analysis in enterprise.**	2	1	0
2. **Levels and basic elements of market position analysis of enterprise.**	2	2	0
3. **External analysis of a company.**	2	3	0

4. **Sectoral analysis.**	2	3	0
5. **Resources and capabilities in enterprise.**	2	2	0
6. **Competitive advantage and the scope of a company.**	2	2	0
7. **Implications of the internalization of market position analysis of enterprise.**	2	2	0
Format of instruction: **discussion classes**			
1. **Exercise on the domain of market position analysis of enterprise**	2	1	0
2. **Exercise on the levels and elements of market position analysis of enterprise.**	2	1	0
3. **Designing external analysis of a company.**	2	2	0
4. **Designing sectoral analysis.**	2	2	0
5. **Exercise on the resources and capabilities of a company.**	2	2	0
6. **Exercise on the competitive advantage**	2	2	0
7. **Exercise on the implications of the internalization of market position analysis.**	2	2	0
8. **Concluding exercise on applying market position analysis of enterprise.**	2	3	0

Modes of delivery	**PPT presentation, case studies, discussion based on papers, team work**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP6**
	PROJEKT	**EP3,EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**The final grade of the course will be calculated on the basis of two assignments worth:** **-50% colloquium (60% points) - open questions** **-50% poster prepared within groups** **The condition for passing the exercises is getting a positive grade for a poster.** **The condition for passing the lectures is getting a positive mark in the test.**
	Grade calculation principles
	The final grade from the course is equal to the arithmetic mean of grades from the exercises and the lecture.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	2	Analysis of Enterprises' Market Position (analiza pozycji rynkowej przedsiębiorstw)		Arytmetyczna	
	2	Analysis of Enterprises' Market Position (analiza pozycji rynkowej przedsiębiorstw) [ćwiczenia]	zaliczenie z oceną		
	2	Analysis of Enterprises' Market Position (analiza pozycji rynkowej przedsiębiorstw) [wykład]	zaliczenie z oceną		

Basic reading	Crossan M.M., Rouse M.J., et al. (2011): Strategic analysis and action, 8th edition, Pearson Canada, Toronto
	Grant R.M. (2013): , Contemporary strategic analysis: text and cases, John Wiley and Sons Ltd., 8th edition, Chichester
	Rothaermel, Frank T. (2017): Strategic management. 3th Edition, McGraw-Hill Education, New York
	Warner A. (2010): Strategic analysis and choices, A structured approach,, Business Expert Press, New York
Supplementary reading	Blue J. (2015): Strategic Analysis Report, Tesla Motors & Powerwal
	Harvard Business Review – current issues

STUDENT WORKLOAD		
	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**7**	**0**
Preparation for contact hours	**9**	**0**
Private reading and studying	**10**	**0**
Participation in tutorials	**5**	**0**
Preparation of project / essay / etc.	**14**	**0**
Preparation for test / exam	**0**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Banking (bankowość) (PODSTAWOWE)**	Course code: **EFZ71AIJ3432_44S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status: **obligatory**	Language of instruction: **semester: 2 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	2	discussion classes	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr DOROTA SKAŁA**
Course instructor	**dr DOROTA SKAŁA**
Course / module objectives	**The goal of this course is to introduce topics that may be used to identify and understand the primary processes taking place within the banking system.**
Prerequisites	**The student understands the basic functionality of financial institutions, has an ability to analyse basic processes taking place in the financial sector, understands the need for the continuous study process.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student defines and describes the rules and features regarding bank activities.**	K_W02
	2	EP2	**The student describes the role of banking system in the economy and its effect on financial stability.**	K_W02
	3	EP3	**The student has knowledge of the banking system structure and the effects of its evolution.**	K_W02
skills	1	EP4	**The student is able to identify factors shaping the financial situation and market position of banks.**	K_U02 K_U17
	2	EP5	**The student is able to analyse basic elements influencing the risk-profitability relation in a bank.**	K_U02
social competences	1	EP6	**The student is prepared to clearly present strenghts and weaknesses of individual banks.**	K_K01 K_K04
	2	EP7	**The student is interested in further studies and analyses regarding bank activities.**	K_K04
	3	EP8	**The student is prepared to act as an active member of a team, analysing the basic characteristics of chosen banks.**	K_K01 K_K04

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Banking (bankowość)**			
Format of instruction: **lecture**			
1. **The structure and changes within the modern banking system. Ownership changes. Regulatory framework. The role and types of banks. The role of banking systems in modern economies.**	2	3	0
2. **Bank funding structures: sources, stability and maturity.**	2	2	0
3. **Main categories of bank assets and their links with risk and profitability.**	2	2	0

4. **Assets and liabilities management in banking. Bank risk - credit risk, liquidity risk, market risk and operational risk.**	2	4	0
5. **Bank capital, capital adequacy, Basle I, II and III agreements.**	2	2	0
6. **The banking system and the financial safety net. Banking supervision and deposit insurance systems. Moral hazard problems.**	2	2	0
Format of instruction: **discussion classes**			
1. **The analysis of changes in the modern banking systems. Privatisation, nationalisation and shareholder structure, private versus public banks - discussion.**	2	2	0
2. **Bank balance sheet and income statement analysis.**	2	4	0
3. **Main elements of the asset and liability transactions and intermediation functions of commercial banks, banking activities within the regulatory framework.**	2	2	0
4. **Bank risk - credit risk (case study).**	2	2	0
5. **Market risk and capital adequacy: problem solving, calculations.**	2	2	0
6. **Student presentations - analysis of chosen banks, in the context of their shareholder structure, size, market position, profitability and risk.**	2	2	0
7. **Summary and final conclusions.**	2	1	0

Modes of delivery	**Powerpoint presentations, text analysis and discussion, team projects (student presenations)**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	PREZENTACJA	**EP4,EP5,EP6,EP7,EP8**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Lecture grading: Written test, in the form of a multiple choice test (80% points), with 2-4 additional short questions (20% points). Exam grading: 50% pass, 75% grade 4.0.** **Tutorial grades: student presentations, homework assignments and reports handed in at the end of each class.** **Student presentations: group projects (3 students max), oral presentations of chosen banks during the final class based on powerpoint presentations.**
	Grade calculation principles
	The final grade will be calculated as a weighted mean of the written test grade (70%) and project/presentation grade (30%). Students have to receive a positive grade on the tutorial in order to participate in the final exam (lectures).

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	2	Banking (bankowość)		Ważona	
	2	Banking (bankowość) [wykład]	zaliczenie z oceną		0,30
	2	Banking (bankowość) [ćwiczenia]	zaliczenie z oceną		0,70

Basic reading	De Haan J., Oosterloo S., Schoenmaker D. (2018): Financial Markets and Institutions, Cambridge University Press
	Matthews K., Mishkin F., Giuliodori M. (2013): The Economics of Money, Banking and Financial Market, Pearson
Supplementary reading	Choudhry M. (2012): Principles of Banking, Wiley
	Koch T, MacDonald S. (2009): Bank Management, South Western College Pub
	Saunders A., Cornett M. (2011): Financial Institutions Management: a Risk Management Approach, MC Graw-Hill

STUDENT WORKLOAD

	No. of hours	
		including e-learning

Contact hours	**30**	**0**
Participation in test / exam	**0**	**0**
Preparation for contact hours	**6**	**0**
Private reading and studying	**10**	**0**
Participation in tutorials	**9**	**0**
Preparation of project / essay / etc.	**14**	**0**
Preparation for test / exam	**6**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**		
Course title: **Data Acquisition Systems (systemy pozyskiwania danych) (KIERUNKOWE)**		Course code: **EFZ71AIJ3432_39S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	laboratory	15	0	pg	2
		lecture	15	0	pg	
Total			**30**			**2**

Course / module coordinator	**dr DOMINIK ROZKRUT**
Course instructor	**dr DOMINIK ROZKRUT**
Course / module objectives	**- gaining abilities of aquiring data from different sources - gaining knowledge about information system of public statistics in Poland and in European Union - aquiring abilities to find and evaluate the quality of data sources - providing students with an understanding of the impact that information and the systems that manage it have on the ways in which information is gathered, processed, stored and disseminated in society**
Prerequisites	**- knowledge and abilities from "Statistics" course - knowledge and abilities from "Macroeconomics" course**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student knows the structure and organization of public statistics in Poland and European Union.**	**K_W11**
	2	EP2	**Student knows the official data sources and methods of their acquisition.**	**K_W10**
	3	EP3	**Student knows the statistical surveys programme of the public statistics in Poland.**	**K_W01**
skills	1	EP4	**Student is able to define information needs, find and evaluate data sources.**	**K_U10 K_U18**
	2	EP5	**Student is able to classify data and present them accordingly.**	**K_U08 K_U10 K_U17**
	3	EP6	**Student is able to use data acquisition techniques in order to diagnose economic processes.**	**K_U10 K_U18**
social competences	1	EP7	**Student uses results of surveys conducted by statistical institutions, including acknowledging the importance and consequences of cooperation with public statistics institution.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Data Acquisition Systems (systemy pozyskiwania danych)**			
Format of instruction: **lecture**			
1. **Definition of information, types and functions of information in economy. Economics of information. Information processes and data acquisition techniques. Types of statistical surveys.**	1	2	0
2. **Data structures. Electronic data exchange protocols.**	1	2	0

3. **State information infrastructure. Main resources of state information infrastructure. Functions of state information systems.**	1	2	0
4. **The role of public statistics system in the state information infrastructure. Legal basis for the functioning of the public statistics system in Poland and the European Union. Structure and organization of public statistics system in in Poland and the European Union. Structure and organization of public statistics system in Poland. European Statistical System.**	1	2	0
5. **Statistical research programme of public statistics, European statistical programme.**	1	2	0
6. **Information resources of international organizations.**	1	2	0
7. **Commercial data sources, domain information systems. Specialized data search tools. Assessment of sources reliability and data quality.**	1	3	0
Format of instruction: **laboratory**			
1. **Defining information needs. Searching for information resources. Examples of statistical databases systems.**	1	2	0
2. **Methods of gathering, processing and storing data. Statistical meta information and para information systems.**	1	2	0
3. **Geographic Information System (GIS).**	1	2	0
4. **Information resources of Polish public statistics.**	1	2	0
5. **Information resources of international organizations: International Monetary Fund, World Trade Organization, The Organisation for Economic Co-operation and Development, World Bank, Bank for International Settlements, United Nations.**	1	2	0
6. **Information resources of the commercial and domain databases.**	1	2	0
7. **Internet as a data source. Assessment of sources reliability and data quality.**	1	3	0

Modes of delivery	**The course uses lectures with (when needed) multimedia presentations of statistical surveys of socio-economic processes.** **Metody kształcenia economic processes and lab classes based on individual and group work covering practical assignments related to collecting, processing and storing data.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	SPRAWDZIAN	**EP1,EP2,EP3**
	PROJEKT	**EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Lectures: Written txt (min 60% of proper answers to pass).** **Laboratories:** **Project - a project to achieve the learning outcomes tested on practical skills and teamwork.**
	Grade calculation principles
	The final grade is weighted average of the grades received form on practical skills and teamwork (laboratories) and lectures.

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	1	Data Acquisition Systems (systemy pozyskiwania danych)		Ważona	
	1	Data Acquisition Systems (systemy pozyskiwania danych) [laboratorium]	zaliczenie z oceną		0,80
	1	Data Acquisition Systems (systemy pozyskiwania danych) [wykład]	zaliczenie z oceną		0,20

Basic reading	Olenski J. (2006): Infrastruktura informacyjna panstwa w globalnej gospodarce, Uniwersytet Warszawski, Warszawa
	Statistical Survey Programme of Public Statistics (current). Program Badań Statystycznych Statystyki Publicznej (aktualny)
	Statistical Work Programme of the Commission (current)
Supplementary reading	Cieciura M. : Podstawy technologii informacyjnych z przykładami zastosowań, Vizja Pressit
	SDMX User Guide, version 2009-1-7
	Ustawa o statystyce publicznej z 29 czerwca 1995 (z pózn.zmianami).

STUDENT WORKLOAD		
	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**2**	**0**
Private reading and studying	**2**	**0**
Participation in tutorials	**5**	**0**
Preparation of project / essay / etc.	**8**	**0**
Preparation for test / exam	**0**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**		
Course title: **Descriptive statistics (statystyka opisowa) (KIERUNKOWE)**		Course code: **EFZ71AIJ3432_38S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	discussion classes	15	0	pg	4
		laboratory	15	0	pg	
		lecture	15	0	e	
Total			**45**			**4**

Course / module coordinator	**dr KRZYSZTOF DMYTRÓW**
Course instructor	**dr KRZYSZTOF DMYTRÓW**
Course / module objectives	**The aim of the course is to acquire basic knowledge on a quantitative description of economic and social phenomena as well as ability to present the results of research, based on primary or secondary data.**
Prerequisites	**- knowledge of basic economic concepts, - knowledge and abilities from the "Mathematics" module**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the parameters describing the socioeconomic characteristics, their properties, measurement scales, student knows how to describe dynamics and relationships.**	**K_W10**
	2	**EP2**	**Student knows the research methods in the social sciences and methods of measurement specific for social and economic sciences.**	**K_W06 K_W10**
	3	**EP3**	**Student knows the methods of presentation of the study of primary and secondary data, taking into account characteristics of the populations and distributions.**	**K_W06 K_W10**
skills	**1**	**EP4**	**Student is able to quantitatively describe the socioeconomic phenomena on the basis of both primary and secondary data.**	**K_U06 K_U10 K_U15**
	2	**EP5**	**Student is able to estimate strength and direction of relationships.**	**K_U05 K_U06 K_U10**
	3	**EP6**	**Student is able to describe dynamics of phenomena, use economic indices.**	**K_U05 K_U10**
social competences	**1**	**EP7**	**Student is ready to use results of surveys conducted by national statistical institutes, including acknowledging the importance and consequences of cooperation with public statistics institution.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning

Subject title: **Descriptive statistics (statystyka opisowa)**

Format of instruction: **lecture**			
1. **Types of statistical surveys, definition of statistical unit, population and sample, statistical surveys; types of variables, measurement scales, methods of data presentation, measurement scales. The structure of mass processes.**	1	2	0
2. **One-dimensional populations, empirical distributions, moments and quantiles for metric scales, measures of central tendency, measures of dispersion, measures of skewness, measures of kurtosis.**	1	3	0
3. **Correlation coefficients, Chi2, variance equality. Multidimensional analysis, partial correlations.- dimensional populations, tables, ranks, types of relationships.**	1	4	0
4. **Empirical and theoretical regressions, the method of least squares for linear regression, measures of regression fit.**	1	2	0
5. **Measurement of dynamics of economic and social phenomena. Time series, chronological mean. Analysis of shortterm changes, individual indices, the average rate of change, average absolute change. Aggregate indexes. Price indices. Aggregate indices for relative values.**	1	2	0
6. **Decomposition of time series, trend and seasonality. Linear and exponential trend. Additive and multiplicative seasonality.**	1	2	0
Format of instruction: **discussion classes**			
1. **Statistics, populations, data, notation, tables and charts, measurement scales. Measures of central tendency, dispersion, skewness, kurtosis.**	1	5	0
2. **Correlation and regression analysis:** **- correlation series and contingency table,** **- correlation coefficients: Tschuprow's, Spearman's rank, correlation ratios, Pearson product-moment correlation coefficient,** **- empirical and theoretical regression lines.**	1	5	0
3. **Analysis of dynamics:** **- short-term analysis: differences and indexes,** **- long-term analysis: analysis of trends and seasonality.**	1	5	0
Format of instruction: **laboratory**			
1. **Statistics, populations, data, notation, tables and charts, measurement scales. Measures of central tendency, dispersion, skewness, kurtosis.**	1	5	0
2. **Correlation and regression analysis:** **- correlation series and contingency table,** **- correlation coefficients: Tschuprow's, Spearman's rank, correlation ratios, Pearson product-moment correlation coefficient,** **- empirical and theoretical regression lines.**	1	5	0
3. **Analysis of dynamics:** **- short-term analysis: differences and indexes,** **- long-term analysis: analysis of trends and seasonality.**	1	5	0

Modes of delivery	**The course comprises lectures using (where appropriate) transparencies / presentations of research of socioeconomic phenomena, exercises and laboratories - working individually and in groups.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3**
	KOLOKWIUM	**EP4,EP5,EP6**
	PROJEKT	**EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**The form and terms of the lectures:** **A written exam consisting of 7 single-choice and 3 multiple-choice test questions. The exam tests the knowledge of students. Students can obtain up to 10 points. There are the following thresholds for grades:** **Grade 3.0 - at least 5 points.** **Grade 3.5 - 7 points.** **Grade 4.0 - 8 points.** **Grade 4.5 - 9 points.** **Grade 5.0 - 10 points.** **The form and terms of the exercises:** **Students are assessed on the basis of two written tests covering writing skills verification based on solving tasks of choosing appropriate descriptive characteristics, their determination and interpretation of detailed series and aggregated data to a series of interval and correlation tables (students during the tests can benefit from standardised statistical tables). The students' results at each test are presented as the percentage of total number of points that can be obtained. The final grade for exercises is calculated as the arithmetic mean of percentages obtained for both tests. The thresholds for grades are as follows:**	

Grade 3.0 - at least 50%.
Grade 3.5 - at least 70%.
Grade 4.0 - at least 80%.
Grade 4.5 - at least 90%.
Grade 5.0 - at least 95%.

The form and terms of the laboratories:
A project to achieve the learning outcomes tested on practical skills and social competences. Project is done in groups of 2-3 students. Students must perform full statistical research: specify the goal, collect statistical data, graphically present the data, apply appropriate analytical methods, interpret the results and draw conclusions. Projects are assessed with respect to their completeness and correctness. The thresholds for grades are as follows:
Grade 3.0 - at least 50%.
Grade 3.5 - at least 70%.
Grade 4.0 - at least 80%.
Grade 4.5 - at least 90%.
Grade 5.0 - at least 95%.

Grade calculation principles

The final grade is a simple arithmetic mean of the grades obtained from the lecture, classes and laboratories.

Final grade calculation method

Sem.	Course	Type of credit	Grade calc. method	Weight for the average
1	Descriptive statistics (statystyka opisowa)		Arytmetyczna	
1	Descriptive statistics (statystyka opisowa) [laboratorium]	zaliczenie z oceną		
1	Descriptive statistics (statystyka opisowa) [ćwiczenia]	zaliczenie z oceną		
1	Descriptive statistics (statystyka opisowa) [wykład]	egzamin		

Basic reading

Aczel A., Sounderpandian, J. (2009): Complete Business Statistics 7th Edition, McGraw-Hill/Irwin

Bak I., Markowicz I., Mojsiewicz M., Wawrzyniak K. (2021): Formulas and Tables. Statistical and Econometric Methods, CeDeWu, Warszawa

Cleff. T. (2019): Applied Statistics and Multivariate Data Analysis for Business and Economics. A Modern Approach Using SPSS, Stata, and Excel, Springer, Cham

Supplementary reading

Central Statistical Office of Poland : Statistical yearbooks, monthly information on the economic situation of the country, monthly information on price developments in the national economy, Publications of Central Statistical Office of Poland

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**7**	**0**
Preparation for contact hours	**14**	**0**
Private reading and studying	**7**	**0**
Participation in tutorials	**14**	**0**
Preparation of project / essay / etc.	**13**	**0**
Preparation for test / exam	**0**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**						
Course title: **Economic Policy (polityka gospodarcza) (PODSTAWOWE)**					Course code: **EFZ71AIJ3432_76S**	
Name of field of study: **Economics and IT Applications**						
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**				Specialty:	
Course / module status **obligatory**			Language of instruction: **semester: 2 - english language**			

Year	Semester	Form of instruction	No. of hours		Type of credit	ECTS
				including e-learning		
1	2	conversation	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr IZABELA SZAMREJ-BARAN**
Course instructor	**dr IZABELA SZAMREJ-BARAN**
Course / module objectives	**To acquaint students with the basic knowledge of economic policy, in particular with the economic impact of regulation and state intervention in the economy. To study the sources, essence, objectives, functions and instruments of various economic policies.**
Prerequisites	**Fundamentals of macroeconomics, the ability to analyze, teamwork, open-mindedness to discussion.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student defines the basic concepts of economic policy.**	**K_W01**
skills	**1**	**EP2**	**Student describes and explains the theoretical and practical aspects of economic policy.**	**K_U03**
	2	**EP3**	**Student uses theoretical concepts to explain the relationship between the state and the market in modern economies and economic development.**	**K_U01 K_U03**
social competences	**1**	**EP4**	**Student critically assesses economic policy decisions.**	**K_K02 K_K04**
	2	**EP5**	**Student complements and broadens the acquired knowledge and skills in the field of economic policy, is aware of the importance of the concept of lifelong learning.**	**K_K02**
	3	**EP6**	**Student is prepared for active teamwork aimed at solving common problems in the public interest**	**K_K01 K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Economic Policy (polityka gospodarcza)**			
Format of instruction: **conversation**			
1. **Concept, determinants and economic policy objectives. Functions and fields of economic policy.**	2	2	0
2. **Instruments of economic policy: fiscal policy, monetary policy, income policy.**	2	3	0
3. **Counter-cyclical policy and contemporary crises.**	2	1	0
4. **Economic growth and development - the basic problems. Pro-growth policies.**	2	1	0
5. **Industrial policy. The investment policy. Science and innovation policy.- and other growth factors.**	2	2	0

6. **Structural policy. Structural changes in the economy. Types and structural policies. Structural problems of transition.**	2	2	0
7. **Labor market regulation. Employment policy and its functions. Instrumentation.**	2	2	0
8. **Regional economic policy in Poland and the European Union.**	2	2	0

Modes of delivery	**multimedia presentation, case studies, group work, texts analysing/watching films with discussion, gamification**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4**
	PREZENTACJA	**EP5,EP6**
	PROJEKT	**EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for seminar: The student will get credit if hers/his assessment of the test, presentation and project is positive. 50% test, 30% presentation, 20% project**
	Grade calculation principles
	The final grade of the course is equal to the grade from seminar.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	2	Economic Policy (polityka gospodarcza)		Ważona	
	2	Economic Policy (polityka gospodarcza) [konwersatorium]	zaliczenie z oceną		1,00

Basic reading	Acocella N. (Translated from the Italian by Brendan Jones) (2005): Economic Policy in the Age of Globalisation, Cambridge University Press, Cambridge
	Bénassy-Quéré A., Coeuré B., Jacquet P., Pisani-Ferry J. (2010): Economic Policy Theory and Practice, Oxford University Press, New York
	Coppock L., Mateer D. (2018): Principles of Economics, 2nd Ed., Norton&Company, New York
	Friedman M. (2011): Price Theory, Transaction Publishers, New Jersey
Supplementary reading	Friedman M. (2008): Ile panstwa w gospodarce, C.H. Beck, Warszawa
	Horodecka A. (2008): Ewolucja celów polityki gospodarczej, PWN, Warszawa
	Kryk B. (red), autorzy m.in: Szamrej-Baran I. (2012): Polityka gospodarcza, Wydawnictwo Economicus, Szczecin
	Noga M., Stawiska M.K. (2009): Modele rozwoju gospodarczego dla Polski w dobie integracji europejskiej i globalizacji, CeDeWu
	Winiarski B. (2006): Polityka gospodarcza, PWN, Warszawa
	Włudyka T. (red.) (2007): Polityka gospodarcza, Oficyna Wolters Kluwer Polska

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**0**	**0**
Preparation for contact hours	**0**	**0**
Private reading and studying	**9**	**0**
Participation in tutorials	**6**	**0**

Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Finance (finanse) (PODSTAWOWE)**	Course code: **EFZ71AIJ3432_35S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	discussion classes	15	0	pg	3
		lecture	15	0	e	
Total			**30**			**3**

Course / module coordinator	**dr MARTA MUSIAŁ**
Course instructor	**dr MARTA MUSIAŁ**
Course / module objectives	**The goal of this course is to introduce and describe the main institutions, markets and processes in the financial system, both on a national and international level.**
Prerequisites	**The student has basic knowledge of the social and political framework, as well as a basic understanding of the business environment; is capable of solving basic mathematical problems; is able to use academic sources from both the internet and the literature.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student has knowledge of the position of finance within the general economic environment and of its links to other disciplines (such as sociology and law), while understanding the main processes, categories and instruments within finance.**	**K_W02**
	2	**EP2**	**The student has knowledge of the basic rules of financial system functioning, mainly with respect to financial and non-financial institutions (of the private and public sector) and its relations with the real economy.**	**K_W02**
	3	**EP3**	**The student understands the role of money in the economy and the money creation mechanism.**	**K_W02**
skills	**1**	**EP4**	**The student is able to correctly interpret the money creation process in the modern economy, including its sources and link this to macroeconomic outcomes.**	**K_U01 K_U02**
	2	**EP5**	**The student is able to identify the perspectives and challenges related to changes within modern financial processes, including changes of institutions and markets.**	**K_U01**
	3	**EP6**	**The student has basic skills of analysing the role of financial instruments usage by financial and nonfinancial institutions.**	**K_U01**

social competences	**1**	**EP7**	**The student is capable to identify basic ethical dilemma relating to using financial instruments in the private and public sector, in the context of the moral hazard problem.**	**K_K01**
	2	**EP8**	**The student is prepared to communicate and present basic knowledge on the rules of functioning of the modern financial system.**	**K_K01**
	3	**EP9**	**The student is interested in further studies and perfecting skills in the field of finance.**	**K_K01 K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Finance (finanse)**			
Format of instruction: **lecture**			
1. **The field and functions of finance. Money as building block of financial phenomena.**	1	2	0
2. **Financial system: structure, functions and the main markets.**	1	2	0
3. **Monetary and non-monetary financial institutions.**	1	3	0
4. **Central bank and its role in stabilising monetary conditions. Basic monetary policy tools.**	1	2	0
5. **Interest rates and exchange rate as determinants of the finanicial market outcomes.**	1	2	0
6. **The stock market, the efficient market theory, stock valuation.**	1	2	0
7. **Financial crises: origins, development and consequences.**	1	2	0
Format of instruction: **discussion classes**			
1. **The time value of money. Present and future values and the concept of discounting.**	1	4	0
2. **Public finance and economic growth. Public spending and income, public finance deficit and public debt.**	1	2	0
3. **Evolution of money forms, functions of money. Inflation - forms and sources, measures.**	1	3	0
4. **The framework of commercial banking. Main bank types and banking operations. Central banks.**	1	3	0
5. **The euro as the common currency: challenges and advantages.**	1	2	0
6. **Summary of public finance knowledge.**	1	1	0

Modes of delivery	**Lecture with powerpoint presentations, analysis of data and information sources, basic financial calculations, discussion, case-study.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3**
	KOLOKWIUM	**EP1,EP2,EP3**
	PRACA PISEMNA/ ESEJ/ RECENZJA	**EP4,EP5,EP6,EP9**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP7,EP8,EP9**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Credit for lectures: Written final exam, in the form of a multiple choice test (80% points), with 2-4 additional short questions (20% points). Exam grading: 50% pass, 75% grade 4.0. Tutorial grading: Written test (30% points) and student participation in tutorials (70%). Written test - multiple choice test. Written test grading: 50% pass, 75% grade 4.0. Students must pass the written test in order to pass the tutorial. Student participation in tutorials: graded written homework (80%) and active participation in the discussions and presentations during classes (20%).**	
	Grade calculation principles	

	The final grade will be calculated as a weighted mean of the final exam grade (60%) and tutorial grade (40%).				
Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	Finance (finanse)		Ważona	
	1	Finance (finanse) [ćwiczenia]	zaliczenie z oceną		0,40
	1	Finance (finanse) [wykład]	egzamin		0,60
Basic reading	Howells, D., Bain, K. (2008): The Economics of Money, Banking and Finance - a European text, Prentice Hall				
	Melicher, R., Norton, E. (2013): Introduction to Finance: Markets, Investment and Financial Management, Wiley				
	Mishkin, F. (2012): Economics of Money, Banking and Financial Markets. The European Edition, Pearson				
Supplementary reading	Bodie, Z., Merton, R, Cleeton, D. (2008): Financial Economics, Prentice Hall				

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**9**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**6**	**0**
Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Informatics in Economics (informatyka w ekonomii) (KIERUNKOWE)**	Course code: **EFZ71AIJ3432_41S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	laboratory	15	0	pg	2
		lecture	15	0	pg	
Total			**30**			**2**

Course / module coordinator	**dr AGATA WAWRZYNIAK**
Course instructor	**dr AGATA WAWRZYNIAK**
Course / module objectives	**To provide students with knowledge of modern information technologies transforming the contemporary economy. Students will acquire knowledge and skills related to the classification of information systems used in business entities, defining needs in the area of information systems and technologies, and selecting appropriate software for enterprises and other economic entities. Practical aspects include gaining experience in processing large data sheets, performing complex calculations and multi-level analyses, and improving the security and comfort of computer user?s work.**
Prerequisites	**Basic knowledge of economics and information technologies, proficiency in using basic functions of Microsoft Excel, and ability to work in a team.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student has general knowledge of IT infrastructure applied in various areas of economic entities' activity.**	**K_W08**
	2	**EP2**	**The student understands techniques, tools, perspectives, and limitations of e-business.**	**K_W08**
skills	**1**	**EP3**	**The student can apply acquired knowledge to formulate and solve problems of an IT and economic nature.**	**K_U08**
	2	**EP4**	**The student is proficient in working with spreadsheets, creating complex reports and analyses, including pivot tables.**	**K_U08**
	3	**EP5**	**The student can evaluate the functionality of existing ERP and CRM systems and perform their critical analysis.**	**K_U08**
social competences	**1**	**EP6**	**The student is ready to formulate original ideas for solving economic problems using IT techniques and tools.**	**K_K01**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Informatics in Economics (informatyka w ekonomii)**			
Format of instruction: **lecture**			
1. **The role and significance of information in the contemporary economy. Information technology as a tool supporting economic entities.**	1	1	0

2. **Basics of information theory: data, information, knowledge. Processing large datasets and knowledge discovery in databases (data mining).**	1	2	0
3. **Information and information systems in the operations of economic entities. Formalization of information systems. Informatization of enterprises.**	1	2	0
4. <style pdfFontName="helvetica-bold">Information society, knowledge-based economy, information as a commodity. Virtual organizations and inter-organizational information systems. Business Intelligence & Analytics.</style>	1	2	0
5. **Introduction to ERP (Enterprise Resource Planning) and CRM (Customer Relationship Management) systems. Document automation.**	1	4	0
6. **Electronic business ? basic definitions and development trends. Modern e-commerce. Artificial intelligence in the economy (including applications of expert systems in economic analysis).**	1	2	0
7. **Information and information systems security. Data protection using selected IT tools and technologies.**	1	2	0
Format of instruction: **laboratory**			
1. **Processing large datasets using spreadsheets (e.g. MS Excel).**	1	1	0
2. **Creating complex reports and analyses using advanced formulas, multi-sheet connections, pivot tables, and pivot charts.**	1	4	0
3. **Using macros with elements of VBA (Visual Basic for Applications).**	1	2	0
4. **Performing advanced data analyses and building extensive data models using Power Pivot.**	1	2	0
5. **Overview of market offerings in the field of CRM and ERP software.**	1	4	0
6. **Modeling business processes. BPMN (Business Process Modeling Notation).**	1	2	0

Modes of delivery	**The course includes lectures using multimedia tools and practical classes in computer laboratories ? solving economic problems using Excel spreadsheets (tasks performed individually and in groups) and reviewing ERP and CRM class software.** The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	SPRAWDZIAN	**EP1,EP2**
	PROJEKT	**EP3,EP5,EP6**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP3,EP4,EP6**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Passing the lecture component is based on a test verifying achievement of the intended learning outcomes in the knowledge domain.** **Passing the laboratory component is based on achieving each skill outcome at a satisfactory level or higher. The evaluation includes a project presentation (prepared in groups) and active participation in classes (individual tasks completion).** **Grades are assigned as follows:** **- Satisfactory (3.0): minimum 50% of the maximum achievable points for all verified outcomes.** **- Good (4.0): minimum 70% of the maximum achievable points for all verified outcomes.** **- Very Good (5.0): minimum 90% of the maximum achievable points for all verified outcomes.**
	Grade calculation principles
	The final grade requires passing both lectures and laboratories with at least a satisfactory (3.0) mark. The final grade is the arithmetic mean of the grades obtained in lectures and laboratories.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	Informatics in Economics (informatyka w ekonomii)		Arytmetyczna	
	1	Informatics in Economics (informatyka w ekonomii) [laboratorium]	zaliczenie z oceną		
	1	Informatics in Economics (informatyka w ekonomii) [wykład]	zaliczenie z oceną		

Basic reading	Holloway, A. (2023): Data Analysis in Microsoft Excel: Deliver Awesome Analytics in 3 Easy Steps Using VLOOKUPS, Pivot Tables, Charts And More, Independently published.
	Valacich, J. S., Schneider, C., Hashim, M. (2022): Information Systems Today: Managing in the Digital World, 9th edition, Pearson.
	Weber, P., Gabriel, R., Lux, T., & Menke, K. (2022): Basics in Business Informatics., Springer Fachmedien Wiesbaden., Wiesbaden

Supplementary reading	Alexander, M., Kusleika, R., & Walkenbach, J. (2018): Excel 2019 Bible, John Wiley & Sons
	Wrycza, S., & Maślankowski, J. (2019): Informatyka ekonomiczna. Teoria i zastosowania, PWN, Warszawa
	Yatsko, A., & Suslow, W. (2015): Insight into Theoretical and Applied Informatics: Introduction to Information Technologies and Computer Science, De Gruyter Open Poland, Warsaw

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**4**	**0**
Preparation for contact hours	**2**	**0**
Private reading and studying	**4**	**0**
Participation in tutorials	**2**	**0**
Preparation of project / essay / etc.	**4**	**0**
Preparation for test / exam	**4**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**						
Course title: **Information Technologies - IT (technologie informacyjne) (KIERUNKOWE)**					Course code: **EFZ71AIJ3432_68S**	
Name of field of study: **Economics and IT Applications**						
Mode and cycle of study: **first-degree, full - time**		Profile of study: **general academic**			Specialty:	
Course / module status **obligatory**			Language of instruction: **semester: 1 - english language**			

Year	Semester	Form of instruction	No. of hours		Type of credit	ECTS
				including e-learning		
1	1	laboratory	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr AGATA WAWRZYNIAK**
Course instructor	**dr TOMASZ ŁUKASZEWSKI**
Course / module objectives	**The course covers theoretical issues concerning the use of information technology and aims at the acquisition by the student practical skills in using software to prepare to win ECDL certificates.**
Prerequisites	**Basic computer skills, the basics of using the Internet.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student has an understanding of the role of information in the modern economy**	**K_W08**
skills	**1**	**EP2**	**Student uses of software applications (word processing, spreadsheet, presentation graphics) in business issues**	**K_U08 K_U13**
social competences	**1**	**EP3**	**Students can complement and improve the acquired knowledge and skills in the use of information technology**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Information Technologies - IT (technologie informacyjne)**			
Format of instruction: **lecture**			
1. **Role and importance of information in modern economy**	1	2	0
2. **Computer devices - principle and parameters of functionality**	1	4	0
3. **System software and utilities - examples, use, built-in tools**	1	2	0
4. **The process of computerization of organizations - models, available systems, types of licenses**	1	2	0
5. **Environment of the Internet as a place to search, collect and share information**	1	2	0
6. **Safety of the use of information technology**	1	2	0
7. **Development trends of the Internet, telecommunication services and electronic devices in business applications**	1	1	0
Format of instruction: **laboratory**			
1. **Fundamentals of operation systems**	1	2	0

2. **Text Editor - creating and editing documents, construction and formatting tables, formatting of AutoShapes, text boxes, use of other implemented tools, working with a large document**	1	4	0
3. **Spreadsheet - introduction, interface, basic formulas, cell formatting, spreadsheet, charts, functions, import / export of data, the analysis of large data files, management decisions**	1	4	0
4. **Search tools, communication and sharing of information on the Internet, the process of synchronizing resources for personal time management**	1	3	0
5. **Presentation of information on the Internet - project**	1	2	0

Modes of delivery	**laboratory classes (solving practical tasks) based on Microsoft applications, open source solutions and network applications, multimedia presentations**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2**
	PROJEKT	**EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Lectures:** **Written test (min. 60% of proper answers to pass).** **Laboratories:** **Practical test (50% weighting) - test achievement of learning outcomes in terms of skills. Test is a challenge for formatting and making calculations, analysis, and visualization of data in a given time during the course.** **Project (50% weighting) - a project to achieve the learning outcomes tested on practical skills and teamwork. Projects will cover the proper preparation of the presentation on a chosen topic and the implementation of a given website theme.** **To pass the subject a student must obtain a minimum of 60% of points of practical test and project.** **In the period of hybrid or distance learning only, the conditions for completing the course will change to the following requirements:** **- the condition for getting credit for the lecture is preparing a presentation on a given topic and presenting it through MS Teams.** **In the period of hybrid or distance learning only, the methods of verification of learning outcomes will change to the following:** **- presentation - EP1,EP2.**
	Grade calculation principles
	The final grade of the course is an average of laboratory and lecture grades.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	Information Technologies - IT (technologie informacyjne)		Arytmetyczna	
	1	Information Technologies - IT (technologie informacyjne) [wykład]	zaliczenie z oceną		
	1	Information Technologies - IT (technologie informacyjne) [laboratorium]	zaliczenie z oceną		

Basic reading	Kennedy J. A. (2011): Complete ECDL 5, Gill & Macmillan
	(2016): ECDL Presentation Software. Using Powerpoint, CiA Training Ltd
	(2016): ECDL Spreadsheet Software. Using Excel, CiA Training Ltd
	(2016): ECDL Word Processing Software, CiA Training Ltd
Supplementary reading	Dooley J., Evans V., Wright S. (2018): Career Paths. Information Technology, Express Publishing
	Walkenbach J. (2016): Excel 2016, Bible, Viley

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**

Participation in test / exam	**2**	**0**
Preparation for contact hours	**5**	**0**
Private reading and studying	**9**	**0**
Participation in tutorials	**7**	**0**
Preparation of project / essay / etc.	**14**	**0**
Preparation for test / exam	**8**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**		
Course title: **Intellectual property protection (ochrona własności intelektualnej) (OGÓLNOUCZELNIANE)**		Course code: **EFZ71AIJ3435_34S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	lecture	8	0	pg	1
Total			**8**			**1**

Course / module coordinator	**dr PRZEMYSŁAW KATNER**
Course instructor	**dr PRZEMYSŁAW KATNER**
Course / module objectives	**To acquire knowledge and skill to analyse the basic issues of the copyright and industrial property laws.**
Prerequisites	**Student has a basic knowledge of civil law.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows and understands basic concepts and principles of the protection of industrial property and of copyright and the need for intellectual property management.**	**K_W07**
skills	**1**	**EP2**	**Student uses acquired knowledge in their activity.**	**K_U07**
	2	**EP3**	**Student is ready to systematically deepen their knowledge, in particular regarding legal status updates.**	**K_U02**
social competences	**1**	**EP4**	**Student is convinced of importance of behaving in professional manner and obeying rules of professional ethics.**	**K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Intellectual property protection (ochrona własności intelektualnej)**			
Format of instruction: **lecture**			
1. **Introduction to intellectual property law. The scope of the act of 4 February 1994 on copyright and related rights.**	1	1	0
2. **The subject of copyright and the content of copyright.**	1	1	0
3. **The duration of author's economic rights.**	1	1	0
4. **The transfer of author's economic rights and the protection of author's moral and economic rights.**	1	1	0
5. **The scope of the act of 30 June 2000 on law of industrial property.**	1	1	0
6. **Inventions, utility models and industrial models.**	1	2	0
7. **Trademarks and geographical indications. Pursuing claims on account of violating exclusive rights.**	1	1	0

Modes of delivery	**Problem lecture.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**The lectures are assessed based on the multiple choice test (with negative points) that consists of 20 questions. Grading scale: 5.0 - 23-25 points; 4.5 - 21-22 points, 4.0 - 18-20 points, 3.5 - 16-17 points, 3.0 - 13-15 points.**	
	Grade calculation principles	
	The final grade is based on the grade of the lectures.	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	Intellectual property protection (ochrona własności intelektualnej)		Ważona	
	1	Intellectual property protection (ochrona własności intelektualnej) [wykład]	zaliczenie z oceną		1,00

Basic reading	Act of 30 June 2000 on law of industrial property.
	Act of 4 February 1994 on copyright and related rights.
Supplementary reading	

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**8**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**0**	**0**
Private reading and studying	**7**	**0**
Participation in tutorials	**4**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**4**	**0**
TOTAL workload	**25**	
ECTS credits	**1**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**						
Course title: **Introduction to Computer Programming (wprowadzenie do programowania komputerów) (KIERUNKOWE)**					Course code: **EFZ71AIJ3433_77S**	
Name of field of study: **Economics and IT Applications**						
Mode and cycle of study: **first-degree, full - time**		Profile of study: **general academic**			Specialty:	
Course / module status **obligatory**			Language of instruction: **semester: 2 - english language**			
Year	**Semester**	**Form of instruction**	**No. of hours**		**Type of credit**	**ECTS**
				including e-learning		
1	2	laboratory	30	0	pg	4
		lecture	15	0	pg	
Total			**45**			**4**
Course / module coordinator	**dr hab. JAKUB SWACHA**					
Course instructor	**dr hab. JAKUB SWACHA**					
Course / module objectives	**To acquire knowledge of computer programming on the example of the Python language, and to master practical skills of programming in Python.**					
Prerequisites	**Knowledge of basic computer skills.**					

LEARNING OUTCOMES

Category	**No.**	**Code**	**Description**	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the basic terms and structures characteristic of structured programming.**	**K_W08**
	2	**EP2**	**Student knows the phases of software development life-cycle.**	**K_W08**
skills	**1**	**EP3**	**Student is able to independently design, implement and test programs in Python.**	**K_U08**
	2	**EP4**	**Student is able to implement programs according to given specifications.**	**K_U08**
	3	**EP5**	**Student is able to work with other developers in the implementation of a joint software development project.**	**K_U18**
social competences	**1**	**EP6**	**Student is aware of the allowed terms of use of software under various licenses.**	**K_K03**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Introduction to Computer Programming (wprowadzenie do programowania komputerów)**			
Format of instruction: **lecture**			
1. **Basic terminology of programming. Methods of algorithm specification.**	2	2	0
2. **Computer as an object of programming.**	2	2	0
3. **Programming languages. Programming paradigms.**	2	1	0
4. **The components of program. Simple and complex instructions.**	2	2	0
5. **Strings, lists, tuples and their processing.**	2	2	0

6. **Functions and modules.**	2	2	0
7. **Dictionaries and sets. Files and databases.**	2	2	0
8. **Software testing and documenting.**	2	2	0
Format of instruction: **laboratory**			
1. **Python syntax.**	2	2	0
2. **Simple programs with input/output and calculations.**	2	2	0
3. **Using conditional statements.**	2	4	0
4. **Using loops. Processing data sequences.**	2	4	0
5. **Built-in functions.**	2	2	0
6. **Standard modules.**	2	4	0
7. **Defining functions. Recursion.**	2	4	0
8. **Defining classes. Inheritance.**	2	4	0
9. **Files and databases.**	2	2	0
10. **Testing programs. Debugger.**	2	2	0

Modes of delivery	**- lecture supported with multimedia presentation** **- application development, programming** **- case study** **- problem solving** **- working in groups** **- project development**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2**
	SPRAWDZIAN	**EP3**
	PROJEKT	**EP4,EP5,EP6**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for lectures: the lectures grade is based on the results of a single-choice test covering the content of the lectures.** **Grading scale: 3.0: more than 50% points; 4.0: more than 70%, 5.0: more than 85%.** **Credit for laboratory classes: the grade is a weighted average of a programming test consisting of writing a computer program designated by the teacher (35% points), group project - a program written in collaboration with other students (topic selected by the group) (35% points), and completing laboratory exercises during the semester (30% points).** **Grading scale for laboratory classes: 3.0: more than 50% points; 4.0: more than 70%, 5.0: more than 85%.**
	Grade calculation principles
	The final grade of the course is an arithmetic mean of the laboratory exercises grade and the lectures grade.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	2	Introduction to Computer Programming (wprowadzenie do programowania komputerów)		Arytmetyczna	
	2	Introduction to Computer Programming (wprowadzenie do programowania komputerów) [laboratorium]	zaliczenie z oceną		
	2	Introduction to Computer Programming (wprowadzenie do programowania komputerów) [wykład]	zaliczenie z oceną		

Basic reading	Petkovic L. (2012): Introduction to Computing Using Python, Wiley
	Swacha J. (2020): Introduction to programming in Python 3, Wydawnictwo Naukowe Uniwersytetu Szczecinskiego, Szczecin

Supplementary reading	Matthes E. (2019): Python Crash Course, 2nd Edition: A Hands-On, Project-Based Introduction to Programming, No Starch Press
	Miller B., Ranum D. (2019): How to Think Like a Computer Scientist. Learning with Python: Interactive Edition, Runestone Interactive
	Miller B., Ranum D. (2019): Problem Solving with Algorithms and Data Structures, Runestone Interactive

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**12**	**0**
Private reading and studying	**12**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**12**	**0**
Preparation for test / exam	**6**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**		
Course title: **Law (prawo) (OGÓLNOUCZELNIANE)**		Course code: **EFZ71AIJ3435_37S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - english language**	

Year	Semester	Form of instruction	No. of hours		Type of credit	ECTS
				including e-learning		
1	1	lecture	30	0	pg	3
Total			**30**			**3**

Course / module coordinator	**dr PRZEMYSŁAW KATNER**
Course instructor	**dr Małgorzata Szymszon**
Course / module objectives	**Gaining knowledge in the field of fundamental institutions and disciplines of the law. The ability to use this knowledge for the purpose of understanding and use of economic institutions, particularly in relation to IT.**
Prerequisites	**Willingness to acquire legal knowledge.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the fundamental legal concepts in English.**	**K_W07**
	2	**EP2**	**Student has the knowledge about the fundamental branches and fields of law in the comparison scope.**	**K_W07**
	3	**EP3**	**Student has the knowledge about the fundamental law systems (common Law and Civil Law).**	**K_W07**
	4	**EP4**	**Student has the knowledge about the fundamental law institutions in the field of public law, private law and the European Union law.**	**K_W07**
	5	**EP5**	**Student has the knowledge about means, which enable presenting legal problems in the right way to solve them with IT.**	**K_W08**
skills	**1**	**EP6**	**Student can distinguish the fundamental legal concepts and define them.**	**K_U07**
	2	**EP7**	**Student understands fundamental legal verdicts, can analyze basic legal cases**	**K_U07**
	3	**EP8**	**Student can present an abstract of legal acts through Mind Mapping.**	**K_U07**
	4	**EP9**	**Student can prepare legal newsletters.**	**K_U07**
	5	**EP10**	**Student can summarize legal verdicts.**	**K_U07**
social competences	**1**	**EP11**	**Student is able to work in a team using fundamental legal terminology.**	**K_K01**
	2	**EP12**	**Student is able to participate in the creation process of summarizing a legal verdict or a legal act in an interdiciplinary team of lawers, econmists, IT professionals.**	**K_K01 K_K02**
	3	**EP13**	**Student has a fundamental competences for working with basic IT tools, when analyzing fundamental legal problems.**	**K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Law (prawo)**			
Format of instruction: **lecture**			
1. **Definitions, Law, legal environment, legal problem.**	1	2	0
2. **Legal Norms and Legal Orders.**	1	3	0
3. **Law and the Biosphere, Law and the Noosphere, Law and the Economic Sphere, Law and the Semiosphere.**	1	2	0
4. **Law and Technology.**	1	3	0
5. **Common Law and Civil Law.**	1	3	0
6. **Different branches of law belonging to public law and private law, understood on the ground of case law in a comparative perspective.**	1	3	0
7. **Legal aspects concerning European Integration.**	1	3	0
8. **Legal aspects concerning globalization.**	1	2	0
9. **The fundamental institutions of a state.**	1	2	0
10. **Public services: energy, water, transportation.**	1	3	0
11. **Foundations of commercial Law and of company law**	1	4	0

Modes of delivery	**Explaining the legal concepts and institutions during lectures. Understanding, discussiong and summarizing legal texts.** **Analyzing legal texts. Discussions about important cases and important legal acts.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	SPRAWDZIAN	**EP1,EP10,EP11,EP12,EP13,EP2,EP3,EP4,EP5,EP6**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP7,EP8,EP9**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	
	Lectures are assessed by written tests. Students will receive a positive mark if he/she passes all tests.
	Grade calculation principles
	The final grade is based on the grade of lectures.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	Law (prawo)		Ważona	
	1	Law (prawo) [wykład]	zaliczenie z oceną		1,00

Basic reading	Dajczak W., Szwarc A., Wilinski P. (eds) (2011): Handbook of Polish Law, ParkPrawo, Wydawnictwo Szkolne PWN Sp. z o.o., Warszawa - Bielsko Biała
Supplementary reading	Policastro P. (ed.) (2013): Towards Innovation in Legal Education
	Skorupa-Wulczynska A. (2016): Legal English. Civil and Commercial Law. A Handbook, Warszawa

STUDENT WORKLOAD

	No. of hours	including e-learning

Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**0**	**0**
Private reading and studying	**18**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**15**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**						
Course title: **Linear algebra (algebra liniowa) (PODSTAWOWE)**					Course code: **EFZ71AIJ3432_42S**	
Name of field of study: **Economics and IT Applications**						
Mode and cycle of study: **first-degree, full - time**		Profile of study: **general academic**			Specialty:	
Course / module status **obligatory**			Language of instruction: **semester: 2 - english language**			

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	2	discussion classes	15	0	pg	4
		lecture	15	0	e	
Total			**30**			**4**

Course / module coordinator	**dr hab. MAŁGORZATA GUZOWSKA**
Course instructor	**dr hab. MAŁGORZATA GUZOWSKA**
Course / module objectives	**Completing and revising mathematical knowledge so that the students can successfully study the state-of-art economics, statistics and econometrics as well as other fields of science where economic calculation plays a fundamental role and which deal with best practices in decision-making.**
Prerequisites	**- knowledge: a candidate demonstrates the knowledge of mathematics on the basic high school level; - skills: a candidate can solve mathematical problems on the elementary level; - competence (attitude): a candidate demonstrates excellent learning skills.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student knows definitions and the elementary properties of linear space.**	**K_W05**
	2	EP2	**Student knows the elementary properties of the real matrixes as well as can recognize and interpret the procedures of solving any system of linear equations.**	**K_W05**
	3	EP3	**Student knows terms and methods related to square forms, eigenvectors and eigenvalues.**	**K_W05**
skills	1	EP4	**Student can use vector and matrices calculus and can apply them to solving the systems of linear equations and simple economic problems.**	**K_U05**
	2	EP5	**Student can examine the properties of quadratic and determine eigenvectors and eigenvalues.**	**K_U05**
	3	EP6	**Student can easily communicate in English in an international group of people in order to carry out mathematical or business tasks.**	**K_U05 K_U16**
social competences	1	EP7	**Student is ready to critically assess his knowledge of mathematical tools and to supplement and deepen his knowledge as well as to use his knowledge and expert knowledge to solve socio-economic problems.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Linear algebra (algebra liniowa)**			
Format of instruction: **lecture**			

1. **Basic algebraic structures**	2	2	0
2. **Vector spaces: linear combination and linear independence of vector, bases and dimension for vector spaces.**	2	2	0
3. **Algebraic operations on matrices and their properties**	2	2	0
4. **Determinants. Laplace's expansion. Trace and rank of a matrix.**	2	2	0
5. **Inverse of matrices. Matrices equation.**	2	2	0
6. **System of linear equations and it solutions.**	2	2	0
7. **Linear and quadratic forms. Canonical form of a square form. Classification of quadratic forms, Sylvester s law, positive define (negative define) quadratic form. Eigenvalues and eigenvectors and their application in economics.**	2	3	0
Format of instruction: **discussion classes**			
1. **Vector spaces: linear combination and linear independence of vector, bases and dimension for vector spaces**	2	2	0
2. **Algebraic operations on matrices: matrix addition, scalar multiplication, transpose and matrix multiplication.**	2	1	0
3. **Determinants. Laplace expansion. Properties of the determinant.**	2	1	0
4. **Inverse of matrices. Matrices equation.**	2	2	0
5. **Systems of linear equations and methods of solving them (Gaussian elimination, Cramer method, Kronecker - Capelli theorem).**	2	3	0
6. **Systems of linear inequalities.**	2	2	0
7. **Linear and quadratic forms. Canonical form of a square form. Classification of quadratic forms, Sylvester s law. Eigenvalues and eigenvectors.**	2	2	0
8. **Application of linear algebra in economics.**	2	2	0

Modes of delivery	**Lectures with slides shows. Exercises - problem solving**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3**
	KOLOKWIUM	**EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credits are given to students who have learned the following skills, by:** **5 short one-question (exercise) tests with passing score of 5 -10 points;** **1 final test (5 exercises, 10 points each).** **Total passing score: minimum 25 points under the condition of all the short tests being passed;** **The examination form and requirements:** **The final examination tests if a student has achieved all the projected learning outcomes concerning knowledge. It consists of 10 questions. The passing score is 50%.** **The way of calculating the grade** **Fail (2.0) 0%-50%** **Satisfactory (3.0) 51% -60%** **Satisfactory plus (3.5) 61% - 70%** **Good (4.0) 71% - 80%** **Good plus (4.5) 81% - 90%** **Very good (5.0) 91% -100%**
	Grade calculation principles
	The final grade is calculated as a weighted averge of partial and final tests.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	2	Linear algebra (algebra liniowa)		Arytmetyczna	
	2	Linear algebra (algebra liniowa) [wykład]	egzamin		
	2	Linear algebra (algebra liniowa) [ćwiczenia]	zaliczenie z oceną		

Basic reading	Batóg B., Bieszk-Stolorz B., Forys I., Guzowska M., Heberlein K. (2021): Mathematics for Students of Economics, Finance, and Management, Difin
	Strang G. (2003): Linear Algebra And Its Application
Supplementary reading	Edwards C., Penney D. (2005): . Edwards, D. Penney (2005): Differential equations and Linear Algebra, Pearson Prentice Hall
	Ilyin V., Poznyak E. (1986): Linear Algebra, MIRPublisher

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**15**	**0**
Private reading and studying	**23**	**0**
Participation in tutorials	**14**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**15**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Macroeconomics (makroekonomia) (PODSTAWOWE)**	Course code: **EFZ71AIJ3432_33S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	discussion classes	30	0	pg	4
		lecture	15	0	e	
Total			**45**			**4**

Course / module coordinator	**dr hab. RAFAŁ NAGAJ**
Course instructor	**dr hab. RAFAŁ NAGAJ**
Course / module objectives	**To acquaint the student with the issues and models of macroeconomics, to explain key processes and relationships in the economy, and to make students able to perceive the relationships between economic operators and and economic phenomena.**
Prerequisites	**Student's ability to consider phenomena in a cause and effect manner and willingness to acquire economic knowledge.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student has general knowledge about main variables and macroeconomic processes as well as the relationship between economic operators.**	**K_W01**
	2	**EP2**	**Student knows and describes the basic macroeconomic aggregates (ie production, aggregate demand, inflation, unemployment) and the processes taking place within them.**	**K_W01 K_W02**
skills	**1**	**EP3**	**Student can correctly identify, classify and explain the macroeconomic aggregates.**	**K_U01**
	2	**EP4**	**Student is able to recognize and describe the relationships that occur between parts of the economy, as well as the role that individual economic operators play in achieving the global equilibrium.**	**K_U01 K_U05**
social competences	**1**	**EP5**	**The student is aware of the importance of knowledge in solving macroeconomic problems.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Macroeconomics (makroekonomia)**			
Format of instruction: **lecture**			
1. **Introduction to economics, supply and demand, and functioning of the economy. The state of balance in the economy.**	1	4	0
2. **Main macroeconomic problems: global product and economic growth, labor market and unemployment, inflation.**	1	3	0
3. **The monetary system and monetary policy.**	1	3	0

4. **Private and public aggregate demand.**	1	3	0
5. **Interest rate and aggregate demand.**	1	2	0
Format of instruction: **discussion classes**			
1. **Introduction to economics. Circular flow of income and the equilibrium in the economy.**	1	6	0
2. **Basic macroeconomic problems: measurement of global product including GDP, unemployment, inflation.**	1	6	0
3. **Financial market. Money and banking system. Monetary policy.**	1	4	0
4. **Private and public sector demand versus aggregate demand.**	1	6	0
5. **International trade versus aggregate demand. Income and short-term equilibrium on the commodity market.**	1	4	0
6. **Summary of macroeconomic issues and the impact of all macroeconomic variables discussed.**	1	4	0

Modes of delivery	**solving tasks and problem questions, multimedia lectures, explanation of theory**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3,EP4**
	KOLOKWIUM	**EP1,EP2,EP3,EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Credit for the exercises: Students are assessed on the basis of two written colloquiums/tests. Tests consist of test questions and open tasks.** **Credit for lectures: Students are assessed on the basis of the written exam that consists of test questions.** **Graduating: a positive grade means that the the student has scored more than half of the total points for the colloquia (applies to exercises) and the exam (applies to lectures).** **Grading for exercises and lectures (% of total points of exercises or lectures, respectively):** **3.0 51-60%** **3.5 61-70%** **4.0 71-80%** **4.5 81-90%** **5.0 91-100%**	
	Grade calculation principles	
	The final grade is the arithmetic of grades of the exercises and the lectures. If the result of this arithmetic mean is ambiguous, then the grade of lectures prevails.	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	Macroeconomics (makroekonomia)		Arytmetyczna	
	1	Macroeconomics (makroekonomia) [ćwiczenia]	zaliczenie z oceną		
	1	Macroeconomics (makroekonomia) [wykład]	egzamin		

Basic reading	C.J. Jones. (2018): Macroeconomics, 3rd Edition., Norton & Company, Inc., New York/London
	Krugman, P., Wells, R. (2018): Macroeconomics, 5th Edition, Worth Publishers, New York
	N.G. Mankiw (2016): Macroeconomics, 9th Edition, Worth Publishers, New York
Supplementary reading	Mankiw, N.G. (2018): Principles of Macroeconomics, 8th Edition, Cengage Learning, Inc.

STUDENT WORKLOAD

	No. of hours	
		including e-learning

Contact hours	**45**	**0**
Participation in test / exam	**6**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**10**	**0**
Participation in tutorials	**15**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**14**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**		
Course title: **Marketing (marketing) (PODSTAWOWE)**		Course code: **EFZ71AIJ3433_45S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 2 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	2	discussion classes	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr MAŁGORZATA WIŚCICKA-FERNANDO**
Course instructor	**dr MAŁGORZATA WIŚCICKA-FERNANDO**
Course / module objectives	**The aim is to present the essence of the concept of marketing as a way for running a business.**
Prerequisites	**- In the field of knowledge - student defines the basic concepts of economic** **- In the field of skills - student is able to analyse the rules of the market mechanism** **- In the field competences (attitudes) - student is able to work in a team and take the discussion in a specified area**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the essence of the company marketing management.**	**K_W04**
	2	**EP2**	**Student lists and describes the instruments of marketing mix.**	**K_W04**
skills	**1**	**EP3**	**Student has the ability to suggest the shape of marketing instruments used by the company - to analyse examples of market practice and develops the concept of marketing to a specific company.**	**K_U04**
	2	**EP4**	**Student has the ability to cooperate and solve problems in team.**	**K_U18**
social competences	**1**	**EP5**	**Student is ready to formulate their own ideas concerning marketing management and make decisions.**	**K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Marketing (marketing)**			
Format of instruction: **lecture**			
1. **The development of marketing concept**	2	2	0
2. **Marketing environment**	2	2	0
3. **Market segmentation, targeting and positioning**	2	3	0
4. **The development of product concept**	2	2	0
5. **Pricing strategies**	2	2	0

6. **Managing marketing channels**	2	2	0
7. **Marketing communication**	2	2	0
Format of instruction: **discussion classes**			
1. **Getting familiar with the specific marketing-oriented companies**	2	2	0
2. **The analysis of market environment**	2	2	0
3. **Running the process of target market**	2	3	0
4. **The development of the concept of the product and product life cycle for the selected product**	2	2	0
5. **Establishing prices and strategies for price differentiation**	2	2	0
6. **Selection of the method of distribution of the selected offer**	2	2	0
7. **Preparation of promotional activities for the selected company**	2	2	0

Modes of delivery	**Multimedia presentation, discussion, case studies, group work**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Credit for classes: Colloquium covering the issues discussed during the exercises consists of open questions verifying the knowledge and skills of students on issues discussed during the exercises. The pass mark for the lecture is based on a test.** **Credit for lectures: written test.** **Scale of grading:** **The student receives adequate assessment if he receives at least 70% of the points available** **The student receives a good mark if he receives at least 80% of the points available** **The student receives a very good if he receives at least 90% of the points available**	
	Grade calculation principles	
	Final grade of the course - arithmetic average of grades received by the student during classes and lectures (test)	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	2	Marketing (marketing)		Arytmetyczna	
	2	Marketing (marketing) [wykład]	zaliczenie z oceną		
	2	Marketing (marketing) [ćwiczenia]	zaliczenie z oceną		

Basic reading	Kotler P., Armstrong G. (2016): Principles of Marketing, Prentice Hall
	Kumar V., Reinartz W. (2018): Customer Relationship Management: Concept, Strategy, and Tools., Springer Texts in Business and Economics, Springer-Verlag, Berlin
Supplementary reading	Ketller K.L., Kotler P. (2015): Marketing Management, Global Edition Pearson
	Kotler Ph., Kartajaya H., Setiawan I. (2021): Marketing 5.0, John Wiley & Sons
	Palmer A. (2014): Principles of Services Marketing, Mc Graw Hill Education

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**

Participation in test / exam	**4**	**0**
Preparation for contact hours	**7**	**0**
Private reading and studying	**7**	**0**
Participation in tutorials	**12**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**15**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Mathematical analysis (analiza matematyczna) (PODSTAWOWE)**	Course code: **EFZ71AIJ3432_32S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status: **obligatory**	Language of instruction: **semester: 1 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	discussion classes	30	0	pg	4
		lecture	15	0	e	
Total			**45**			**4**

Course / module coordinator	**dr BARBARA BATÓG**
Course instructor	**dr BARBARA BATÓG**
Course / module objectives	**Course deals with differential and integral calculus for single and many variable functions; elements of this course will be used in other courses (for example economics, statistics and econometrics).**
Prerequisites	**Knowledge: student knows mathematics on the high school level. Skills: student is able to solve mathematical problems on the high school level. Social competencies: student studies systematically.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**student is able to explain the concept of limits, continuity, monotonicity, extrema, convexity, curvature, inflection points and asymptotes for single variable function.**	**K_W05**
	2	**EP2**	**Student is able to explain the concept of indefinite and definite integral for single variable function.**	**K_W05**
	3	**EP3**	**Student knows necessary and sufficient conditions of existing of extrema of many variable functions.**	**K_W05**
skills	**1**	**EP4**	**Student is able to analyze the properties of single variable functions by means of derivatives; student computes elasticities and marginal values.**	**K_U05**
	2	**EP5**	**Student is able to use integration by substitution and by parts in computing basic types of indefinite and definite integrals.**	**K_U05**
	3	**EP6**	**Student is able to compute local extrema of many variable functions.**	**K_U05**
social competences	**1**	**EP7**	**Student is ready to apply mathematical analysis in economic problems.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Mathematical analysis (analiza matematyczna)**			
Format of instruction: **lecture**			
1. **Cartesian product. Definition and properties of functions: injection, surjection, bijection, monotonicity, inverse functions, cyclometric functions, function composition. Elementary functions. Examples of countable and uncountable sets.**	1	2	0

2. **Metric space. Neighborhood and punctured neighborhood, open and closed set, bounded set. Limits of the sequences, convergent and divergent sequences, Euler's number e, indeterminate forms.**	1	2	0
3. **Definition and properties of limits and continuity.**	1	1	0
4. **Difference quotient, definition and properties of derivative of single variable function, properties of differentiable function, derivatives of elementary functions; rules for finding the derivatives, differential, higher-order derivatives. Derivatives in geometry and economics.**	1	2	0
5. **Lagrange's and Rolle's theorems. Application of derivatives to analyze single variable functions: necessary and sufficient conditions of existing of local and global extrema, monotonicity, inflection points, curvature. L'Hôpital's rule. Asymptotes.**	1	4	0
6. **Indefinite integrals, integration by substitution and by parts.**	1	1	0
7. **Riemann definite integral, fundamental theorem of integral calculus. Improper integrals. Relationship between definite integral and area.**	1	2	0
8. **Differentiability, partial derivatives and local extrema of many variable functions.**	1	1	0
Format of instruction: **discussion classes**			
1. **Cartesian product. Definition and properties of functions: injection, surjection, bijection, monotonicity, inverse functions, cyclometric functions, function composition. Elementary functions.**	1	4	0
2. **Limits of the sequences, convergent and divergent sequences, Euler's number e, indeterminate forms.**	1	2	0
3. **Limits and continuity of functions.**	1	2	0
4. **Computing the derivatives of single variable functions.**	1	4	0
5. **Application of derivatives to analyze single variable functions: necessary and sufficient conditions of existing of local and global extrema, monotonicity, inflection points, curvature. L'Hôpital's rule. Asymptotes.**	1	6	0
6. **Computing basic types of indefinite integrals by means of integrating by substitution and by parts.**	1	4	0
7. **Computing basic types of definite integrals. Area of figures.**	1	4	0
8. **Partial derivatives and local extrema of many variable functions.**	1	4	0

Modes of delivery	**Lecture, exercises in groups.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3,EP4,EP5,EP6,EP7**
	KOLOKWIUM	**EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Exercises: 2 colloquia - max. 5 problems each** **Lectures: exam - max. 5 problems and max. 5 theoretical questions.**
	Grade calculation principles
	The final grade is calculated as an arithmetic average of exercises and lectures.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	Mathematical analysis (analiza matematyczna)		Arytmetyczna	
	1	Mathematical analysis (analiza matematyczna) [ćwiczenia]	zaliczenie z oceną		
	1	Mathematical analysis (analiza matematyczna) [wykład]	egzamin		

Basic reading	Batóg B., Bieszk-Stolorz B., Forys I., Guzowska M., Heberlein K. (2021): Mathematics for Students of Economics, Finance and Management, Difin, Warszawa
	Hoffmann L.D., Bradley G.L. (2006): Calculus for Business, Economics, and the Social and Life Sciences, McGraw-Hill Science/Engineering/Math
	Marvin L. Bittinger, David J.Ellenbogen, Scott A. Surgent (2012): Calculus and its Applications, Addison-Wesley, Pearson Education, Boston
Supplementary reading	Ciałowicz B. (2017): Workouts in Calculus and Linear Algebra with Applications in Economics, Cracow University of Economics Press, Cracow

STUDENT WORKLOAD		
	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**6**	**0**
Preparation for contact hours	**15**	**0**
Private reading and studying	**5**	**0**
Participation in tutorials	**13**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**16**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**						
Course title: **Microeconomics (mikroekonomia) (PODSTAWOWE)**					Course code: **EFZ71AIJ3432_46S**	
Name of field of study: **Economics and IT Applications**						
Mode and cycle of study: **first-degree, full - time**		Profile of study: **general academic**			Specialty:	
Course / module status **obligatory**			Language of instruction: **semester: 2 - english language**			

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	2	discussion classes	30	0	pg	4
		lecture	15	0	e	
Total			**45**			**4**

Course / module coordinator	**dr ALEKSANDRA GĄSIOR**
Course instructor	**dr ALEKSANDRA GĄSIOR**
Course / module objectives	**The aim is to present the basic issues of microeconomics course, in particular the functioning of individual markets, the behavior of individual entities, micro-economic theory of choice: consumers and businesses, the basic conceptual methods and tools for the analysis of micro-economic activities of economic agents.**
Prerequisites	**The student knows the basics of economics and the principles of market economy, student is orientented in current economic events.** **Students are able to solve the basic tasks of mathematics and use (properly interpreted) graphs showing the relationship between the main categories, which are subject to economic analysis.** **The student is able to think analytically, properly formulate conclusions based on their knowledge of the news of economic life.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows basic methodology allowed to analysis basic economic events.**	**K_W01 K_W03 K_W07**
skills	**1**	**EP2**	**Students can predict possible scenarios come from different issues from market and can assess company situation in different market structure.**	**K_U01 K_U05 K_U07**
social competences	**1**	**EP3**	**Student can think in creative and innovative way and easily communicate in English in an international group of people in order to carry out business tasks and projects.**	**K_K01 K_K02 K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Microeconomics (mikroekonomia)**			
Format of instruction: **lecture**			
1. **null**	2	3	0
2. **Theory of demand and supply**	2	2	0
3. **Market equilibrium and its changes**	2	2	0
4. **Company choice - theory of production**	2	2	0
5. **Costs, revenue and profits**	2	2	0

6. **Optimal choice of company**	2	2	0
7. **Market structure - perfect competition**	2	2	0
Format of instruction: **discussion classes**			
1. **Introduction to microeconomics**	2	3	0
2. **Economics theory of human behaviour**	2	3	0
3. **Theory of demand and supply**	2	3	0
4. **Market equilibrium and its changes**	2	3	0
5. **Company choice - theory of production**	2	3	0
6. **Costs, revenue and profits**	2	3	0
7. **Optimal choice of company**	2	3	0
8. **Market structure - perfect competition**	2	3	0
9. **Market structure - imperfect competition**	2	3	0
10. **The case studies analysis**	2	3	0

Modes of delivery	**Main form of knowledge transfer is lectures with case studies. The main way of excercises is case studies solving, also discussions, graphic and algebraic tasks.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1**
	KOLOKWIUM	**EP1**
	PREZENTACJA	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for classes:** **- Students are assessed on the basis of written colloquia and presentation.** **Credit for lectures: students are assessed on the basis of a written exam covering the verification of knowledge based on case studies (50% points) and theory (50% points), for checking the knowledge of the basic principles of the functioning of markets and corporate entities (consumers , businesses).** **Rating:** **- The student receives a satisfactory grade - if he can provide some basic definitions of terms related to microeconomics and solve simple algebraic tasks.** **- The student is given a score good - when also can define the basic relationships occurring in different markets, as well as to solve problems in which it can represent causal relationships that take place in the markets.** **- The student receives a very good - if also able to predict the likely impact of events taking place in the markets, as well as able to solve case studies that require proper to anticipate effects of events occurring in the markets.**
	Grade calculation principles
	The final course grade is the arithmetic mean of the exercise and lecture grades.

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	2	Microeconomics (mikroekonomia)		Arytmetyczna	
	2	Microeconomics (mikroekonomia) [wykład]	egzamin		
	2	Microeconomics (mikroekonomia) [ćwiczenia]	zaliczenie z oceną		

Basic reading	Mankiw N.G. (2017): Principles of Microeconomics, New York
	Perloff J. (2007): Microeconomics, Pearson International Edition

Supplementary reading	Forbes
	The Economist
	The Financial Times

STUDENT WORKLOAD		
	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**0**	**0**
Preparation for contact hours	**15**	**0**
Private reading and studying	**10**	**0**
Participation in tutorials	**15**	**0**
Preparation of project / essay / etc.	**5**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Organisational Management (zarządzanie organizacją) (PODSTAWOWE)**	Course code: **EFZ71AIJ3433_36S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status: **obligatory**	Language of instruction: **semester: 1 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	lecture	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr ALEKSANDRA RUDAWSKA**
Course instructor	**dr ALEKSANDRA RUDAWSKA**
Course / module objectives	**The course covers essential concepts and practices of modern management. Topics are discussed according to the functions of the management process, i.e., planning, organizing, leading and motivating, and controlling. The course aims to develop students' understanding of the specifics of managing organizations and the fundamental theories that characterize organizational management with a focus on business organizations.**
Prerequisites	**The student demonstrates a desire to learn basic economic and social concepts and understands the need for continuous learning.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student defines basic concepts related to the management process and the functioning of an organization**	**K_W12 K_W14**
	2	**EP2**	**The student explains the impact of the environment on organizations and identifies the challenges that the contemporary environment faces organizations.**	**K_W12**
	3	**EP3**	**The student explains the essence of each management function and the basic theories describing these functions.**	**K_W12**
skills	**1**	**EP4**	**The student applies the decision-making procedure according to the administrative model.**	**K_U11 K_U13 K_U17**
	2	**EP5**	**The student identifies elements of the organization and their external environment and assesses the impact of the environment on the organization.**	**K_U04 K_U18**
social competences	**1**	**EP6**	**The student identifies dilemmas related to the manager's work.**	**K_K01 K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Organisational Management (zarządzanie organizacją)**			
Format of instruction: **lecture**			
1. **Organizational management in the modern world ? the essence and challenges organizations and managers face.**	1	3	0
2. **Elements and significance of the organizational environment in organizational management.**	1	2	0
3. **The planning process and elements in organizational management.**	1	2	0

4. **The importance and specifics of organizational structure.**	1	2	0
5. **Motivation and motivating employees.**	1	2	0
6. **The role and types of leadership in organizations.**	1	2	0
7. **The control process in management.**	1	2	0

Modes of delivery	**Lectures will use a multimedia presentation with numerous practical examples, supported by discussions with students and short case studies.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4,EP5,EP6**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Written test: single- and multiple-choice closed questions, open questions, and short tasks.**	
	Grade calculation principles	
	The test is graded in the form of a point system. **Below 55% of the points - grade: 2.0** **55%-66% of the points - grade: 3.0** **67%-74% of the points - grade: 3.5** **75%-82% of the points - grade: 4.0** **83%-89% of the points - grade: 4.5** **90% or more - grade: 5.0**	

Final grade calculation method

Sem.	Course	Type of credit	Grade calc. method	Weight for the average
1	Organisational Management (zarządzanie organizacją)		Ważona	
1	Organisational Management (zarządzanie organizacją) [wykład]	zaliczenie z oceną		1,00

Basic reading	Bateman T.S., Konopaske R. (2022): Management: Leading & Collaborating in a Competitive World, 15 wydanie, McGraw-Hill.
Supplementary reading	Jones G. (2013): Organizational Theory, Design and Change, 7 wydanie,, Pearson
	Mullins L.J., Rees G. (2023): Management and Organisational Behaviour, 13 wydanie, Pearson.

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**7**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**4**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**14**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**		
Course title: **Principles Accounting (zasady rachunkowości) (PODSTAWOWE)**		Course code: **EFZ71AIJ3432_47S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 2 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	2	discussion classes	15	0	pg	3
		lecture	15	0	e	
Total			**30**			**3**

Course / module coordinator	**dr ILONA KĘDZIERSKA-BUJAK**
Course instructor	**dr ILONA KĘDZIERSKA-BUJAK**
Course / module objectives	**The aim is to educate students about the role of accounting as the basic information system in the enterprise and to develop elemental skills necessary to participate in processing accounting data.**
Prerequisites	**Student knows the basics of entrepreneurship, the basic distinction between economic categories, such as resources, processes. Students can work in a team and understand the importance of lifelong learning.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the basic source of law governing the conduct of corporate accounting.**	**K_W07 K_W09**
	2	**EP2**	**Student knows the scope and the general structure of the financial statements.**	**K_W07 K_W09**
skills	**1**	**EP3**	**Student can classify resources and claims in the balance sheet and determine the result of the simple business operations on the profit and loss account.**	**K_U07 K_U09**
	2	**EP4**	**Student can post business operations (balance sheet and income operations) and recognizes their impact on the financial statement items.**	**K_U07 K_U09**
social competences	**1**	**EP5**	**Student can complement and improve their knowledge and skills.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Principles Accounting (zasady rachunkowości)**			
Format of instruction: **lecture**			
1. **The essence, the features and functions of accounting. The scope of accounting. Introduction to accounting law.**	2	1	0
2. **The scope and importance of the financial statements.**	2	1	0
3. **Assets and liabilities of the company and its classification. Equity. Balance sheet.**	2	2	0
4. **Business operations. The impact of business operations on the components of the balance sheet.**	2	1	0
5. **Documentation of business transactions.**	2	1	0
6. **The account - construction and operation. Types of accounts. The principle of double-entry bookkeeping. Registration rules for balance sheet accounts.**	2	2	0

7. **Income statement. Basic categories of profits - income, expenses, losses, gains.**	2	1	0
8. **Principles of operation of the profit and loss accounts. Financial result and comparative variant function.**	2	2	0
9. **The overriding principles of accounting.**	2	1	0
10. **Control and Subsidiary Accounts. Trial balance.**	2	1	0
11. **Preparing a simplified balance sheet and profit and loss account for the basis of the trial balance**	2	1	0
12. **Examples of ethical dilemmas**	2	1	0
Format of instruction: **discussion classes**			
1. **The elements of the balance sheet and profit and loss account published by selected entities (assessment the initial requierment of knowledge and skills of students).**	2	1	0
2. **Definitions of accounting. Users of accounting information. Aim of finanancial reporting.**	2	1	0
3. **Discussion of selected accounting regulations (management and supervisory boards, documentation, inventory, reporting deadlines, the importance of accounting policy, and charts of accounts).**	2	1	0
4. **The balance sheet structure and substance of the balance sheet items.**	2	1	0
5. **Preparation and interpretation of the importance of the balance sheet position.**	2	1	0
6. **Business operations and their documentation.**	2	1	0
7. **The impact of transactions on the balance sheet.**	2	1	0
8. **The principle of double-entry bookkeeping.**	2	1	0
9. **Trial balance.**	2	1	0
10. **Income, revenues and gains. Cost, expenses and loses. Principles of recognizing income. Recording income opreactions in accounting books.**	2	1	0
11. **Financial performance. The preparation of the profit and loss account.**	2	1	0
12. **Comprehensive example**	2	2	0
13. **Understanding the importance of accounting information based on a simplified financial statements (working with documents)**	2	1	0
14. **Comprehensive summary of knowledge in the field of accounting principles**	2	1	0

Modes of delivery	**Simulation methods, Group work, Multimedia presentation, Cases studies, Analysis of source documents**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3,EP4**
	KOLOKWIUM	**EP3,EP4**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Students are assessed on the basis of the classroom activities and written colloquium, including verification based on exercises for checking the ability to prepare and interpret simplified financial statements, and records of business transactions (students can use charts of accounts).** **The form and terms of the exam:** **a written examination testing the knowledge and skills of students in the recording various business transactions and preparing basic financial statements. The examination covers the part of the test (about 40% of the points - the multiple-choice test and open-ended questions) and the registration and reporting tasks (about 60% of the points). Students may use during the examination charts of accounts.** **Rating:** **The student passes the exam, if he/she can post basic operations and the prepare balance sheet, and knows the basic concepts of accounting basics.**	
	Grade calculation principles	

	Final grade is equal to the weighted average of the exam grade (75% weighted) and classes grade (25% weighted) - upon condition that both grade are at least satisfactory (3,0).				
Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	2	Principles Accounting (zasady rachunkowości)		Ważona	
	2	Principles Accounting (zasady rachunkowości) [wykład]	egzamin		0,75
	2	Principles Accounting (zasady rachunkowości) [ćwiczenia]	zaliczenie z oceną		0,25
Basic reading	Edmonds T.P., Edmonds Ch., Olds P.R., McNair F.M., Tsay B.-Y. (2018): Survey of Accounting (Irwin Accounting) 5th Edition, McGraw-Hill Education, 13e, international student edition, New York				
	Elliott B., Elliott J. (2017): Financial accounting and reporting, Financial Times Prentice Hall, Harlow, England				
	Franklin M., Graybeal P., Cooper D. (2019): Principles of Accounting, Volume 1: Financial Accounting., OpenStax, Rice University, Houston, Texas				
Supplementary reading	Walther L.M. (2017): Financial Accounting Textbook, CreateSpace Independent Publishing Platform				

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**7**	**0**
Participation in tutorials	**12**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**14**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Statistical Inference (wnioskowanie statystyczne) (KIERUNKOWE)**	Course code: **EFZ71AIJ3432_48S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 2 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	2	discussion classes	30	0	pg	4
		lecture	15	0	pg	
Total			**45**			**4**

Course / module coordinator	**dr hab. CHRISTIAN LIS**
Course instructor	**dr hab. CHRISTIAN LIS**
Course / module objectives	**Acquisition of the ability to apply statistical inference methods in the study of economic and social phenomena.**
Prerequisites	**- ability to apply the methods of the course "Descriptive Statistics"; - ability to apply the methods of the "Mathematics" module. - knowledge of measures describing the structure of the population, measures of coexistence relations (correlation coefficient, chi2 statistic)**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student knows the properties of estimators describing population structure and parameters describing dependencies between variables and properties of their distributions.**	**K_W08 K_W10**
	2	EP2	**Student knows methods of obtaining estimators.**	**K_W06 K_W10**
	3	EP3	**Student knows the stages of verification of statistical hypotheses in the social sciences.**	**K_W10**
skills	1	EP4	**Student can choose model of estimation and make an estimation of parameters describing the structure of the collectivity and interdependence parameters, including model assumptions.**	**K_U06 K_U10**
social competences	1	EP5	**Student is able to carry out a verification of statistical hypotheses concerning distribution parameters describing the structure of population and occurrence of dependencies.**	**K_K01 K_K02**
	2	EP6	**Student appreciates the importance and consequences of cooperation with the departments of public statistics in the study conducted by a representative method.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Statistical Inference (wnioskowanie statystyczne)**			
Format of instruction: **lecture**			

1. **Transformations of random variables, linear transformations of variables with normal distribution. Nonlinear transformations of variables with normal distribution.**	2	2	0
2. **Sampling, simple samples.**	2	2	0
3. **Point estimation assumptions, estimators - their properties and distributions. Error of estimator. Estimates of estimators and errors of estimators. Interval estimation.**	2	3	0
4. **Methods of obtaining estimators - method of maximum likelihood, method of moments.**	2	2	0
5. **Concept and types of statistical hypotheses, I and II type error in the hypotheses verification, critical regions of the tests.**	2	2	0
6. **Parametric tests, testing stages, test for the parameters describing structures, correlation and regression coefficients significance tests.**	2	2	0
7. **Nonparametric tests: tests of compliance with a hypothetical distribution, test of randomness, test of two structures compatibility (Kolmogorov-Smirnov).**	2	2	0
Format of instruction: **discussion classes**			
1. **Interval and point estimation in the structure analysis. Error and accuracy of estimation.**	2	6	0
2. **Interval and point estimation in the interdependence analysis.**	2	6	0
3. **The maximum likelihood method. The method of moments.**	2	2	0
4. **Verification of parametric hypothesis in the analysis of structures, tests of means, fractions, variance. Stages of verification of statistical hypotheses. The critical regions of tests.**	2	6	0
5. **Verification of parametric hypothesis in the analysis of interdependence. Tests of significance.**	2	4	0
6. **Nonparametric tests of empirical distributions compatibility with a normal distribution (Kolmogorov compatibility tests), test of independence.**	2	2	0
7. **Repetition and summary of the subject material.**	2	4	0

Modes of delivery	**The course comprises lectures using (where appropriate) transparencies/presentations concerning random variables and exercises - working individually and in groups.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	SPRAWDZIAN	**EP4,EP5,EP6**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Assessment form of classes content:** **- Students are assessed on the basis of three written tests covering writing skills verification based on solving practical tasks of interval estimation and verification of parametric and nonparametric hypotheses according to the material provided on exercises (students can use standardized statistical tables and formulas). Coursework must be included for a minimum of 60%.** **Assessment form of lectures content:** **- written test concerning knowledge of the effects 01, 02, 03. This includes open-ended questions relating to analytical examples related to research conducted by the Central Statistical Office by representative method (effect 07), in which the student must demonstrate knowledge of the principles necessary to drive the estimation and verification of statistical measures. During the test students may use the standardized statistical tables and formulas.**
	Grade calculation principles
	The final grade is the arithmetic mean of the grades for the lectures and for classes.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	2	Statistical Inference (wnioskowanie statystyczne)		Arytmetyczna	
	2	Statistical Inference (wnioskowanie statystyczne) [ćwiczenia]	zaliczenie z oceną		
	2	Statistical Inference (wnioskowanie statystyczne) [wykład]	zaliczenie z oceną		

Basic reading	Boos D.D., Stefanski L.A. (2013): Essential Statistical Inference, Springer-Verlag New York Inc., New York
	Freedman D., Pisani R., Purves R. (2007): Statistics, 4th Ed., W.W. Norton & Company, New York, London
	Lyman Ott R., Longnecker M. (2015): An Introduction to Statistical Methods and Data Analysis, 7th Edition, Duxbury Thomson Learning, USA
	McClave J.T., Benson P.G., Sincich T. (2018): Statistics For Business nad Economics, Pearson Prentice Hall, 13th Global Edition, New Jersey
Supplementary reading	Bak I., Markowicz I., Mojsiewicz M., Wawrzyniak K. (2005): Statystyka w zadaniach. Cz. II, Wydawnictwo Naukowo-Techniczne
	Wasserman L. (2005): All of Statistics. The Concise Course of Statistical Inference, Springer

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**12**	**0**
Private reading and studying	**7**	**0**
Participation in tutorials	**14**	**0**
Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-26/27Z**	
Course title: **Team Work Management (zarządzanie pracą zespołową) (KIERUNKOWE)**	Course code: **EFZ71AIJ3433_40S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	discussion classes	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr JAROSŁAW POTERALSKI**
Course instructor	**dr JAROSŁAW POTERALSKI**
Course / module objectives	**The goal of the course is to familiarize students with the basic principles of team work management, by developing their skills and managerial competence**
Prerequisites	**Basic knowledge of human resources management, communications and strategic planning**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student explains essence, role and main features of teams and distinguishes teams from groups**	**K_W11 K_W12 K_W14**
	2	**EP2**	**Student describes factors that determine effective teamwork**	**K_W12 K_W14**
skills	**1**	**EP3**	**Student identifies problems occurring during teamwork 1 EP3 and proposes solutions**	**K_U18**
	2	**EP4**	**Student prepares written assignments on the topic of teamwork**	**K_U16 K_U17**
	3	**EP5**	**Student is ready to formulate their own ideas and prepare projects.**	**K_U01 K_U05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Team Work Management (zarządzanie pracą zespołową)**			
Format of instruction: **discussion classes**			
1. **The essence of teamwork**	1	2	0
2. **Teamwork building blocks**	1	3	0
3. **Teamwork development**	1	2	0
4. **Leadership in teams**	1	2	0
5. **Problem solving and decision making in teams**	1	2	0
6. **Team effectiveness**	1	2	0
7. **Communication and conflict management in a team**	1	2	0

Modes of delivery	**Lecture with presentations and group discussion., Case study analysis., Simulations - games and exercises considering communication, creativity, problem solving in smaller and bigger teams (learning by doing and observing)**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2**
	PRACA PISEMNA/ ESEJ/ RECENZJA	**EP1,EP3,EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Credit consists of three elements:** **-Case study on topic: "Effective teamwork" based on articles from "Harvard Business Review" and selected example of a team - written assignment and presentation - 60%** **-Class assignments and case studies - 10%** **-Final test - 30%**	
	Grade calculation principles	
	The final grade is the grade obtained from the exercises.	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	Team Work Management (zarządzanie pracą zespołową)		Ważona	
	1	Team Work Management (zarządzanie pracą zespołową) [ćwiczenia]	zaliczenie z oceną		1,00

Basic reading	Katzenbach J.R. , Smith D.K. (2005): The discipline of teams, Harvard Business Review July-August, pp. 162-171
	West M. A. , Wiley-Blackwell (2012): Effective Teamwork: Practical Lessons from Organizational Research, 3rd ed., Wiley-Blackwell
Supplementary reading	Brett J., Behfar K., Kern M.C. (2006): Managing Multicultural Teams, Harvard Business Review, November
	Edmondson, A.C. (2012): Teamwork on the fly: How to master the new art of teaming, Harvard Business Review (April)
	Gratton L., Ericson T.J. (2007): 8 Ways to Build Collaborative Teams, Harvard Business Review, November
	Pentland A. (2012): The new science of building great teams, Harvard Business Review (April)
	Rudawska A. (2017): Students' Team Project Experiences and Their Attitudes Towards Teamwork, Journal of Management and Business Administration. Central Europe" Vol. 25, No. 1/2017, pp. 78–97

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**0**	**0**
Private reading and studying	**5**	**0**
Participation in tutorials	**6**	**0**
Preparation of project / essay / etc.	**12**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Course title: **analiza ekonomiczna w przedsiębiorstwie (economic analysis in enterprise) (PODSTAWOWE)**	Course code: **EFZ71AIJ3432_10S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	discussion classes	30	0	pg	4
		lecture	15	0	e	
Total			**45**			**4**

Course / module coordinator	**prof. dr hab. MAŁGORZATA PORADA-ROCHOŃ**
Course instructor	**dr MIRELA ROMANOWSKA**
Course / module objectives	**Teach students the ability to search and measure relationships between economic phenomena in business entities and the impact of the environment on their behavior. Understanding and interpretation of using research methods by financial information contained in the financial statements in order to make the right decisions and efficient business management.**
Prerequisites	**- knowledge - the student knows the basics of accounting, management, business economics, - skills - students can read with understanding basic information such as in the financial statements and other sources, - competence (attitudes) - student has instilled habits of lifelong learning, the ability to work in a group and is prepared to observe and analyze the environment.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student has an understanding of the basic information content of financial statements and reports.**	**K_W07**
	2	EP2	**Student has an understanding of the basic construction rules of evaluation measures phenomena that characterize the company.**	**K_W07**
skills	1	EP3	**Student has the ability to use of basic theoretical knowledge to describe and analyze specific phenomena and processes taking place in the enterprise.**	**K_U07**
	2	EP4	**Student has the ability to the use of appropriate methods to evaluate the effects.**	**K_U13**
	3	EP5	**Student has the ability to use of basic theoretical knowledge to describe and analyze specific phenomena and processes taking place in the enterprise.**	**K_U07**
	4	EP6	**Student has the ability to make decisions and to take any responsibility for them.**	**K_U04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **analiza ekonomiczna w przedsiębiorstwie (economic analysis in enterprise)**			
Format of instruction: **lecture**			

1. **The nature and role of analysis in business management.**	3	2	0
2. **Criteria for the classification of economic analysis methods and their usefulness in the current market conditions.**	3	2	0
3. **Characteristics of sources of information for economic analysis.**	3	1	0
4. **A preliminary assessment of the situation of the assets.**	3	2	0
5. **A preliminary assessment of the situation of the capital.**	3	1	0
6. **Evaluation of short-term and long-term static liquidity.**	3	2	0
7. **Cash conversion cycle.**	3	2	0
8. **The nature and assessment of net working capital.**	3	1	0
9. **Concept and measurement of profitability.**	3	2	0
Format of instruction: **discussion classes**			
1. **Reading the basic financial statements of the selected companies.**	3	2	0
2. **Methods of economic analysis: logarithm and subsequent substitutions - tasks with two or three factors.**	3	2	0
3. **A preliminary assessment of the situation the investigated companys assets.**	3	2	0
4. **A preliminary assessment of the situation the investigated companys capital.**	3	2	0
5. **Study of short-term and long-term financial static liquidity of company X.**	3	2	0
6. **Establishing and interpretation of the cash conversion cycle (operating, net).**	3	2	0
7. **Evaluation of net working capital in the company X. Identifying and interpretation of the cash conversion cycle (operating, net).**	3	2	0
8. **Assessment of the company's profitability.**	3	3	0
9. **Corporate debt analysis.**	3	2	0
10. **Analysis of a company's financial condition - case study.**	3	6	0
11. **Project presentation.**	3	2	0
12. **Colloquium.**	3	1	0
13. **The role of Corporate Social Responsibility in financial analysis - examples.**	3	2	0

Modes of delivery	**Lectures, case study, exercises**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3**
	KOLOKWIUM	**EP3,EP4,EP5**
	PROJEKT	**EP6**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**with**	
	Grade calculation principles	
	The final grade is a weighted mean: 40% grade of classes (20% project and 20% test score) and 60% grade of lectures.	

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	3	analiza ekonomiczna w przedsiębiorstwie (economic analysis in enterprise)		Ważona	
	3	analiza ekonomiczna w przedsiębiorstwie (economic analysis in enterprise) [wykład]	egzamin		0,60
	3	analiza ekonomiczna w przedsiębiorstwie (economic analysis in enterprise) [ćwiczenia]	zaliczenie z oceną		0,40
Basic reading	Brigham E.F., Houston J.F. (2009): Fundamentals of Financial Management, South-Western Cengage Learning				
	Friedlob G.T., Schleifer L.F. (2003): Essentials of Financial Analysis, John Wiley & Sons				
	Steven M. Bragg. , 2014. (2014): (2014): Financial Analysis: Second Edition A Business Decision Guide. Edition: 2				
Supplementary reading	Lee A.C., Lee J.C., Lee C.F. (2009): Financial Analysis, Planning & Forecasting: Theory and Application" Financial Analysis, Planning & Forecasting: Theory and Application, , World Scientific Publishing Co. Pte. Ltd				

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**4**	**0**
Preparation for contact hours	**15**	**0**
Private reading and studying	**15**	**0**
Participation in tutorials	**8**	**0**
Preparation of project / essay / etc.	**5**	**0**
Preparation for test / exam	**8**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Unit: **Inżynieria informatyczna biznesu (IT engineering in business) [moduł]**	
Course title: **analiza i projektowanie systemów informacyjnych (IS analysis and design) (KIERUNKOWE)**	Course code: **US71AIJ2717_50S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 4 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	laboratory	30	0	pg	4
		lecture	15	0	pg	
Total			**45**			**4**

Course / module coordinator	**dr KAROLINA MUSZYŃSKA**
Course instructor	**dr KAROLINA MUSZYŃSKA**
Course / module objectives	**The goal of the course is to familiarize the student with the theoretical issues of information systems analysis and design and IT tools supporting this field, as well as to help the student acquire the ability to use these tools and utilize the acquired knowledge for analyzing and designing information systems.**
Prerequisites	**Basic skills in computer and Internet use.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student knows and understands the concepts of information systems analysis and design.**	**K_W08**
	2	EP2	**Student is familiar with the methods of information systems analysis and design and knows how to capture and define requirements.**	**K_W13**
	3	EP3	**Student is familiar with IT tools supporting the analysis and design of information systems.**	**K_W08**
skills	1	EP4	**Student can use the theoretical knowledge to analyze an exemplary information system, to model selected functions and information structures, using appropriate methods and tools.**	**K_U08 K_U12**
	2	EP5	**Student can use the acquired methods and IT tools to design the user's interface for an exemplary system.**	**K_U08 K_U12**
	3	EP6	**Student can easily communicate in English in an international group of people in order to carry out business tasks and projects.**	**K_U16 K_U18**
social competences	1	EP7	**Student is ready to supplement their knowledge and use it to solve issues regarding development of information systems in organizations.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **analiza i projektowanie systemów informacyjnych (IS analysis and design)**			
Format of instruction: **lecture**			

1. **Introduction to the analysis and design of information systems (concepts, methods, tools).**	4	2	0
2. **Methods of gathering, defining and documenting system requirements; modeling the functions and dynamics of the system - use case diagrams.**	4	2	0
3. **Modeling the information structures - class/object diagrams.**	4	2	0
4. **Modeling the functions and dynamics of the system - activity and sequence diagrams.**	4	2	0
5. **Designing the database and physical structure of the system - generating physical data model from class diagram.**	4	2	0
6. **Types and principles of designing system user interface.**	4	2	0
7. **Alternative approaches to system analysis and design.**	4	3	0
Format of instruction: **laboratory**			
1. **Definition of the design task (characteristics of the organization, organizational structure, problems that require informatization and system goals).**	4	2	0
2. **Identification and description of users' requirements, functional structure and system users.**	4	2	0
3. **Modeling the functions - use case diagrams.**	4	4	0
4. **Modeling the information structures - class diagram.**	4	4	0
5. **Modeling the dynamics of the system - activity diagrams.**	4	4	0
6. **Interaction diagrams - sequence diagrams.**	4	4	0
7. **Design of database and physical structure of the system.**	4	2	0
8. **Design of windows form user's interface.**	4	4	0
9. **Design of web form user's interface.**	4	4	0

Modes of delivery	**multimedia presentations, teamwork, case study, lecture based on multimedia presentations**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	PROJEKT	**EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Written test verifies the achievement of learning outcomes in terms of knowledge regarding information systems analysis and design, as well as methods and tools supporting this area. To get a positive grade from the test a minimum of 51% of points must be obtained.** **Project verifies the achievement of learning outcomes on practical skills and teamwork. Projects focus on performing analysis and design for a sample system using the known tools /diagrams. To get a positive grade from the project a minimum of 51% of points must be obtained.**	
	Grade calculation principles	
	The final grade of the course is a weighted average of the two grades - from the written test (30%) and the project (70%). The pass is granted only in case of positive assessment of both the written test and the project.	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	analiza i projektowanie systemów informacyjnych (IS analysis and design)		Ważona	
	4	analiza i projektowanie systemów informacyjnych (IS analysis and design) [wykład]	zaliczenie z oceną		0,30
	4	analiza i projektowanie systemów informacyjnych (IS analysis and design) [laboratorium]	zaliczenie z oceną		0,70

Basic reading	Valacich J.S., George J.F. (2020): Modern Systems Analysis and Design, 9th Edition, Pearson

Supplementary reading	Seidl M., Scholz M., Huemer Ch., Kappel G. (2015): UML @ Classroom: An Introduction to Object-Oriented Modeling, Springer
	Wrycza S., Marcinkowski B., Maślankowski J. (2012): UML 2.x. Ćwiczenia zaawansowane, Helion
	Wrycza S., Marcinkowski B., Wyrzykowski K. (2006): Język UML 2.0 w modelowaniu systemów informatycznych, Helion

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**6**	**0**
Participation in tutorials	**12**	**0**
Preparation of project / essay / etc.	**14**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**		
Course title: **E-commerce (e-gospodarka) (KIERUNKOWE)**		Course code: **EFZ71AIJ3432_2S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - english language**	

Year	Semester	Form of instruction	No. of hours		Type of credit	ECTS
				including e-learning		
2	3	laboratory	15	0	pg	1
Total			**15**			**1**

Course / module coordinator	**dr AGATA WAWRZYNIAK**
Course instructor	**dr AGATA WAWRZYNIAK**
Course / module objectives	**This course focuses on electronic commerce applications, technologies, and tools which are used to conduct business on the World Wide Web. It reviews foundations of e-commerce, its infrastructure, current e-commerce models, transactions, security and quality assurance, web site design, payment systems, and various issues which relate to electronic economy, electronic data interchange, web-based marketing, e-supply chains, emarketplace. Using CMS, students explore the fundamentals of planning dynamic e-commerce websites, CMS databases, developing site templates, integration of meaningful content. The course is project-based - students build several sites over the term to increase their confidence in planning and executing websites.**
Prerequisites	**Skills: student needs to have basic computer skills in order to effectively interact and complete activities** **Competence: student is able to work in a group** **Knowledge: student has a general understanding of the functioning of economy entities**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Identify e-commerce models**	**K_W01**
	2	**EP3**	**Understand the process of setting up an interactive web site, displaying product catalogue, deploying shopping carts, handling transaction**	**K_W08**
	3	**EP4**	**Describe the process of maintaining security on the e-commerce site**	**K_W08**
	4	**EP6**	**Discuss the issues facing businesses that are considering worldwide marketing of their products and services**	**K_W04**
skills	**1**	**EP7**	**Be able to evaluate the information needs and requirements of a business entity wishing to adhere to e-commerce paradigm**	**K_U07**
	2	**EP8**	**Be able to participate in the development of an appropriate business information system to support the economic entity needs**	**K_U08**
	3	**EP9**	**Be able to build an online store**	**K_U08**
	4	**EP10**	**Be aware of security issues and of technologies designed to ensure secure transactions**	**K_U08**
social competences	**1**	**EP11**	**Be able to work as a team**	**K_K01**
	2	**EP12**	**Be able to work with an online store and modify it as necessary**	**K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **E-commerce (e-gospodarka)**			
Format of instruction: **laboratory**			
1. **Introduction to e-commerce: e-commerce models and concepts, types of e-commerce**	3	2	0
2. **E-commerce and its technological aspects: e-commerce infrastructure, the Internet and World Wide Web, web design**	3	2	0
3. **Introduction to CMS. Planning CMS website**	3	2	0
4. **Building an e-commerce website. Custom themes. Personalization and permissions**	3	4	0
5. **Building product catalogue. Shopping cart**	3	2	0
6. **E-commerce payment systems. Security in e-commerce**	3	1	0
7. **Legal and regulatory environment of e-commerce. E-commerce marketing techniques**	3	1	0
8. **Presentation of student projects**	3	1	0

Modes of delivery	**Multimedia presentation, case studies, group work**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	PROJEKT	**EP1,EP10,EP11,EP12,EP3,EP4,EP6,EP7,EP8,EP9**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP1,EP10,EP11,EP12,EP3,EP4,EP6,EP7,EP8,EP9**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Practical tasks (max. 10 points) - test achievement of learning outcomes in terms of knowledge and skills. Project (max. 10 points) - a project to achieve the learning outcomes tested on practical skills and teamwork. To pass the laboratory examination a student must obtain 60% of points of practical tasks and project.**	
	Grade calculation principles	
	The final course grade is the laboratory grade	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	E-commerce (e-gospodarka)		Ważona	
	3	E-commerce (e-gospodarka) [laboratorium]	zaliczenie z oceną		1,00

Basic reading	K. Laudon, C. Traver (2023): E-Commerce 2023-2024: Business, Technology, Society, PEARSON Education Limited, Global edition
	L. Sharma (2023): E-commerce, New Century Publications
	T. Larsson (2016): Ecommerce Evolved. The Essential Playbook To Build, Grow & Scale A Successful Ecommerce Business, CreateSpace Independent Publishing Platform
Supplementary reading	G. Schneider (2018): Electronic Commerce, Cengage Learning

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**15**	**0**

Participation in test / exam	**1**	**0**
Preparation for contact hours	**1**	**0**
Private reading and studying	**1**	**0**
Participation in tutorials	**1**	**0**
Preparation of project / essay / etc.	**5**	**0**
Preparation for test / exam	**1**	**0**
TOTAL workload	**25**	
ECTS credits	**1**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**		
Course title: **ekonometria (econometrics) (KIERUNKOWE)**		Course code: **US71AIJ2855_24S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	discussion classes	15	0	pg	4
		laboratory	15	0	pg	
		lecture	15	0	e	
Total			**45**			**4**

Course / module coordinator	**dr hab. JACEK BATÓG**
Course instructor	**dr hab. JACEK BATÓG**
Course / module objectives	**Acquirement of basic knowledge on econometric methods and their applications in quantitative analysis of economic processes as well as possession of skills of exploitation of chosen function of Excel spreadsheet and chosen statistical programme related to estimation and verification of linear econometric models.**
Prerequisites	**Student in the area of:** **- knowledge: shows acquaintance of problems and methods of algebra, mathematical analysis, descriptive statistics, probability theory, mathematical statistics and basics of macroeconomics, microeconomics and finance,** **- skills: can perform basic mathematical operations, calculate chosen statistical measures, verify hypothesis and use basic function of Excel spreadsheet.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student knows specificity and structure of econometric model as well as stages of modeling of dynamics and interdependency.**	**K_W05 K_W10**
	2	EP2	**Student understand of theoretical foundations of estimation and verification of linear econometric model as well as basic issues from econometric forecasting.**	**K_W05 K_W10**
skills	1	EP3	**Student can construct econometric models of dynamics and interdependency and interpret obtained results.**	**K_U06 K_U10**
	2	EP4	**Student can compute forecasts of economic phenomena using simple econometric models of time series and assess their quality.**	**K_U06 K_U10**
	3	EP5	**Student can use functions of Excel spreadsheet related to estimation and verification of linear econometric models.**	**K_U06 K_U10 K_U15**
social competences	1	EP6	**The student appreciates the importance of teamwork and of independently extending his/her knowledge.**	**K_K01 K_K02**

CONTENT	Semester	No. of hours	including e-learning

Subject title: **ekonometria (econometrics)**

Format of instruction: **lecture**			
1. **Definition and subject of econometrics. Types of statistical regularities. Econometric model.**	3	2	0
2. **Stages of econometric modelling.**	3	2	0
3. **Estimation of structural parameters of econometric models - OLS.**	3	3	0
4. **Verification of econometric models. Chosen challenges of building of econometric models.**	3	3	0
5. **Nonlinear models - building and applications.**	3	3	0
6. **Econometric forecasting - introduction.**	3	2	0
Format of instruction: **discussion classes**			
1. **Specification of independent variables.**	3	2	0
2. **Selection of analytical form of econometric models.**	3	1	0
3. **Estimation and verification of linear econometric models.**	3	6	0
4. **Nonlinear models in analysis of economic phenomena.**	3	3	0
5. **Econometric forecasting.**	3	3	0
Format of instruction: **laboratory**			
1. **Examples of specification of independent variables.**	3	2	0
2. **Examples of selection of analytical form of econometric models.**	3	1	0
3. **Examples of estimation and verification of linear econometric models.**	3	7	0
4. **Exploitation of nonlinear models in analysis of economic phenomena.**	3	2	0
5. **Examples of econometric forecasting.**	3	2	0
6. **Project presentation and discussion.**	3	1	0

Modes of delivery	**Lectures with use of multimedia presentations. Solving problems by means of Excel spreadsheet and chosen statistical programme. Team work oriented on project preparation.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN USTNY	**EP1,EP2**
	KOLOKWIUM	**EP3,EP4,EP5**
	PROJEKT	**EP3,EP4,EP5,EP6**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Form and requirements of exercise and laboratory credit:** **- students are assessed by means of test (exercises) and the group project (laboratory), which verify achievement of educational effects of skills,** **- a lecture mark is identical with an exam mark.** **Form and requirements of exam:** **- students are assessed by means of oral exam (2 questions) which allows to verify of achievement of educational effects of knowledge (after drawing of questions students have some minutes to prepare their answers).**	
	Grade calculation principles	
	Final grade of the course: **- student can be granted a satisfactory credit when he is able at least to discuss problems related to statistical regularities, formulation of model hypothesis, estimation of structural parameters and verification of econometric models, as well as solve assignments related to these issues,** **- the final mark is equal to a weighted average calculated from three partial marks: exercises (weight 0,3), laboratory (weight 0,3) and exam (weight 0,4).**	

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	3	ekonometria (econometrics)		Ważona	
	3	ekonometria (econometrics) [ćwiczenia]	zaliczenie z oceną		0,30
	3	ekonometria (econometrics) [laboratorium]	zaliczenie z oceną		0,30
	3	ekonometria (econometrics) [wykład]	egzamin		0,40

Basic reading	Hayashi F. (2001): Econometrics, Princeton University Press
	Johnston J. (1991): Econometric methods, McGraw-Hill International Edition
	Myoung-jae Lee (2016): Matching, Discontinuity, Difference in Differences, and Beyond 1st Edition, Oxford University Press
	William H. Greene (2012): Econometric Analysis, 7th edition., Prentice Hall
	Wooldridge J.M. (2013): Introductory Econometrics. A Modern Approach, South-Western
Supplementary reading	Batóg J., Batóg B. (2015): Conditional Income Convergence in the European Union: R&D Spending and Export Influence, Transformations in Business & Economics, Vol. 14, No. 3C (36C), Wilno
	Hozer J. (1997): Ekonometria, Katedra Ekonometrii i Statystyki, Stowarzyszenie Pomoc i Rozwój
	Hozer J. (2007): Ekonometria stosowana w przykładach i zadaniach, Katedra Ekonometrii i Statystyki US, Stowarzyszenie Pomoc i Rozwój
	Maddala G.S. (2021): Ekonometria, Wydawnictwo Naukowe PWN

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**13**	**0**
Private reading and studying	**5**	**0**
Participation in tutorials	**14**	**0**
Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Course title: **finanse przedsiębiorstw (corporate finance) (PODSTAWOWE)**	Course code: **EFZ71AIJ3432_1S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status: **obligatory**	Language of instruction: **semester: 4 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	lecture	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr hab. ADAM ADAMCZYK**
Course instructor	**dr hab. ADAM ADAMCZYK**
Course / module objectives	**The aim of the course is explain to the students the mechanisms of firm financing, gaining knowledge of the norms and rules, affecting the finances of the company. The goal is also to teach students how to determine the variable value of money over time, estimate the cost of capital, and value stocks and bonds.**
Prerequisites	**The student has a general knowledge of finance and accounting, knows and understands the relationship between financial sphere and the real economy macroeconomic environment. He understands the need for lifelong learning.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows and understands the mechanism of corporate finance.**	**K_W02**
skills	**1**	**EP2**	**Student is able to identify, classify the business funding.**	**K_U01**
	2	**EP3**	**Student is able to use tools of financial management.**	**K_U02**
social competences	**1**	**EP4**	**Student understands the need for learning throughout life.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **finanse przedsiębiorstw (corporate finance)**			
Format of instruction: **lecture**			
1. **The finance function, corporate objectives, sources of capital.**	4	2	0
2. **Introduction to financial statement analysis.**	4	2	0
3. **Sources of finance.**	4	2	0
4. **Cost of capital.**	4	2	0
5. **Capital structure theories.**	4	2	0
6. **Payout policy theories.**	4	2	0
7. **Capital budgeting- the capital investments process.**	4	2	0
8. **Working capital management.**	4	1	0

Modes of delivery	**Multimedia presentations related to commentary on current issues in the field of corporate finance, problem solving,, Case studies**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**A credit for lectures: written test.** **The scale of grading:** **55% - passed (grade 3,0)** **65%- grade 3,5** **70%- grade 4** **85%- grade 4,5** **90%- grade 5**	
	Grade calculation principles	
	The final course grade is equal to the lecture grade.	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	finanse przedsiębiorstw (corporate finance)		Ważona	
	4	finanse przedsiębiorstw (corporate finance) [wykład]	zaliczenie z oceną		1,00

Basic reading	R.A. Brealey, S.C. Myers, A.J. Marcus (2018): Fundamentals of Corporate Finance, 9th Edition, C Graw Hill Education, New York
	R.A. Brealey, S.C. Myers, F. Allen (2011): Principles of corporate finance: Concise, 2nd. international ed., McGrath-Hill, Boston
Supplementary reading	I. Welch (2014): Corporate Finance, 3rd. (free online access).

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**10**	**0**
Participation in tutorials	**7**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**6**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**		
Course title: **finanse publiczne (public finance) (PODSTAWOWE)**		Course code: **US71AIWNEiZ_25S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	lecture	30	0	e	3
Total			**30**			**3**

Course / module coordinator	**dr NATALIA MARSKA-DZIOBA**
Course instructor	**dr NATALIA MARSKA-DZIOBA**
Course / module objectives	**The goal of this course is to provide students with tools, and the skills to use these tools, to understand and analyze processes in public finance.**
Prerequisites	**Students have knowledge of the fundamentals of finance, accounting, law, and macroeconomics. Students have the ability to analyze the consequences of the use of certain financial instruments. Students can use the sources of knowledge available on the Internet and in the trade press.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows a role and a size of the public sector.**	**K_W02**
	2	**EP2**	**Student knows key factors determining a national fiscal architecture.**	**K_W06**
skills	**1**	**EP3**	**Student is able to define and characterize public resources, public expenditure and public debt policy.**	**K_U02 K_U03**
	2	**EP4**	**Student can use public finance data and formulate policy applications.**	**K_U06 K_U10**
	3	**EP5**	**Student can evaluate public finance policies.**	**K_U17**
social competences	**1**	**EP6**	**Student is ready and willing to communicate and present critical ideas and proposals refering to the public finance.**	**K_K01 K_K04**
	2	**EP7**	**Student is interested in further studies and perfecting skills in the field of public finance.**	**K_K02 K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **finanse publiczne (public finance)**			
Format of instruction: **lecture**			
1. **The nature of public finance and the main divisions of the subject. Public finance and private finance.**	3	2	0
2. **Public goods, public choice and political process.**	3	3	0
3. **Sources of public revenues. Taxes, fees and revenues from public property and public enterprises.**	3	2	0
4. **Taxation. Characteristics of a good tax system. Taxes and equity.**	3	2	0
5. **Theory of income taxation. Income taxation in Poland and other countries.**	3	2	0

6. **Theory of consumption taxation. Consumption taxation in Poland and other countries.**	3	2	0
7. **Polish taxation system against European countries' regulations.**	3	2	0
8. **Classification of public expenditure. The effects of public expenditure.**	3	2	0
9. **Central and local public finance systems.**	3	2	0
10. **Social security and social insurance.**	3	2	0
11. **Budget balance - deficit or surplus. Limitations and effect of budget imbalance.**	3	2	0
12. **Public debt management - tools, methods and assumptions. Public debt limitations.**	3	3	0
13. **Budgeting in public sector.**	3	2	0
14. **Private-public partnership**	3	2	0

Modes of delivery	**Interactive lectures focused on current policy debates and issues, reports analysis.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3,EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**The condition to pass is to receive a positive mark of an exam.**
	Grade calculation principles
	The final grade for the subject equals the grade for the exam.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	finanse publiczne (public finance)		Ważona	
	3	finanse publiczne (public finance) [wykład]	egzamin		1,00

Basic reading	Jonathan Gruber (2016): Public Finance and Public Policy, Worth Publishers, New York,
	Stiglitz J. E. (2015): Economics of the Public Sector (IV ed.), W. Norton & Co
	Ulbrich H. (ed.) (2011): Public finance in theory and practice, Routledge
Supplementary reading	Allen R., Hemming R., Potter B.H. (eds) (2016): The international handbook of public financial management, Palgrave Macmillan
	European Commission (2020): Taxation Trends in the European Union 2020 ed, Publications Office of the European Union
	Sobczak E., Raszkowski A, Sztando A. (eds) (2016): Local and regional economy in theory and practice, Publishing House of Wrocław University of Economics,

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**0**	**0**
Private reading and studying	**15**	**0**

Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**18**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**						
Course title: **informatyka ekonomiczna (economic informatics) (KIERUNKOWE)**					Course code: **US71AIJ2717_26S**	
Name of field of study: **Economics and IT Applications**						
Mode and cycle of study: **first-degree, full - time**		Profile of study: **general academic**			Specialty:	
Course / module status **obligatory**			Language of instruction: **semester: 3 - english language**			
Year	**Semester**	**Form of instruction**	**No. of hours**		**Type of credit**	**ECTS**
				including e-learning		
2	3	laboratory	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**
Course / module coordinator	**dr OLGA PILIPCZUK**					
Course instructor	**dr OLGA PILIPCZUK**					
Course / module objectives	**The aim of the course is to provide the knowledge about the types and the role of information systems used in business organizations. The practical aspects cover getting skills of business process creation, analysis and measurement using BPM software.**					
Prerequisites	**The student knows the basics of the economy. The student knows the basics of management. The student knows the basics of information technology.**					

LEARNING OUTCOMES

Category	**No.**	**Code**	**Description**	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student has a basic knowledge of informatics systems used in business organizations.**	**K_W13 K_W15**
skills	**1**	**EP2**	**The student is able to model and analyze processes using ARIS methodology.**	**K_U12 K_U17**
	2	**EP3**	**The student defines the requirements for an information system to meet the needs of economic organization.**	**K_U08**
social competences	**1**	**EP4**	**The student is ready for entrepreneurial and team thinking.**	**K_K01**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **informatyka ekonomiczna (economic informatics)**			
Format of instruction: **lecture**			
1. **The basics of Economic Informatics. Enterprise Information systems.**	3	2	0
2. **Fundamentals of Business Process Management. BPM systems.**	3	3	0
3. **The basics of ARIS Methodology.**	3	4	0
4. **Business Process measurement.**	3	2	0
5. **Business Process Improvement methodologies.**	3	2	0
6. **New trends in BPM. Intelligent and Cognitive BPM.**	3	2	0
Format of instruction: **laboratory**			

1. **BPM software overview.**	3	2	0
2. **Business proces modelling.**	3	8	0
3. **Business process measurement.**	3	3	0
4. **Business process improvement.**	3	2	0

Modes of delivery	**multimedia presentations, Computer labs with BPM software tool.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP2,EP3**
	PREZENTACJA	**EP1**
	PROJEKT	**EP2,EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Lectures: Theoretical knowledge is checked on the basis of the test and the presentations.** **The grade for lectures is an average of the written test and the presentation.** **Test results evaluation method:** **- 3,0 - student must obtain 56% of points.** **- 3,5 - student must obtain 61% of points** **- 4,0 - student must obtain 71% of points.** **- 4,5 - student must obtain 81% of points** **- 5,0 student must obtain 96% of the points.** **Labs: The knowledge is checked on the basis of the project.**
	Grade calculation principles
	The final grade is calculated as an average of lectures and labs

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	informatyka ekonomiczna (economic informatics)		Arytmetyczna	
	3	informatyka ekonomiczna (economic informatics) [laboratorium]	zaliczenie z oceną		
	3	informatyka ekonomiczna (economic informatics) [wykład]	zaliczenie z oceną		

Basic reading	Davis R., Brabander E. (2007): ARIS Design Platform, Getting started with BPM, Springer
	Dumas, M., La Rosa, M., Mendling, J., Reijers, H. (2018): Fundamentals of Business Process Management, Springer-Verlag , Berlin Heidelberg
	Garimella K., Lees M., Willams B. (2008): BPM Basics for dummies, Wiley
	Scheer A.-W. (2000): ARIS-Business process modelling, Springer
Supplementary reading	

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**4**	**0**
Preparation for contact hours	**6**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**8**	**0**

Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**9**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Unit: **Metody analiz rynkowych (Market research methods) [moduł]**	
Course title: **inwestycje na rynku kapitałowym (capital market investments) (KIERUNKOWE)**	Course code: **US71AIJ2931_53S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 4 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	laboratory	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr hab. SEBASTIAN MAJEWSKI**
Course instructor	**dr hab. SEBASTIAN MAJEWSKI**
Course / module objectives	**Acquire basic knowledge about the organization of the capital market as part of the financial market. Introduction to methods of analysis of basic financial instruments, methods and strategies of investing accessible to individual investors. The indication of the benefits and threats of applied investment strategies.**
Prerequisites	**- Student knows the basic economic and financial issues, has a basic knowledge of mathematics, statistics, econometrics, financial mathematics, economics, finance and financial analysis, - Student is able to search the relationship between the economic and financial phenomena, and to use the basic functions of Excel spreadsheet. - Student has the ability to work in a team, has habits of lifelong learning.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student knows the structure and functioning of the capital market.**	**K_W01**
	2	EP2	**Student knows the basics of valuation of financial instruments and investment strategies.**	**K_W02**
skills	1	EP3	**Student can independently make investment decisions on the capital market, and to use economic and financial data to interpret the events on the capital market.**	**K_U13**
	2	EP4	**Student is able to make the valuation of financial instruments, using technical and fundamental analysis, and also to use an analysis of the profitability of the investment. **	**K_U15**
	3	EP5	**Student is able to classify investments in terms of their profitability and risk.**	**K_U13**
social competences	1	EP6	**Student is able to complement and improve his knowledge and skills in fields of making rational investment decisions in the capital market.**	**K_K01**
	2	EP7	**Student is creative in obtaining information about the situation on the capital market, is inquiring in analyzing of development of the capital market, and also is focused on the quantitative description of the phenomena occurring in the capital market.**	**K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **inwestycje na rynku kapitałowym (capital market investments)**			
Format of instruction: **lecture**			
1. **The nature and functions of the capital market as a part of the financial market. Principles of the Polish capital market functioning.**	4	2	0
2. **Instruments of capital market.**	4	2	0
3. **Technical analysis - assumptions, charts, trends, formations and indicators.**	4	2	0
4. **Fundamental analysis - assumptions, steps of analysis.**	4	2	0
5. **Investing on the capital market - investment strategies, sources of information and their interpretation. Short- and long-term investing.**	4	2	0
6. **The risk on the market and its valuation. Risk management.**	4	2	0
7. **Portfolio Analysis - selected methods.**	4	2	0
8. **Financial conglomerates - instruments from different market segments.**	4	1	0
Format of instruction: **laboratory**			
1. **Rate of return - the types and properties.**	4	2	0
2. **Technical analysis.**	4	2	0
3. **Fundamental analysis - static and dynamic analysis.**	4	2	0
4. **Market valuation of the shares.**	4	3	0
5. **Valuation of risk.**	4	3	0
6. **Portfolios methods - Markowitzs and Sharpes models.**	4	3	0

Modes of delivery	**The course comprises lectures using multimedia tools and exercises in computer labs - solving problems form the capital market with the use of EXCEL spreadsheet and Statistica, a case study methods for explaining the problems / processes on the capital market with the use of statistical and econometric tools.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Students are evaluated on the basis of a written test concerning knowledge from both lectures and laboratories.**	
	Grade calculation principles	
	The final grade is the arithmetic mean of the grades obtained from the lecture and exercises. **The final grade of the course is possible only when a student gets the positive grade from the test.**	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	inwestycje na rynku kapitałowym (capital market investments)		Arytmetyczna	
	4	inwestycje na rynku kapitałowym (capital market investments) [wykład]	zaliczenie z oceną		
	4	inwestycje na rynku kapitałowym (capital market investments) [laboratorium]	zaliczenie z oceną		

Basic reading	E.J. Elton (2017): Modern Portfolio Theory and Investment Analysis, John Wiley & Sons
	J. Teall (2018): Financial Trading and Investing, Elsevier Books
	P. Hopkin (2018): Fundamentals of Risk Management, Kogan Page
Supplementary reading	Czekaj J. (2008): Rynki, instrumenty i instytucje finansowe, PWN
	Jajuga K., Jajuga T. (2009): Inwestycje. Instrumenty finansowe, aktywa niefinansowe, ryzyko finansowe, inżynieria finansowa, PWN
	Sopoćko A. (2010): Rynkowe instrumenty finansowe, PWN
	Tarczyński W. (2002): Fundamentalny portfel papierów wartościowych, PWE
	Tarczyński W., Łuniewska M. (2004): Dywersyfikacja ryzyka na polskim rynku kapitałowym, Placet

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**13**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Course title: **matematyka finansowa i ubezpieczeniowa (financial and insurance mathematics) (KIERUNKOWE)**	Course code: **US71AIJ2857_27S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	discussion classes	30	0	pg	4
		lecture	15	0	e	
Total			**45**			**4**

Course / module coordinator	**dr hab. IWONA FORYŚ**
Course instructor	**dr hab. IWONA FORYŚ**
Course / module objectives	**Obtaining basic knowledge of calculating the value of money over time, getting to know the basic principles and rules applicable in the financial and insurance issues. Acquisition of the ability to use known methods in the analysis of economic and financial developments.**
Prerequisites	**- knowledge of the fundamentals of mathematical analysis, probability, descriptive statistics, and math, entrepreneurship, finance and banking,** **- using the methods of the subject Mathematics as in force on graduation (basic), to use the basic functions of Excel spreadsheet,** **- the ability to work in a team, the ability to independently use the available literature.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the basic financial and insurance issues which apply quantitative methods.**	**K_W05 K_W06**
	2	**EP2**	**Student knows the methods used in matters of money over time, construction schedules for repayment of loans, evaluation of investment projects.**	**K_W05**
	3	**EP3**	**Student understands the theoretical calculation of insurance rates.**	**K_W10**
skills	**1**	**EP4**	**Student can describe in a quantitative manner the problems of an economic-financial and interpret the results.**	**K_U08**
	2	**EP5**	**Student adaptation to the analysis of financial markets and insurance methods of financial mathematics.**	**K_U10**
	3	**EP6**	**Student assessment of the financial and social investment decisions.**	**K_U05**
social competences	**1**	**EP7**	**Student is able to complement and improve their knowledge and skills in English while working individually and in groups using the literature and available data on the economic and financial capacity.**	**K_K01**

CONTENT	Semester	No. of hours	including e-learning

Subject title: **matematyka finansowa i ubezpieczeniowa (financial and insurance mathematics)**

Format of instruction: **lecture**			
1. **The possibilities of using mathematics in finance. The theory of interest. Time Value of Money (current and future).**	3	2	0
2. **Capitalizations of simple, compound, continuous. The intensity of interest. The capitalization of the variable interest rate. Simple and compound discounts.**	3	2	0
3. **Interest rates - concepts and types. The rate of return. Nominal rate, effective, real. Methods for estimating the discount rate.**	3	2	0
4. **Rent account (the current value and future cash flows). Annuity century. Create a pension fund. Fixed Annuities, growing in arithmetic and geometric progression. Annuities generalized.**	3	2	0
5. **Schedules for repayment of loans. Debt cancellation plans. Rules repayment. Fixed repayment installments combined. Conversion and debt consolidation.**	3	2	0
6. **The use of mathematical finance fixed assets in the economy. Review of methods evaluate the effectiveness of investment projects. Dynamic methods of evaluation of investment projects.**	3	2	0
7. **Fundamentals of actuarial calculation. Calculation of insurance premiums.**	3	3	0
Format of instruction: **discussion classes**			
1. **Introduction to time value of money. Percentage of simple and complex. Determining the value of current and future.**	3	4	0
2. **The possibilities of using basic formulas in Excel spreadsheet for determining the current and future value. Determination of the effective rate.**	3	2	0
3. **Nominal rate, effective and real rate. Equivalent rate. The intensity of interest. The capitalization of the variable interest rate.**	3	2	0
4. **Discount rate methods.**	3	2	0
5. **Sequences of payment. Annuities compatible and incompatible. Fixed annuity amount. Annuities forming an arithmetic progression, forming a series of geometric pension, annuity generalized.**	3	4	0
6. **Compatible and incompatible annuities. Arithmetic and geometric annuities.**	3	2	0
7. **Construction of annuity repayment plan with decreasing and selected rate.**	3	4	0
8. **The principle of equivalence and installment debt, loan schemes. Conversion. Loans with grace period. Consolidation.**	3	4	0
9. **Conversion of debt. Loans with grace period. Consolidation.**	3	2	0
10. **Dynamic measures of evaluation of investment projects.**	3	4	0

Modes of delivery	**The course comprises lectures with a presentation of research of economic and financial developments and simulations, exercises, and labs - work individually and in groups.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3**
	KOLOKWIUM	**EP4,EP5,EP6**
	PROJEKT	**EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Lecture: written exam test.** **Exercise: Partial credit during exercise.**	
	Grade calculation principles	
	Final course grade - arithmetic average exam and exercise	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	matematyka finansowa i ubezpieczeniowa (financial and insurance mathematics)		Arytmetyczna	
	3	matematyka finansowa i ubezpieczeniowa (financial and insurance mathematics) [wykład]	egzamin		
	3	matematyka finansowa i ubezpieczeniowa (financial and insurance mathematics) [ćwiczenia]	zaliczenie z oceną		

Basic reading	John McCutcheon, William F. Scott (2005): An Introduction to the Mathematics of Finance, Elsevier Butterworth-Heinemann, Amsterdam,
	Karatzas I.; Shreve S. (1998): Methods of Mathematical Finance, Springer-Verlag New York
	Leslie Jane Federer Vaaler, James W. Daniel (2009): Mathematical Interest Theory, 2nd ed., Mathematical Association of America, Washington,
	Petr Zima, Robert L. Brown (2011): Mathematics of Finance, 2nd ed., Schaum's Outline Series. McGraw-Hill, New York
Supplementary reading	Borowski J., Goplański R., Kasprzak K., Melon L., Podgórska M. (2003): Matematyka finansowa - przykłady, zadania testy, rozwiązania., Szkoła Główna Handlowa
	Foltynowicz I. (2001): Ćwiczenia z matematyki finansowej w Excelu: w poszukiwaniu równań bankierów., Mikom
	Jaworski P., Micał J. (2005): Modelowanie matematyczne w finansach i ubezpieczeniach., Poltext
	Matłoka M. (2000): Matematyka w finansach i bankowości., Akademia Ekonomiczna w Poznaniu
	Podgórska M., Klimkowska J. (2005): Matematyka finansowa., PWN
	Sharpe W. (1985): Investments, Prentice-Hall
	Smaga E. (2000): Arytmetyka finansowa., PWN

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**8**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**12**	**0**
Preparation of project / essay / etc.	**12**	**0**
Preparation for test / exam	**12**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Unit: **Metody analiz rynkowych (Market research methods) [moduł]**	
Course title: **metody ilościowe w badaniach marketingowych (quantitative methods in marketing) (KIERUNKOWE)**	Course code: **US71AIJ2931_52S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 4 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	laboratory	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr hab. CHRISTIAN LIS**
Course instructor	**dr hab. SEBASTIAN MAJEWSKI**
Course / module objectives	**Obtaining basic knowledge of measurement in research of attitudes, preferences and motivations. The acquisition of ability to construct a questionnaire in marketing research and planning audit.**
Prerequisites	**- the knowledge of procedures for estimating parameters of the population structure,** **- the knowledge of using methods of module "Statistics";** **- the knowledge of terminology of the subject "Marketing".**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the the steps of marketing research, knows the method for determining the personal scope and kind and a size of the sample.**	**K_W04**
	2	**EP2**	**Student knows the methods of measurement of attitudes, preferences, motivation, market shares, competitive position.**	**K_W10**
skills	**1**	**EP3**	**Students can prepare a questionnaire to study the preferences and attitudes.**	**K_U10**
	2	**EP4**	**Student can critical analyse the conditions of marketing researches.**	**K_U06**
social competences	**1**	**EP5**	**Student is ready to use the results of research conducted by the statistical institutes and appreciates the importance and consequences of cooperation with the departments of public statistics.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **metody ilościowe w badaniach marketingowych (quantitative methods in marketing)**			
Format of instruction: **lecture**			
1. **The formulation of goals, the organization of research, description of the field of marketing research.**	4	2	0
2. **Marketing information system, analysis of environment, the criteria for the quality evaluation of datas secondary sources.**	4	2	0
3. **_the building of the questionnaire, the number of respondents and the criteria for the respondents' selection_**	4	2	0

4. **The study of motivation. Observations. Experiments.**	4	2	0
5. **Studies of attitudes, preferences' researches. Measuring scales of attitudes and preferences.**	4	2	0
6. **Researches of shares of the market. Portfolio methods, the measurement of the competitive position and attractiveness of the market.**	4	2	0
7. **Methods of multidimensional comparative analysis**	4	3	0
Format of instruction: **laboratory**			
1. **Definition of a research and identification of sources of marketing information.**	4	3	0
2. **Measuring scales in marketing research.**	4	3	0
3. **Construction of the questionnaire, verification of assumptions, representativeness problems.**	4	3	0
4. **Measurement in motivational and experimental researches.**	4	3	0
5. **The application of multidimensional analysis in marketing.**	4	3	0

Modes of delivery	**The course comprises lectures with a presentation of research of socio-economic phenomena and exercises - case studies (questionnaires analysis and solving of problems tied with observation and measurement), and problem solving.** The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4,EP5**
	PRACA PISEMNA/ ESEJ/ RECENZJA	**EP1,EP2,EP3,EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for the lecture is on the basis of a written test.** **Credit for laboratories is on the basis of one work, i.e. a case study (analysis of questionnaires and problem solving related to observation and measurement).** **Grading:** **The final grade of the course is possible only when a student gets a positive grade of the test**
	Grade calculation principles
	The final grade of the course is calculated as follows: **- Students are evaluated on the basis of a written test and one work - case study (questionnaires analysis and solving of problems tied with observation and measurement)** **The final grade is the arithmetic average of the grades for the lecture and for the laboratory classes.**

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	metody ilościowe w badaniach marketingowych (quantitative methods in marketing)		Arytmetyczna	
	4	metody ilościowe w badaniach marketingowych (quantitative methods in marketing) [laboratorium]	zaliczenie z oceną		
	4	metody ilościowe w badaniach marketingowych (quantitative methods in marketing) [wykład]	zaliczenie z oceną		

Basic reading	Brandimarte P. (2011): Quantitative Methods, An Introduction for Business Management, John Wiley and Sons Ltd
	David R. Anderson (2016): Quantitative Methods for Business, Cengage Learning
	Grover R., Vriens M. (2006): The Handbook of Marketing Research. Uses, Misuses, and Future Advances, SAGE Publications, Inc
	McClave J.T., Benson P.G., Sincich T. (2018): Statistics For Business nad Economics, Pearson Prentice Hall, 13th Global Edition, New Jersey
	R. Lyman Ott, Michael Longnecker (2015): An Introduction to Statistical Methods and Data Analysis, Duxbury Thomson Learning, 7th Edition, USA
	Scott Smith and Gerald Albaum (2005): Fundamentals in Marketing Research, Sage Publications, Inc., London, New Delhi
	Waters D. (2011): Quantitative Methods for Business, Pearson Education Limited

Supplementary reading	Dennis D. Boos, L. A. Stefanski (2013): Essential Statistical Inference, Springer-Verlag New York Inc.
	Freedman D., Pisani R., Purves R. (2007): Statistics, W.W. Norton & Company, 4th Ed., New York, London
	Walesiak M. (2006): Uogólniona miara odległości w statystycznej analizie wielowymiarowej, WN AE Wrocław
	Wasserman L. (2005): All of Statistics. The Concise Course of Statistical Inference, Springer

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**5**	**0**
Preparation for contact hours	**8**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**14**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Unit: **Metody analiz rynkowych (Market research methods) [moduł]**	
Course title: **ocena przedsięwzięć innowacyjnych (innovative initiative evaluation) (KIERUNKOWE)**	Course code: **EFZ71AIJ3433_13S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 4 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	laboratory	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr KATARZYNA ŁOBACZ**
Course instructor	**dr KATARZYNA ŁOBACZ**
Course / module objectives	**Obtaining basic knowledge of evaluation of the innovative projects, their financing, organization and requirements. Student acquires also the skills of proper evaluation of innovative projects.**
Prerequisites	**Knowledge: the student knows the basic concepts of management, microecnomics, macroeconomics and basics of finance. Skills: assessment of the economic entity in the specific market conditions. Social competence: the student is able to work in a team, has instilled habots of lifelong learning.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**A student knows the basic categories of asset used for innovative projects.**	**K_W14 K_W16**
	2	EP2	**A student knows the selection of innovative assessment techniques such as the scoring system, benchmarking, QuickLook.**	**K_W02 K_W12 K_W16**
skills	1	EP3	**A student on the basis of certain parameters can evaluate the status of the innovative project and identify potential sources of financing.**	**K_U07 K_U13 K_U16 K_U17**
	2	EP4	**A student is able to identyfy problems and propose the directions of changes to improve the innovation project.**	**K_U13 K_U16 K_U17**
	3	EP5	**A student is able to identify sources od innovative risk in the projects.**	**K_U01 K_U07 K_U13 K_U16 K_U17**
	4	EP6	**A student is able to access and evaluate the various stages of evaluation of innovative projects.**	**K_U01 K_U07 K_U13 K_U16 K_U17**
social competences	1	EP7	**A student is ready to develop and improve his ability to work in the group and comply with ethical provisions in his professional life.**	**K_K01 K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **ocena przedsięwzięć innowacyjnych (innovative initiative evaluation)**			
Format of instruction: **lecture**			
1. **The asset in the development of innovative business and economy**	4	2	0
2. **Macroeconomic conditions of innovative projects**	4	1	0
3. **Strategies for innovation in the enterprises**	4	2	0
4. **Risk and uncertainly in innovative projects**	4	2	0
5. **Financing of innovative projects**	4	2	0
6. **Methods of asseessment of innovative projects**	4	2	0
7. **Evaluation and criteria for success of innovative projects financed form public funds**	4	2	0
8. **Evaluation and criteria for success of innovative projects funded by provate sector**	4	2	0
Format of instruction: **laboratory**			
1. **Types, systematics and functions of asset in innovative projects**	4	2	0
2. **Analysis of the market and competition**	4	2	0
3. **Protection against the risk of an innovative project**	4	2	0
4. **Sources of financing of innovative projects**	4	2	0
5. **The process of innovation in the enterprises**	4	2	0
6. **Innovative projects - case studies**	4	4	0
7. **Calculation of the effectiveness of innovative projects**	4	1	0

Modes of delivery	**Lecture with audiovisual aids, discoussions, case study analysis**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2**
	PREZENTACJA	**EP7**
	PROJEKT	**EP3,EP4,EP5,EP6**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for laboratory classes: the execution of a final essay: preparation of the project and its presentation or research and presentation of the results - the project is testing the achievement of learning outcomes in terms of skills.** **Credit for lectures: evaluation of the lectures is obtained form the test - a written test of the learning outcomes achieved in terms of knowledge gained during participation in lectures and excercises.** **The student receives a satisfactory grade, when he can discuss the basic knowledge of evaluation of the innovative projects, their financing, organization and requirements, which checks the achieved learning outcomes in terms of knowledge and skills obtained through participation in lectures and exercises.**
	Grade calculation principles
	Final grade od the course is the arithmetic average of the grades obtained for lectures and laboratory classes.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	ocena przedsięwzięć innowacyjnych (innovative initiative evaluation)		Arytmetyczna	

	4	ocena przedsięwzięć innowacyjnych (innovative initiative evaluation) [laboratorium]	zaliczenie z oceną		
	4	ocena przedsięwzięć innowacyjnych (innovative initiative evaluation) [wykład]	zaliczenie z oceną		

Basic reading	Drucker P.F. (2007): Innovation and Entrepreneurship,, Taylor & Francis
	Fagerberg J., Mowery D.C., Nelson R.R. (2005): The Oxford Handbook of Innovation, Oxford University Press,, New York
	OECD; Oslo Manual : The Measurement of Scientific and Technological Activities, Proposed Guidelines for Collecting and Interpreting Technological Innovation Data,, Eurostat
	Shane S. (ed.) J (2008): Handbook of Technology and Innovation Management, ohn Willey & Sons Limited, Chichester
	Szopik-Depczyńska K. (2021): User-driven innovation in R&D departments in Poland, Wydawnictwo Uniwersytetu Szczecińskiego, Szczecin
	Tidd J, Bessant J. (2009): Innovation Management. Integrating Technological, Market and Organisational Change.ion, John Wolley & Sons Limited
Supplementary reading	Chesbrough H. , (2006): Open Innovation. The New Imperative for Creating and Profiting from Technology, Harvard Business School Publishing Corporation

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**9**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**7**	**0**
Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**9**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**		
Course title: **podstawy programowania komputerów (introduction to computer programming) (KIERUNKOWE)**		Course code: **EFZ71AIJ3433_11S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	laboratory	30	0	pg	4
		lecture	15	0	pg	
Total			**45**			**4**

Course / module coordinator	**dr hab. JAKUB SWACHA**
Course instructor	**dr hab. JAKUB SWACHA**
Course / module objectives	**To acquire knowledge of computer programming on the example of the Python language, and to master practical skills of programming in Python.**
Prerequisites	**Knowledge of basic computer skills.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the basic terms and structures characteristic of structured programming.**	**K_W08**
	2	**EP2**	**Student knows the phases of software development life-cycle.**	**K_W08**
skills	**1**	**EP3**	**Student is able to independently design, implement and test programs in Python.**	**K_U08**
	2	**EP4**	**Student is able to implement programs according to given specifications.**	**K_U08**
	3	**EP5**	**Student is able to work with other developers in the implementation of a joint software development project.**	**K_U18**
social competences	**1**	**EP6**	**Student is aware of the allowed terms of use of software under various licenses.**	**K_K03**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **podstawy programowania komputerów (introduction to computer programming)**			
Format of instruction: **lecture**			
1. **Basic terminology of programming. Methods of algorithm specification.**	3	2	0
2. **Computer as an object of programming.**	3	2	0
3. **Programming languages. Programming paradigms.**	3	1	0
4. **The components of program. Simple and complex instructions.**	3	2	0
5. **Strings, lists, tuples and their processing.**	3	2	0
6. **Functions and modules.**	3	2	0

7. **Dictionaries and sets. Files and databases.**	3	2	0
8. **Software testing and documenting.**	3	2	0
Format of instruction: **laboratory**			
1. **Python syntax.**	3	2	0
2. **Simple programs with input/output and calculations.**	3	2	0
3. **Using conditional statements.**	3	4	0
4. **Using loops. Processing data sequences.**	3	4	0
5. **Built-in functions.**	3	2	0
6. **Standard modules.**	3	4	0
7. **Defining functions. Recursion.**	3	4	0
8. **Defining classes. Inheritance.**	3	4	0
9. **Files and databases.**	3	2	0
10. **Testing programs. Debugger.**	3	2	0

Modes of delivery	**- lecture supported with multimedia presentation** **- application development, programming** **- case study** **- problem solving** **- working in groups** **- project development**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2**
	SPRAWDZIAN	**EP3**
	PROJEKT	**EP4,EP5,EP6**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for lectures: the lectures grade is based on the results of a single-choice test covering the content of the lectures.** **Grading scale: 3.0: more than 50% points; 4.0: more than 70%, 5.0: more than 85%.** **Credit for laboratory classes: the grade is a weighted average of a programming test consisting of writing a computer program designated by the teacher (35% points), group project - a program written in collaboration with other students (topic selected by the group) (35% points), and completing laboratory exercises during the semester (30% points).** **Grading scale for laboratory classes: 3.0: more than 50% points; 4.0: more than 70%, 5.0: more than 85%.**
	Grade calculation principles
	The final grade of the course is an arithmetic mean of the laboratory exercises grade and the lectures grade.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	podstawy programowania komputerów (introduction to computer programming)		Arytmetyczna	
	3	podstawy programowania komputerów (introduction to computer programming) [wykład]	zaliczenie z oceną		
	3	podstawy programowania komputerów (introduction to computer programming) [laboratorium]	zaliczenie z oceną		

Basic reading	Petkovic L. (2012): Introduction to Computing Using Python, Wiley
	Swacha J. (2020): Introduction to programming in Python 3, Wydawnictwo Naukowe Uniwersytetu Szczecinskiego, Szczecin

Supplementary reading	Matthes E. (2019): Python Crash Course, 2nd Edition: A Hands-On, Project-Based Introduction to Programming, No Starch Press
	Miller B., Ranum D. (2019): How to Think Like a Computer Scientist. Learning with Python: Interactive Edition, Runestone Interactive
	Miller B., Ranum D. (2019): Problem Solving with Algorithms and Data Structures, Runestone Interactive

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**12**	**0**
Private reading and studying	**12**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**12**	**0**
Preparation for test / exam	**6**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Unit: **Inżynieria informatyczna biznesu (IT engineering in business) [moduł]**	
Course title: **podstawy sieci komputerowych (computer networks) (KIERUNKOWE)**	Course code: **US71AIJ2717_48S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 4 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	laboratory	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr hab. JAKUB SWACHA**
Course instructor	**dr hab. JAKUB SWACHA , dr inż. Piotr Niemcewicz**
Course / module objectives	**Acquiring knowledge on computer networks and practical skills in designing, configuring and managing computer networks, including security issues.**
Prerequisites	**Basic computer skills.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Students know how computer networks are organized, and how they work.**	**K_W08**
	2	**EP2**	**Students know the tools used for diagnosing and managing computer networks.**	**K_W08**
skills	**1**	**EP3**	**Students can diagnose and configure computer networks.**	**K_U08**
social competences	**1**	**EP4**	**Students are able to form their own ideas and beliefs and to participate in decision-making process regarding issues related to computer networks.**	**K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **podstawy sieci komputerowych (computer networks)**			
Format of instruction: **lecture**			
1. **A conceptual introduction to the physical network infrastructure. Introduction to the organization of logical networks. Introduction to Active Directory**	4	2	0
2. **Introduction to TCP/IP and TCP/IP addressing. Introduction to name resolution. Configuration of dynamic IP addressing**	4	2	0
3. **A conceptual introduction to content delivery. Introduction to IP communication. Procedures to perform subnetting**	4	1	0
4. **A conceptual introduction to IPv6 addressing. Introduction to unicast IPv6 addresses. Configuration of IPv6**	4	1	0
5. **Introduction to administrative tools in Windows Server 2016. Introduction to performance monitoring tools in Windows Server 2016. Procedures to perform server administration**	4	2	0
6. **Introduction to securely accessing Web content and files. A conceptual introduction to public key infrastructure**	4	2	0

7. **Introduction to perimeter security. Configuration of Windows Firewall. Procedures to monitor and troubleshoot Windows Firewall**	4	1	0
8. **Introduction to remote access. Configuration of a network policy server. Introduction to routing. Configuration of routing**	4	2	0
9. **Various methods to implement server scalability and availability. Implementation of Windows network load balancing Introduction to server virtualization. Implementation of server virtualization**	4	1	0
10. **A conceptual introduction to printing. Introduction to the printing processes. Configuration of network printers Implementation of print management**	4	1	0
Format of instruction: **laboratory**			
1. **A conceptual introduction to the physical network infrastructure. Introduction to the organization of logical networks. Introduction to Active Directory**	4	2	0
2. **Introduction to TCP/IP and TCP/IP addressing. Introduction to name resolution. Configuration of dynamic IP addressing**	4	1	0
3. **A conceptual introduction to content delivery. Introduction to IP communication. Procedures to perform subnetting**	4	1	0
4. **A conceptual introduction to IPv6 addressing. Introduction to unicast IPv6 addresses. Configuration of IPv6**	4	1	0
5. **Introduction to administrative tools in Windows Server 2016. Introduction to performance monitoring tools in Windows Server 2016. Procedures to perform server administration**	4	2	0
6. **Introduction to securely accessing Web content and files. A conceptual introduction to public key infrastructure**	4	2	0
7. **Introduction to perimeter security. Configuration of Windows Firewall. Procedures to monitor and troubleshoot Windows Firewall**	4	1	0
8. **Introduction to remote access. Configuration of a network policy server. Introduction to routing. Configuration of routing**	4	2	0
9. **Various methods to implement server scalability and availability. Implementation of Windows network load balancing Introduction to server virtualization. Implementation of server virtualization**	4	2	0
10. **A conceptual introduction to printing. Introduction to the printing processes. Configuration of network printers Implementation of print management**	4	1	0

Modes of delivery	**- lecture supported with multimedia presentation** **- case study** **- problem solving** The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	SPRAWDZIAN	**EP1,EP2,EP3,EP4**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Laboratories are evaluated based on individual practical exercises.** **Lectures are evaluated based on single-choice test.** Grade calculation principles **The final grade is the arithmetic average lecture grade (50% points) and laboratories grade (50% points).** **The final grade is based on the number of points (Polish grade scale):** **- 91-100: 5,** **- 81-90: 4,5,** **- 71-80: 4,** **- 61-70: 3,5,** **- 50-60: 3,** **- less than 50: 2.**

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	4	podstawy sieci komputerowych (computer networks)		Arytmetyczna	
	4	podstawy sieci komputerowych (computer networks) [wykład]	zaliczenie z oceną		
	4	podstawy sieci komputerowych (computer networks) [laboratorium]	zaliczenie z oceną		

Basic reading	Eckert J. (2020): Hands-On Microsoft Windows Server 2019. 3rd Ed., Cengage Learning
	Callaway J. (2020): Computer Networking for Beginners, KDP Print
	Tanenbaum A.S., Feamster N. (2019): Computer networks, Pearson Education
Supplementary reading	Boyle R.J., Clements J.A. (2014): Applied Networking Labs, Pearson Education

STUDENT WORKLOAD		
	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**4**	**0**
Preparation for contact hours	**12**	**0**
Private reading and studying	**9**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Course title: **rachunkowość w przedsiębiorstwie (accounting in enterprise) (KIERUNKOWE)**	Course code: **US71AIJ2964_29S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	discussion classes	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr MAGDALENA JANOWICZ**
Course instructor	**dr PRZEMYSŁAW MUĆKO**
Course / module objectives	**The aim of the course is to demonstrate the basic elements of drawing up financial statements by adjusting the balance. The aim is also for the student to acquire practical skills in preparing financial statements and understanding the information provided by these statements.**
Prerequisites	**Basic knowledge of accounting.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student has the knowledge of the scope of the financial statements, reporting requirements, methods of preparation of financial statements, the rules for reporting and audit of financial statements.**	**K_W09**
skills	**1**	**EP2**	**Student is able to determine the impact of transactions on financial statements.**	**K_U09**
	2	**EP3**	**Students can prepare basic elements of a financial statement.**	**K_U09**
social competences	**1**	**EP4**	**Student is ready to evaluate solutions adopted by an economic entity in its financial statements.**	**K_K02 K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **rachunkowość w przedsiębiorstwie (accounting in enterprise)**			
Format of instruction: **lecture**			
1. **The nature and objectives of financial reporting. Factors affecting the evolution of the financial statements. The scope of the financial statements. Current trends in financial reporting (harmonization and standarization processess).**	3	1	0
2. **Introduction to accounting valuation methods.**	3	1	0
3. **Information content of the statement of financial position.**	3	2	0
4. **The preparation of the statement of financial position - recognition and measurement of selected items of assets, liabilities and equity. Impairment loss.**	3	4	0
5. **Income statement**	3	2	0
6. **Framework for the preparation and interpretation of the statement of cash flows.**	3	2	0
7. **Statement of changes in equity.**	3	1	0

8. **Information content of the notes to financial statemants.**	3	1	0
9. **Verification of the course effects.**	3	1	0
Format of instruction: **discussion classes**			
1. **Elements of the financial statements of the selected entities (initial assessment of the knowledge and skills of students). Discussion of the objectives of the projects.**	3	1	0
2. **The statement of financial position (balance sheet) - a case study..**	3	3	0
3. **Measurement and valuation of assets - a case study.**	3	3	0
4. **Elements of the profit and loss account. Other comprehensive income. Comprehensive income statement.**	3	2	0
5. **Cash flow statement - definitions, type of activities. Direct and indirect method.**	3	2	0
6. **Statement of changes in equity. Notes to the financial statement. Limitations of the financial information provided by accounting.**	3	2	0
7. **The effect of economic events on the date presented in a financial statement.**	3	1	0
8. **Verification of the course effects.**	3	1	0

Modes of delivery	**Multimedia presentation, method of cases, simulation methods, the use of a computer program, the analysis of source documents.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP2,EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**The form and terms getting credit for the class:** **Students are assessed on the basis of written assignments (one for each part of the course - lectures and exercises), including verification based on exercises checking the ability to prepare financial statements as well as checking students' knowledge of valuation and measurement rules and their effect on the values presented in the financial statements.** **Forms of the assignments for each part of the course:** **- for the lectures: a test (multiple choice, fill-in-the-gaps, open questions/assignments) testing students' knowledge of students in rules of preparing financial statements,** **- for the exercises: a written assignment testing students skills in preparing financial statements, consisting of reporting tasks (up to 6 short exercises) .** **Rating:** **The student receives a passing grade assuming, they achieved the minimal required percentage of points from the assignment (i.e. 51%). The grading scale is consistent with the rules mentioned in the study programme.** **Every student has the right to have their grade increased by 0.5 grade point provided that they have been active during the classes, answering the teacher's questions and proposing solutions to the discussed problems.**	
	Grade calculation principles	
	Final grade: **Final grade is equal to the weighted average of the classes grade (50% weighted) and lecture grade (50% weighted) - upon condition that both grades are at least satisfactory (3,0).**	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	rachunkowość w przedsiębiorstwie (accounting in enterprise)		Arytmetyczna	
	3	rachunkowość w przedsiębiorstwie (accounting in enterprise) [wykład]	zaliczenie z oceną		
	3	rachunkowość w przedsiębiorstwie (accounting in enterprise) [ćwiczenia]	zaliczenie z oceną		

Basic reading	Elliott B., Elliott J. (2017): Financial accounting and reporting, 18 edition., Pearson, Harlow
	Karwowski W. (2015): Accounting and financial reporting, SGH, Warszawa

Supplementary reading	Janowicz M. (2021): Rachunek przepływów pieniężnych w: Sprawozdania finansowe i ich analiza - zbiór zadań, red. W. Gos, SKwP, Warszawa
	Janowicz M. (2021): Rachunek przepływów pieniężnych w: Sprawozdania finansowe i ich analiza, red. W. Gos, SKwP, Warszawa

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**0**	**0**
Preparation for contact hours	**15**	**0**
Private reading and studying	**15**	**0**
Participation in tutorials	**6**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**9**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Unit: **Inżynieria informatyczna biznesu (IT engineering in business) [moduł]**	
Course title: **systemy mobilne (mobile systems) (KIERUNKOWE)**	Course code: **US71AIJ2717_49S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 4 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	laboratory	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr TOMASZ ZDZIEBKO**
Course instructor	**dr TOMASZ ZDZIEBKO**
Course / module objectives	**The aim is to provide knowledge on technologies used in mobile devices, skills in using them by end-users and designers to design application for mobile devices**
Prerequisites	**Student has good knowledge about usage and limitations of mobile applications**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**has knowledge on tools and methodologies used to design mobile devices**	**K_W08 K_W13 K_W15**
	2	**EP2**	**has knowledge on designing mobile applications**	**K_W08 K_W13 K_W15**
skills	**1**	**EP3**	**has ability to design and prototype mobile applications**	**K_U08**
social competences	**1**	**EP4**	**can think out ways of monetizing mobile applications**	**K_K01**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **systemy mobilne (mobile systems)**			
Format of instruction: **laboratory**			
1. **Usability and User Experience Design**	4	3	0
2. **Design for Mobile Constraints**	4	2	0
3. **Requirements specification**	4	2	0
4. **Application prototyping**	4	4	0
5. **Monetization of mobile apps**	4	2	0
6. **Presentations of group projects with discussion and evaluation**	4	2	0

Modes of delivery	**- project work** **- group work** **- solving tasks** **- application design, application prototyping**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	SPRAWDZIAN	**EP1,EP2,EP3**
	PROJEKT	**EP1,EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	
	The credit for laboratory classes consists of two parts: **- evaluation from performing exercises (tasks) during laboratory classes (50 points),** **- group project in the field of mobile application design (50 points).**
	Grade calculation principles
	The final grade is equal to the grade obtained for the laboratory classes.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	systemy mobilne (mobile systems)		Ważona	
	4	systemy mobilne (mobile systems) [laboratorium]	zaliczenie z oceną		1,00

Basic reading	J. Nielsen (2014): Mobile Usability, New Riders
	Steve Krug (2013): Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability (3rd Edition) (Voices That Matter) 3rd Edition, New Riders
Supplementary reading	Dharma Prakash Agrawal (2016): Introduction to Wireless & Mobile Systems, 4th Edition, Cengage Learning, Boston
	(2013): MIT App Inventor, http://appinventor.mit.edu/

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**0**	**0**
Preparation for contact hours	**9**	**0**
Private reading and studying	**6**	**0**
Participation in tutorials	**9**	**0**
Preparation of project / essay / etc.	**11**	**0**
Preparation for test / exam	**0**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Course title: **wprowadzenie do sztucznej inteligencji (Introduction to artificial intelligence) (KIERUNKOWE)**	Course code: **EFZ71AIJ3432_1S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	lecture	15	0	pg	1
Total			**15**			**1**

Course / module coordinator	**dr inż. MARCIN GRYCZKA**
Course instructor	**dr inż. MARCIN GRYCZKA**
Course / module objectives	**Understanding the fundamentals of AI, exploring selected AI applications in economics and business, evaluating the ethical and societal implications of AI, analyzing the economic impact of AI, understanding AI in global context, future trends and opportunities in AI**
Prerequisites	**A basic understanding of economic principles, theories, and models; principles of microeconomics, macroeconomics and international economics; basic computer literacy; critical thinking and problem solving skills**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the key challenges concerning artificial intelligence (AI) and its socio-economic consequences for global economy.**	**K_W03 K_W08**
skills	**1**	**EP2**	**Student is able to analyze general phenomena in world economy, to assess their impact on different stakeholders, and to recognize their positive and negative consequences for selected economies.**	**K_U03 K_U05**
social competences	**1**	**EP3**	**Student recognizes the influence of technological change, especially development of AI, on socio-economic environment.**	**K_K02 K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **wprowadzenie do sztucznej inteligencji (Introduction to artificial intelligence)**			
Format of instruction: **lecture**			
1. **Artificial Intelligence (AI): Concepts and History**	3	2	0
2. **AI in Economics and Business: Applications and Case Studies**	3	2	0
3. **The Economic Impact of AI: Labor, Productivity, and Growth**	3	2	0
4. **Ethical, Legal, and Social Implications of AI**	3	2	0
5. **Global Perspectives on AI: Policy and Economic Competitiveness**	3	2	0
6. **The Future of Work and AI**	3	2	0
7. **Emerging Technologies and Future Trends in AI**	3	2	0
8. **Final written test**	3	1	0

Modes of delivery	**lectures, PowerPoint presentations, usage of Internet resources and electronic databases, usage of ChatGPT, student discussions**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	
	Lecture credit based on final test results (written test with multi-choice and/or open-ended questions), 50 points in total
	Grade calculation principles
	The final grade is the grade from the lectures. **The final grade of the course is calculated as follows:** **student needs at least 30 points to pass the course, i.e. 30-33 points equals grade 3.0, 34-37 points ? grade 3.5, 38-41 points ? grade 4.0, 42-45 points ? grade 4.5, 46 points or more ? grade 5.0**

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	wprowadzenie do sztucznej inteligencji (Introduction to artificial intelligence)		Ważona	
	3	wprowadzenie do sztucznej inteligencji (Introduction to artificial intelligence) [wykład]	zaliczenie z oceną		1,00

Basic reading	
	A. Agrawal, J. Gans, A. Goldfarb (2022): Prediction Machines: The Simple Economics of Artificial Intelligence, Harvard Business Review Press, Boston, MA
	C. O'Neil (2017): Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy, Crown, New York
	M. Mitchell (2019): Artificial Intelligence: A Guide for Thinking Humans, Picador (Macmillan Publishing Group), New York
	R. Bootle (2021): The AI Economy: Work, Wealth and Welfare in the Age of the Robot, Nicholas Brealey Publishing, London and Boston
	S. Russell (2020): Human Compatible: Artificial Intelligence and the Problem of Control, Penguin Books, London

Supplementary reading	
	E. Brynjolfsson, A. McAfee (2016): The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies, W. W. Norton & Company, New York
	K.-F. Lee (2018): AI Superpowers: China, Silicon Valley, and the New World Order, Harper Business, Boston and New York
	M. Tegmark (2018): Life 3.0: Being Human in the Age of Artificial Intelligence, Vintage Books, New York
	N. Bostrom (2016): Superintelligence: Paths, Dangers, Strategies, Oxford University Press, Oxford
	P. Domingos (2018): The Master Algorithm: How the Quest for the Ultimate Learning Machine Will Remake Our World, Basic Books, New York
	S.U. Noble (2018): Algorithms of Oppression: How Search Engines Reinforce Racism, New York University Press, New York

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**1**	**0**
Preparation for contact hours	**5**	**0**
Private reading and studying	**4**	**0**
Participation in tutorials	**0**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**0**	**0**

TOTAL workload	**25**
ECTS credits	**1**

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-25/26Z**	
Course title: **zastosowania pakietów statystycznych (statistical software applications) (KIERUNKOWE)**	Course code: **US71AIJ2856_35S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 4 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	laboratory	30	0	pg	2
Total			**30**			**2**

Course / module coordinator	**dr KRZYSZTOF DMYTRÓW**
Course instructor	**dr KRZYSZTOF DMYTRÓW**
Course / module objectives	**Goal of the course/module: to teach students handling of statistical software such as Analysis ToolPak and R language, especially in order to recognise and analyse statistical regularities of economic variables distributions, correlations between variables and dynamics of variables observed in many markets.**
Prerequisites	**1. Knowledge: a knowledge of descriptive statistics, statistical inference, econometric modelling and general economic knowledge of macro- and microeconomics phenomena analysis is demanded. 2. Skills: abilities to determining descriptive parameters in statistics, drawing conclusions from data deriving from random sample, interpreting analysis results and drawing logical conclusions as a result of inductive reasoning. 3. Competencies (Attitudes): Student is aware of advantages and disadvantages of using statistical computer software.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student is aware of advantages and disadvantages of using selected statistical software**	**K_W08**
	2	EP2	**Student knows methods and tools in the processing and storage of information, and is able to prepare and analyse statistical data**	**K_W06 K_W10**
	3	EP3	**Student knows assumptions, methods and tools of economic phenomena forecasting**	**K_W08 K_W10**
skills	1	EP4	**Student is able to use his knowledge about statistical software applications such as Analysis ToolPak and R language in order to analyse real economic phenomena and processes**	**K_U06 K_U10**
	2	EP5	**Student is able to analyse causes and course of economic phenomena using statistical software applications such as Analysis ToolPak, or R language in the right way**	**K_U10**
	3	EP6	**Student is able to forecast economic phenomena using statistical software applications such as Analysis ToolPak, or R language in the right way**	**K_U10**
social competences	1	EP7	**Student understands the need of continual learning because of permanent computer tools and statistical software development**	**K_K02**
	2	EP8	**Student realizes that the statistical software is highly important in real economic applications**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning

Subject title: **zastosowania pakietów statystycznych (statistical software applications)**			
Format of instruction: **laboratory**			
1. **Methods of distribution analysis for economic variables, using statistical software called Analysis ToolPak (in Excel). Statistical data preparing and analysis with the use of tools such as Histogram, Descriptive Statistics, Rank and Percentile.**	4	4	0
2. **Regression and correlation analysis for economic variables, using Analysis ToolPak's tools such as Covariance, Correlation, Regression.**	4	4	0
3. **The probability determining for selected distributions of random variables and statistical hypothesis verification with the use of Analysis ToolPak's tools such as Random Number Generation, Sampling, Analysis of Variance (ANOVA): Single Factor, Two-Factor with Replication, Two-Factor without Replication. F-test Two Sample for Variance, t-test: Paired Two Sample for Means, t-test: Two-Sample Assuming Equal Variances, t-test: Two-Sample Assuming Unequal Variances, z-test: Two Sample for Means.**	4	2	0
4. **Application of R language using in the distribution analysis for economic variables.**	4	4	0
5. **The probability determining for selected distributions of random variables and statistical hypothesis verification with the use of R language, such as: Analysis of Variance (ANOVA): Single Factor, Two-Factor with Replication, Two-Factor without Replication. F-test Two Sample for Variance, t-test: Paired Two Sample for Means, t-test: Two-Sample Assuming Equal Variances, t-test: Two-Sample Assuming Unequal Variances, z-test: Two Sample for Means.**	4	4	0
6. **Correlation and regression analysis in R language**	4	4	0
7. **Time series and forecasting in R language: trend analysis, analysis of seasonality and exponential smoothing models.**	4	2	0
8. **Measuring the similarity. Multivariate statistical analysis: Cluster analysis, factor analysis, classification trees and linear ordering. Application of GDM in R software environmental.**	4	6	0

Modes of delivery	**Education methods: A short introduction to the lesson as a multimedia presentation (15-20 min.), explaining the main goal of laboratories and problems to sort out. The rest of lessons - computer work supervised by teacher.** The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	PROJEKT	**EP1,EP2,EP3,EP4,EP5,EP6,EP7,EP8**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	
	Students are assessed on the basis of the project. Its completeness and correctness is taken into account. **Students receive grade 3.0 if they obtain at least 50% of total number of points from the project.** **Students receive grade 3.5 if they obtain at least 70% of total number of points from the project.** **Students receive grade 4.0 if they obtain at least 80% of total number of points from the project.** **Students receive grade 4.5 if they obtain at least 90% of total number of points from the project.** **Students receive grade 5.0 if they obtain at least 95% of total number of points from the project.**
	Grade calculation principles
	The final grade is equal to the grade obtained from laboratories.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	zastosowania pakietów statystycznych (statistical software applications)		Ważona	
	4	zastosowania pakietów statystycznych (statistical software applications) [laboratorium]	zaliczenie z oceną		1,00

Basic reading	Aczel, A., Sounderpandian, J. (2009): Complete Business Statistics 7th Edition, McGraw-Hill/Irwin
	Cleff, Thomas (2019): Applied Statistics and Multivariate Data Analysis for Business and Economics. A Modern Approach Using SPSS, Stata, and Excel, Springer, Cham
Supplementary reading	Venables, W. N., Smith, D. M. and the R Core Team (2021): An Introduction to R

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**0**	**0**

Preparation for contact hours	**3**	**0**
Private reading and studying	**2**	**0**
Participation in tutorials	**5**	**0**
Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**0**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Course title: **bazy danych na potrzeby ekonomii (databases in economic applications) (KIERUNKOWE)**	Course code: **US71AIJ2721_67S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 5 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	laboratory	15	0	pg	3
		lecture	15	0	e	
Total			**30**			**3**

Course / module coordinator	**dr AGATA WAWRZYNIAK**
Course instructor	**dr AGATA WAWRZYNIAK**
Course / module objectives	**The aim of the course is transferring knowledge of design methodology for relational database; developing skills in modeling relational databases and implementation in MS SQL Server environment. The aim of the course is also preparing students for using databases in economic applications.**
Prerequisites	**Skills: student is computer literate and works in Microsoft Windows operating environment; Competencies: student is able to work in a team, has deep-rooted habits of lifelong learning and consciously benefits from information technologies. Knowledge: student has a general knowledge of functioning of economic entities;**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student has knowledge concerning functioning and construction of databases.**	K_W13
	2	EP2	**Student mastered the knowledge in the scope of: database design, data structure, database normalization.**	K_W13
	3	EP3	**Student knows the Structured Query Language (SQL) basic concepts and principles.**	K_W13
skills	1	EP4	**Student demonstrates the ability to practical use of the database in economic applications.**	K_U12
	2	EP5	**Student can independently design the structure of relational database model.**	K_U12
	3	EP6	**Student implements physical database model in MS SQL Server.**	K_U12
	4	EP7	**Student is able to generate queries in SQL, create forms and reports.**	K_U12
social competences	1	EP8	**Student is ready to participate in the preparation of projects in a team.**	K_K01

CONTENT	Semester	No. of hours	including e-learning
Subject title: **bazy danych na potrzeby ekonomii (databases in economic applications)**			
Format of instruction: **lecture**			
1. **An introduction to databases . Applications of databases in economics and business**	5	2	0
2. **Database Analysis**	5	2	0

3. **Database design - Entity Relationship Diagram. Database normalization and normal forms (1NF - 6NF)**	5	2	0
4. **Database language - SQL. Types of commands, types of data, functions, group functions**	5	2	0
5. **SQL - defining data**	5	2	0
6. **SQL - data manipulation (select, insert, update, delete)**	5	3	0
7. **Database transactions. Data security (access and protection)**	5	2	0
Format of instruction: **laboratory**			
1. **The Database Environment and Development Process**	5	2	0
2. **Modeling Data in the Organization**	5	2	0
3. **Logical Database Design and Relational Model**	5	2	0
4. **MS SQL Server - database management (new database, create table, create index)**	5	1	0
5. **MS SQL Server - SELECT statement with clauses: where, order by, asc, desc, and, or, between, like, top**	5	3	0
6. **MS SQL Server - join clauses in SQL: inner join, right outer join, left outer join, full outer join, cross join**	5	2	0
7. **MS SQL Server - SQL aggregation, group by clause, having clause, subqueries, create view statement, procedures**	5	2	0
8. **Laboratory examination - practical test**	5	1	0

Modes of delivery	**Computer laboratory., Lecture illustrated by multimedia presentations.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3**
	SPRAWDZIAN	**EP4,EP5,EP6,EP7**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP4,EP5,EP6,EP7,EP8**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for laboratory classes: points for tasks getting during laboratories (40%) and practical test (60%).** **Credit for lectures: the lecture grade is equal to the exam grade. The exam consists of 5 theoretical questions.** **Student passes the course when knows basic concepts from the scope of database design principles and is able to perform basic operations in the chosen database management system (based on SQL).**
	Grade calculation principles
	The final grade is an arithmetic average of the grades received from the laboratory examination and the exam.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	bazy danych na potrzeby ekonomii (databases in economic applications)		Arytmetyczna	
	5	bazy danych na potrzeby ekonomii (databases in economic applications) [wykład]	egzamin		
	5	bazy danych na potrzeby ekonomii (databases in economic applications) [laboratorium]	zaliczenie z oceną		

Basic reading	Forta B. (2014): SQL in 10 Minutes, Sams Teach Yourself (4th Edition), Pearson Education
	Hoffer J. A., Prescott Ramesh V. & Topi H. (2013): Modern Database Management (11th ed.), Pearson Education
Supplementary reading	Coronel C. (2017): Database Systems: Design, Implementation, & Management - 12th edition, Cengage Learning
	Date C. J. (2012): Database Design and Relational Theory: Normal Forms and All That Jazz, O'Reilly Media
	Pratt Ph. J. (2015): Concepts of Database Management - 8th edition, Cengage Learning

STUDENT WORKLOAD		
	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**4**	**0**
Preparation for contact hours	**8**	**0**
Private reading and studying	**11**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**12**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Unit: **Rynek i konkurencja (Market and competition) [moduł]**	
Course title: **konkurencja i koncentracja rynkowa (competition and monopoly) (KIERUNKOWE)**	Course code: **US71AIJ2860_60S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 5 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	discussion classes	15	0	pg	2
		lecture	15	0	pg	
Total			**30**			**2**

Course / module coordinator	**dr hab. TOMASZ BERNAT**
Course instructor	**dr hab. TOMASZ BERNAT**
Course / module objectives	**Study questions and issues of market concentration that face enterprise on the basis of economic theory the market is concentrated. Analysis of the impact of different models on the market behavior of businesses, consumers and state regulators. An attempt to answer the question of what is better for the market: competition or concentration.**
Prerequisites	**The student knows the basics of economics (microeconomics and macroeconomics) and the principles of market economy, student versed in current economic events. The student is able to think analytically, properly formulate conclusions based on their knowledge of the news of economic life.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows definitions from the competition and market monopolisation field.**	**K_W01 K_W07**
skills	**1**	**EP2**	**Student has the abilities of analysis of the company activity on market under the perspective of competition and possibility to posses market power.**	**K_U01 K_U03 K_U07**
social competences	**1**	**EP3**	**Student can think in creative and innovative way and easily communicate in English.**	**K_K01 K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **konkurencja i koncentracja rynkowa (competition and monopoly)**			
Format of instruction: **lecture**			
1. **Principles of market competition**	5	3	0
2. **The economic foundations of market concentration**	5	2	0
3. **Competition from the point of view of market actors**	5	2	0
4. **Concepts of measuring the monopoly power**	5	2	0
5. **Monopolization and the problem of resource allocation**	5	2	0
6. **Competition or concentration?**	5	2	0
7. **Practical examples of concentrated market in contemporary economies**	5	2	0

Format of instruction: **discussion classes**			
1. **Principles of market competition**	5	3	0
2. **The economic foundations of market concentration**	5	2	0
3. **Competition from the point of view of market actors**	5	2	0
4. **Concepts of measuring the monopoly power**	5	2	0
5. **Monopolization and the problem of resource allocation**	5	2	0
6. **Competition or concentration?**	5	2	0
7. **Practical examples of concentrated market in contemporary economies**	5	0	0
8. **Case studies - monopolization vs competition in global market**	5	2	0

Modes of delivery	**The main form of knowledge transfer is lectures with case studies. The main way of excercises is case studies solving, also discussions. To develop knowledge the exercises in e-learning system will be presented to students.** The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	PREZENTACJA	**EP1,EP2,EP3**

Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.

Grading criteria	
	Credit for the lectures: **- Students are assessed on the basis of a written test covering the verification of knowledge based on theory (50% points), for checking the knowledge of the basic principles of the market competition and concentration - partly by e-learning system.** **Credit for the classes: Students are assessed on the basis of a written test covering the verification of knowledge based on case studies for checking the knowledge of the basic principles of the market competition and concentration - partly by e-learning system.** **Rating:** **- The student receives a satisfactory grade - if he can provide some basic definitions of terms related to state intervention.** **- The student is given a score good - when also can define the basic relationships occurring in different markets acting under concentration and competition.** **- The student receives a very good - if also able to predict the likely impact of events taking place in the markets.**
	Grade calculation principles
	The final grade of the course is the arithmetic mean of grades of lectures and of classes.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	konkurencja i koncentracja rynkowa (competition and monopoly)		Arytmetyczna	
	5	konkurencja i koncentracja rynkowa (competition and monopoly) [ćwiczenia]	zaliczenie z oceną		
	5	konkurencja i koncentracja rynkowa (competition and monopoly) [wykład]	zaliczenie z oceną		

Basic reading	
	Bernat T. (2009): Competition of entities with reference to competition of the economy , Print Group Daniel Krzanowski
	G. C. Allen (2010): Monopoly and Restrictive Practices, Routledge , New York
	Lele M. (2007): Monopoly Rules ...., Kogan Page Publishers
	McKenzie R. (2008): In Defense of Monopoly: How Market Power Fosters Creative Production, University of Michigan Press
Supplementary reading	Shermann R (1989): The Regulation of Monopoly, Cambridge University Press

STUDENT WORKLOAD		
	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**2**	**0**
Private reading and studying	**6**	**0**
Participation in tutorials	**2**	**0**
Preparation of project / essay / etc.	**4**	**0**
Preparation for test / exam	**4**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Course title: **metody sztucznej inteligencji w ekonomii (Artificial intelligence methods in economics) (PODSTAWOWE)**	Course code: **EFZ71AIJ3432_5S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 6 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	6	laboratory	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr AGATA WAWRZYNIAK**
Course instructor	**dr AGATA WAWRZYNIAK**
Course / module objectives	**This is a course on economic applications of artificial intelligence. It provides knowledge about artificial intelligence methods and concepts, and present various applications of such methods in economic research. The aim of the course is also to develop students' skills in using appropriate artificial intelligence methods in the analysis of economic data.**
Prerequisites	**Basic understanding of mathematics and statistics, basic knowledge of information technologies.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student demonstrates knowledge of artificial intelligence methods**	**K_W10**
	2	**EP2**	**The student understands the essence of problems related to the collection and analysis of economic data**	**K_W06 K_W10**
	3	**EP3**	**The student knows the possibilities of applications of artificial intelligence methods in economics**	**K_W08**
skills	**1**	**EP4**	**The student solves sample problems using rough set theory**	**K_U08**
	2	**EP5**	**The student is able to develop a rule-based knowledge base for sample problems**	**K_U08**
	3	**EP6**	**The student is able to use specialized software for solving problems using artificial intelligence methods**	**K_U08**
social competences	**1**	**EP7**	**The student is able to work in a team**	**K_K01**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **metody sztucznej inteligencji w ekonomii (Artificial intelligence methods in economics)**			
Format of instruction: **laboratory**			
1. **An overview of artificial intelligence methods**	6	2	0
2. **Artificial neural networks and their properties**	6	2	0
3. **Rough set theory in modelling economic phenomena**	6	2	0
4. **Fuzzy logic concepts and applications in economics**	6	2	0

5. **Economic modelling with genetic algorithms**	6	2	0
6. **Modeling economic phenomena using a selected artificial intelligence method - project implementation**	6	5	0

Modes of delivery	**Multimedia presentation, case studies, group work**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	PROJEKT	**EP1,EP4,EP5,EP6,EP7**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP1,EP2,EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Practical tasks (max. 10 points) - test achievement of learning outcomes in terms of knowledge and skills. Project (max. 10 points) - a project to achieve the learning outcomes tested on practical skills and teamwork. To pass the laboratory examination a student must obtain 60% of points of practical tasks and project. The grade is awarded on the basis of practical tasks and the project (implemented on the laboratories).**
	Grade calculation principles
	The grade for the course is the grade for the laboratory

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	6	metody sztucznej inteligencji w ekonomii (Artificial intelligence methods in economics)		Ważona	
	6	metody sztucznej inteligencji w ekonomii (Artificial intelligence methods in economics) [laboratorium]	zaliczenie z oceną		1,00

Basic reading	I. Nunes da Silva, D. H. Spatti, R. Andrade Flauzino, L. H. Bartocci Liboni, S. F. dos Reis Alves (2017): Artificial Neural Networks. A Practical Course, Springer International Publishing
	M. Banerjee, D. Ciucci, I. Düntsch, T. Mihálydeák, F. Min, Z. Suraj, G. Wang (2019): Rough Sets, Springer
Supplementary reading	E. Wirsansky (2020): Hands-On Genetic Algorithms with Python: Applying genetic algorithms to solve real-world deep learning and artificial intelligence problems, Packt Publishing
	T. Marwala (2013): Economic Modeling Using Artificial Intelligence Methods, Springer, Londyn

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**6**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**5**	**0**
Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**4**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Course title: **metody wyceny przedsiębiorstw (enterprise appraisal methods) (KIERUNKOWE)**	Course code: **US71AIJ2715_42S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status: **obligatory**	Language of instruction: **semester: 6 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	6	lecture	15	0	e	2
Total			**15**			**2**

Course / module coordinator	**dr hab. KATARZYNA BYRKA-KITA**
Course instructor	**prof. dr hab. DARIUSZ ZARZECKI**
Course / module objectives	**Subject covers issues of business valuation methods.**
Prerequisites	**- Knowledge: the student knows the basics of accounting, finance, statistics, economic analysis, methods for assessing the effectiveness of investments and financial planning. The student has a general knowledge of the macro- and microeconomics and management;** **- Skills: the student can handle a spread sheet;** **- Competence (attitude): students can work in groups, has habits of lifelong learning.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student has specific knowledge on nature, purpose and function of the valuation**	**K_W07**
	2	EP2	**Student knows the methods for valuing businesses**	**K_W07**
skills	1	EP3	**Student is able to apply known methods of valuation in practice**	**K_U07 K_U16**
	2	EP4	**Student is able to build a financial model for the valuation of companies**	**K_U07 K_U16**
social competences	1	EP5	**Student is ready to recognize and avoid unethical behaviour in business valuation**	**K_K03 K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **metody wyceny przedsiębiorstw (enterprise appraisal methods)**			
Format of instruction: **lecture**			
1. **The essence of the objectives, functions, business valuations**	6	2	0
2. **Overview of the basic concepts of enterprise valuation**	6	2	0
3. **Legal determinants of the valuation of companies in Poland**	6	2	0
4. **Income approach to valuation of companies**	6	2	0
5. **Estimating the cost of capital for the purposes of business valuation**	6	2	0
6. **Market approach to valuing businesses**	6	2	0

7. **Special cases in the valuation of businesses**	6	2	0
8. **Summary of the material**	6	1	0

Modes of delivery	**Lectures with a presentations and examples for practical solutions (case study).**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3,EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for lectures: Course ends with an exam test.**
	Grade calculation principles
	The final grade is equal to the grade from lectures.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	6	metody wyceny przedsiębiorstw (enterprise appraisal methods)		Ważona	
	6	metody wyceny przedsiębiorstw (enterprise appraisal methods) [wykład]	egzamin		1,00

Basic reading	Hitchner James R. (2011): Financial Valuation: Applications and Models, John Wiley & Sons
	Mercer Z. Christopher, Harms Travis W. (2008): Business Valuation: An Integrated Theory, John Wiley & Sons
	Pratt Shannon P. (2005): The Market Approach to Valuing Businesses, John Wiley & Sons
	Zarzecki D. (1999): Metody wyceny przedsiębiorstw, Fundacja Rozwoju Rachunkowości w Polsce
Supplementary reading	czasopismo (2008): Valuation Strategies, Thomson RIA
	dane rynkowe (2012): Ibbotson Year Book, Morningstar
	Zadora H. (2010): Wycena przedsiębiorstw w teorii i praktyce, Wydawnictwo Stowarzyszenia Księgowych w Polsce

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**8**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**7**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**		
Course title: **międzynarodowe stosunki ekonomiczne (international economic relations) (PODSTAWOWE)**		Course code: **US71AIJ2890_37S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 6 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	6	discussion classes	15	0	pg	2
		lecture	15	0	pg	
Total			**30**			**2**

Course / module coordinator	**dr inż. MARCIN GRYCZKA**
Course instructor	**dr inż. MARCIN GRYCZKA**
Course / module objectives	**Acquiring the knowledge about the world economy processes, especially the ones concerning goods, services, labor force and capital flows; comprehension of the electronic market and e-commerce phenomena; familiarity with contemporary concepts related to international technology transfer, innovation and competitiveness**
Prerequisites	**Basic knowledge in the following fields: microeconomics, macroeconomics, international trade, international finance**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the main trends of economic policies and tendencies in economic globalization, knows the role of foreign trade in economic processes taking place in the world**	**K_W16**
skills	**1**	**EP2**	**Student is able to correctly identify and explain the economic policies of the state and understands the benefits and risks associated with the development of the world economy and globalization.**	**K_U16**
	2	**EP3**	**Student has the ability to use the English language in terms of knowledge gained in the course of study. Understand the main ideas of complex text on business topics, including understanding the discussion. Can communicate so spontaneously and fluently to perform normal conversation with native speakers. Can formulate clear, detailed oral and written ideas, as well as explain his position on issues that are being discussed, considering the advantages and disadvantages of various option.**	**K_U16**
	3	**EP5**	**Student can freely communicate in English in an international group to carry out business tasks and projects. Is able to interact and work in organizations where the language of communication is English.**	**K_U16 K_U18**
social competences	**1**	**EP4**	**Student is prepared to form their own ideas and beliefs and to participate in decision-making process in a changing environment conditions.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning

Subject title: **międzynarodowe stosunki ekonomiczne (international economic relations)**			
Format of instruction: **lecture**			
1. **World economy - basic concepts**	6	2	0
2. **Evolution of the international division of labor**	6	3	0
3. **International services market**	6	3	0
4. **International labour force flows**	6	3	0
5. **Foreign direct investment - theoretical issues**	6	2	0
6. **WTO and its role in the international trade**	6	2	0
Format of instruction: **discussion classes**			
1. **Formal markets and their transition into electronic markets**	6	3	0
2. **International technology transfer and knowledge diffusion**	6	3	0
3. **Foreign direct investment - practical issues**	6	2	0
4. **International trade statistics ? selected issues**	6	4	0
5. **New phenomena in global economy**	6	3	0

Modes of delivery	**lectures, discussions, PowerPoint presentations, usage of Internet resources and electronic databases**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP4**
	PREZENTACJA	**EP2,EP3,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Self-prepared presentation on topic selected AND AGREED with the lecturer (maximum 60 points for this part), final written test consisting of 25 questions (multi-choice, 1 point each) plus 1 open-ended question (5 points) (maximum 30 points for this part), student's activity during classes (maximum 10 points for this part).**	
	Grade calculation principles	
	The final grade is a weighted average of the grades from the lecture and exercises **The final grade of the course is calculated as follows:** **student needs at least 55 points to pass the course, i.e. 55-68 points equals grade 3.0, 69-75 - grade 3.5, 76-84 - grade 4.0, 85-92 - grade 4.5, 93 points or more - grade 5.0.**	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	6	międzynarodowe stosunki ekonomiczne (international economic relations)		Ważona	
	6	międzynarodowe stosunki ekonomiczne (international economic relations) [wykład]	zaliczenie z oceną		0,30
	6	międzynarodowe stosunki ekonomiczne (international economic relations) [ćwiczenia]	zaliczenie z oceną		0,70

Basic reading	Carbaugh R. (2018): International Economics, Cengage
	Chesbrough H. (2011): Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era., Jossey-Bass, A Wiley Imprint
	Dicken P. (2015): Global Shift: Mapping the Changing Contours of the World Economy., Guilford Publications
	Feenstra R., Taylor A. (2017): International Economics, Worth Publishers
	Gopinath G., Helpman E. and Rogoff K. (eds.) (2014): Handbook of International Economics, Volume 4, Elsevier
	Krugman P.R., Obstfeld M., Melitz M. (2017): International Economics: Theory and Policy, Pearson Education Limited
	Schenk C.R. (2021): International Economic Relations since 1945, Routledge
Supplementary reading	Bingham A., Spradlin D. (2011): The Open Innovation Marketplace. Creating Value in the Challenge Driven Enterprise., FT Press
	Ghahroudi M.R. (2018): Foreign Direct Investment, World Scientific Publishing
	Moosa I. (2002): Foreign Direct Investment. Theory, Evidence and Practice, Palgrave Macmillan UK
	Rugman A.M. (ed.) (2010): The Oxford Handbook of International Business., Oxford University Press

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**1**	**0**
Private reading and studying	**2**	**0**
Participation in tutorials	**4**	**0**
Preparation of project / essay / etc.	**6**	**0**
Preparation for test / exam	**5**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Course title: **modelowanie i symulacje w analizie biznesowej (computer aided modelling and simulation) (KIERUNKOWE)**	Course code: **EFZ71AIJ3432_4S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 6 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	6	laboratory	15	0	pg	2
		lecture	15	0	pg	
Total			**30**			**2**

Course / module coordinator	**dr AGATA WAWRZYNIAK**
Course instructor	**dr AGATA WAWRZYNIAK**
Course / module objectives	**Preparing students for the use of computer simulation methods in conducting business analysis in objectives enterprises.**
Prerequisites	**Knowledge: a student has a general understanding of the functioning of business objects; Skills: a student is able to operate a computer in MS Windows operating environment; Competence: a student is able to work in a group.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Student has the knowledge about the capabilities and limitations of computer simulation methods in the analysis of the business.**	K_W08
skills	1	EP2	**Student can create computer simulation models to solve specific business problems.**	K_U08
	2	EP3	**Student is able to plan the simulation experiments and interpret the results.**	K_U10
social competences	1	EP4	**Student is ready to formulate his own ideas for solving business problems using methods and tools for modeling and simulation of processes.**	K_K04

CONTENT	Semester	No. of hours	including e-learning
Subject title: **modelowanie i symulacje w analizie biznesowej (computer aided modelling and simulation)**			
Format of instruction: **lecture**			
1. **null**	6	2	0
2. **null**	6	4	0
3. **null**	6	7	0
4. **null**	6	2	0
Format of instruction: **laboratory**			
1. **Introduction to computer simulation. Basic concepts and definitions.**	6	3	0
2. **System Dynamics as the technique of continuous simulation.**	6	6	0

3. **Techniques of discrete simulation.**	6	2	0
4. **Languages and tools of computer simulation.**	6	2	0
5. **An overview of applications of computer simulation methods for economic and business problems solving (case studies).**	6	2	0

Modes of delivery	**Lectures: multimedia presentation** **Laboratories: discussion, case studies, performing simulation experiments, the development of the project, working in groups.** **The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	SPRAWDZIAN	**EP1**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP2,EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Lectures: mark for a written test** **Laboratories: the number of points received for the realization of individual and group projects (max. 20 points): for 20 points: 5,0; 18-19: 4,5; 16-17: 4,0; 14-15: 3,5; 12-13: 3,0, 11 and under: 2.0) - mark from the laboratories.**
	Grade calculation principles
	The condition for obtaining the final grade is to pass lectures and laboratories at a minimum 3.0. **The final grade of the course results from the arithmetic mean of all grades obtained for lectures and laboratories.**

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	6	modelowanie i symulacje w analizie biznesowej (computer aided modelling and simulation)		Arytmetyczna	
	6	modelowanie i symulacje w analizie biznesowej (computer aided modelling and simulation) [wykład]	zaliczenie z oceną		
	6	modelowanie i symulacje w analizie biznesowej (computer aided modelling and simulation) [laboratorium]	zaliczenie z oceną		

Basic reading	Kirkwood C.W. (2013): System Dynamics Methods: A Quick Introduction, Arizona State University
	Road Maps: A Guide to Learning System Dynamics (2013): http://clexchange.org/curriculum/roadmaps.asp
	Sterman J.D. (2000): Business Dynamics: Systems Thinking and Modeling for a Complex World, McGraw-Hill/Irwin
	Warren K. (2002) (2002): Competitive Strategy Dynamics, John Wiley & Sons
Supplementary reading	Łatuszyńska M. (2008): Symulacja komputerowa dynamiki systemów, Wydawnictwo PWSZ
	Mielczarek B. (2009): Modelowanie symulacyjne w zarządzaniu. Symulacja dyskretna, Oficyna Wydawnicza Politechniki Wrocławskiej

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**4**	**0**
Private reading and studying	**3**	**0**
Participation in tutorials	**5**	**0**

Preparation of project / essay / etc.	**4**	**0**
Preparation for test / exam	**2**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Unit: **Technologie internetowe w biznesie (IT in business) [moduł]**	
Course title: **narzędzia behawioralne w ekonomii (Behavioural tools in economics) (KIERUNKOWE)**	Course code: **EFZ71AIJ3432_5S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 5 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	conversation	15	0	pg	3
		laboratory	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr hab. RAFAŁ NAGAJ**
Course instructor	**dr hab. RAFAŁ NAGAJ , dr hab. PIOTR SZKUDLAREK**
Course / module objectives	**Presentation of behavioural aspects of the problems of evaluation and economic decision-making and how they are used in economic practice. Based on the results of research, special attention is paid to the process of evaluation and decision-making in the context of heuristics, cognitive limitations, self-control, emotions, motivation, morality or social interaction.**
Prerequisites	**Knowledge of economy-wide issues.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student is familiar with behavioural economics tools for analysing economic behaviour.**	**K_W04 K_W08 K_W10 K_W16**
skills	**1**	**EP2**	**The student uses the tools used in behavioural economics to analyse economic behaviour (economic experiments, economic games, specialised apparatus and software).**	**K_U04 K_U08 K_U10**
	2	**EP3**	**The student analyses and evaluates the influence of behavioural factors on the evaluation and economic decision-making process.**	**K_U13 K_U17**
social competences	**1**	**EP4**	**The student demonstrates creativity in individual and group tasks.**	**K_K01**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **narzędzia behawioralne w ekonomii (Behavioural tools in economics)**			
Format of instruction: **conversation**			
1. **Origins of behavioural economics and main research areas.**	5	1	0
2. **Dualism of cognition and decision-making processes.**	5	1	0
3. **Moral and social values in economic behaviour.**	5	2	0
4. **Mood and emotion in the evaluation and economic decision-making process.**	5	2	0

5. **Heuristics and cognitive biases in evaluation and decision-making.**	5	3	0
6. **Preferences under uncertainty and risk. Prospect theory and its implications.**	5	2	0
7. **Psychology of the stock market.**	5	2	0
8. **Nudges - shaping the choice architecture.**	5	1	0
9. **A synthesis of the issues surrounding behavioural tools in economics.**	5	1	0
Format of instruction: **laboratory**			
1. **Principles of planning and conducting economic experiments. Organisation and stages of behavioural economics research.**	5	1	0
2. **Introduction to methods, techniques and tools used in behavioural economics - part 1: Eye tracking.**	5	2	0
3. **Introduction to methods, techniques and tools used in behavioural economics - part 2: Electroencephalography.**	5	2	0
4. **Introduction to methods, techniques and tools used in behavioural economics - part 3: Biometric methods.**	5	2	0
5. **Formulation of research problems and questions in a group project (self-study). Selection and size of the research sample.**	5	1	0
6. **Implementation of research (economic experiment) using a selected behavioural tool.**	5	4	0
7. **Quantitative and qualitative analysis of the collected empirical material, interpretation of the results obtained and formulation of conclusions from the experiment carried out.**	5	2	0
8. **Communication of results - preparation of a written study of the results (research report) and preparation of a scientific presentation and/or poster.**	5	1	0

Modes of delivery	**- multimedia presentation** **- development of the project** **- working in groups** **- carrying out an economic experiment** **- discussion** **- brainstorming**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1**
	PROJEKT	**EP2,EP3,EP4**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**The grade for the conversation classes is given on the basis of a written colloquium.** **The credit grade for laboratory classes is given on the basis of:** **- written project: preparing a project and conducting an economic experiment using a selected behavioural tool (carried out as part of the laboratories) (60%)** **- activity during laboratory classes: engaging in group tasks and preparing a group project/economic experiment design and presenting its results (40%)**
	Grade calculation principles
	The final (coordinator) grade for the course is given on the basis of the arithmetic mean of the grades obtained for the conversation classes and for the laboratory classes.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	narzędzia behawioralne w ekonomii (Behavioural tools in economics)		Ważona	
	5	narzędzia behawioralne w ekonomii (Behavioural tools in economics) [laboratorium]	zaliczenie z oceną		0,50
	5	narzędzia behawioralne w ekonomii (Behavioural tools in economics) [konwersatorium]	zaliczenie z oceną		0,50

Basic reading	Jaśkowski P. (2009): Neuronauka poznawcza. Jak mózg tworzy umysł, VIZJA PRESS&IT, Warszawa
	Jaśkowski P. (2004): Zarys psychofizjologii, Wydawnictwo Wyższej Szkoły Finansów i Zarządzania w Warszawie, Warszawa
	Kahneman D. (2022): Thinking, Fast and Slow, Penguin Books, London
	Noga M. (2017): Neuroekonomia a ekonomia głównego nurtu, CeDeWu, Warszawa
	Thaler R.H. (2016): Misbehaving. The Making of Behavioral Economics, Penguin Books, London
	Tyszka T. (2010): Decyzje. Perspektywa psychologiczna i ekonomiczna, Wydawnictwo Naukowe SCHOLAR, Warszawa
	Zaleśkiewicz T. (2012): Psychologia ekonomiczna, Wydawnictwo Naukowe PWN, Warszawa
Supplementary reading	Ariely D. (2013): The (honest) truth about dishonesty, Perennial, New York
	Dawson R. (2008): Sekrety podejmowania trafnych decyzji, MT Biznes, Warszawa
	Krawczyk M. (red.) (2012): Ekonomia eksperymentalna, Oficyna Wolters Kluwer business, Warszawa
	Mruk H., Sznajder M. (2008): Neuromarketing. Interdyscyplinarne spojrzenie na klienta, Wydawnictwo Uniwersytetu Przyrodniczego w Poznaniu, Poznań
	Orlik K. (2017): Makroekonomia behawioralna, CeDeWu, Warszawa
	Stasiuk K., Maison D. (2015): Psychologia konsumenta, Wydawnictwo Naukowe PWN, Warszawa
	Thaler R.H., Sunstein C.R. (2022): Nudge. Improving Decision About Health, Wealth and Happiness, Penguin Books, London
	Zielonka P. (2021): Giełda i psychologia, CeDeWu, Warszawa

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**4**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**10**	**0**
Participation in tutorials	**5**	**0**
Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**6**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Unit: **Technologie internetowe w biznesie (IT in business) [moduł]**	
Course title: **narzędzia IT w marketingu (IT Tools in Marketing) (KIERUNKOWE)**	Course code: **EFZ71AIJ3432_9S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 5 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	laboratory	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr AGATA WAWRZYNIAK**
Course instructor	**dr BARBARA WĄSIKOWSKA**
Course / module objectives	**The aim of the course is to familiarise the student with the important role of information technology (IT) in modern business and marketing (in the context of improving productivity and saving costs). IT and marketing work together to maximise a company's marketing potential. The student will acquire skills to use various IT technologies and tools (CRM, CMS, analytical and reporting tools, marketing automation, big data, mobile applications, etc.) which are increasingly being used by marketers. The student will acquire competences in IT in order to implement necessary software to support marketing activities.**
Prerequisites	**Basic knowledge of marketing and information technologies.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student understand the important role of IT in marketing (in keeping abreast of changing technologies).**	**K_W15**
	2	**EP2**	**Student describes various IT tools to store and analyse data in the marketing information system.**	**K_W15**
skills	**1**	**EP3**	**Student can compare and contrast different IT tools allowing to conduct advertising and promotional campaigns.**	**K_U08**
	2	**EP4**	**Student is able to collect, analyze, process and critically assess the usefulness of marketing information obtained via the Internet.**	**K_U04**
social competences	**1**	**EP5**	**Student is able to establish contacts and to function on the Internet being aware of threats resulting with limitations of social media.**	**K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **narzędzia IT w marketingu (IT Tools in Marketing)**			
Format of instruction: **laboratory**			
1. **The essence and significance of IT tools in marketing. Chief Marketing Officer (CMO) in the role of an agent of change. CMO as a chief marketing technologist.**	5	1	0
2. **Digital channels: social media, mobile marketing, online advertising.**	5	1	0
3. **Computer implementation of tasks in the process of the customer service. Customer relationship management systems (CRM systems).**	5	1	0

4. **Content Management Systems (CMS).**	5	1	0
5. **Mobile tools in marketing.**	5	1	0
6. **Marketing through search engines and Internet messengers. The positioning and optimization of web pages.**	5	2	0
7. **Tools allowing to conduct advertising campaigns (e.g. Google AdWords, Facebook Ads).**	5	1	0
8. **Tools supporting conducting promotional campaigns (e.g. AdWords Editor, Hootsuite, Buffer).**	5	1	0
9. **Analytical and reporting tools (e.g. Google Analytics, Crazyegg, Brand24, Mention, Share Tally, Website Grader).**	5	2	0
10. **null**	5	1	0
11. **Modern technologies: marketing automation, big data, social enterprise and marketing operations.**	5	1	0
12. **Integrated marketing software. Business solutions and case studies.**	5	2	0

Modes of delivery	**Case studies, Multimedia presentation, Group work**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	PROJEKT	**EP3,EP4,EP5**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for laboratory classes - students are assessed on the basis of practical tasks and a project. Students need to score at least 60% of the points in order to get a credit.** **Practical tasks verify outcomes in terms of knowledge and skills. Project - a project to achieve the learning outcomes tested on practical skills and teamwork.** **The course grade will be a weighted average of the scores from the practical tasks (40%) and project (60%).**
	Grade calculation principles
	The final grade for the course is equal to the grade for the laboratory classes.

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	5	narzędzia IT w marketingu (IT Tools in Marketing)		Ważona	
	5	narzędzia IT w marketingu (IT Tools in Marketing) [laboratorium]	zaliczenie z oceną		1,00

Basic reading	D. Chaffey, F. Ellis-Chadwick (2019): Digital Marketing: Strategy, Implementation and Practice, Pearson Education Limited
	D. Ryan (2016): Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation, Kogan Page Publisher
Supplementary reading	J. Sterne (2017): Artificial Intelligence for Marketing: Practical Applications, John Wiley & Sons
	M. Johnsen (2016): Multilingual Digital Marketing: Become The Market Leader, Maria Johnsen

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**8**	**0**
Private reading and studying	**5**	**0**

Participation in tutorials	**8**	**0**
Preparation of project / essay / etc.	**6**	**0**
Preparation for test / exam	**6**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**		
Course title: **negocjacje w biznesie (business negotiations) (PODSTAWOWE)**		Course code: **US71AIJ2935_38S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 6 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	6	laboratory	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr SANDRA MISIAK-KWIT**
Course instructor	**dr ANNA WIECZOREK-SZYMAŃSKA**
Course / module objectives	**The purpose of this course is to introduce students to the theory and practice of business negotiation.**
Prerequisites	**The basic knowledge of business communication, international economic relations, human resources.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the structure of negotiations, basic styles and strategies.**	**K_W14**
	2	**EP2**	**Student knows the rules of ethical negotiations.**	**K_W14**
skills	**1**	**EP3**	**Student is able to perform brief negotiations on a given topic.**	**K_U11**
	2	**EP4**	**Student is able to use chosen negotiation techniques in practice.**	**K_U18**
social competences	**1**	**EP5**	**Student is ready to negotiate ethically and responsibly in the professional life.**	**K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **negocjacje w biznesie (business negotiations)**			
Format of instruction: **laboratory**			
1. **Structure of Negotiations. BATNA**	6	2	0
2. **Ethical Negotiations vs. Distributive Negotiation**	6	3	0
3. **Role of place, time and team in Negotiating. Preparation for Negotiations**	6	2	0
4. **Bargaining strategies and styles**	6	3	0
5. **Communication in Negotiations**	6	2	0
6. **Negotiations in international business and Cross-Cultural Negotiation**	6	3	0

Modes of delivery	**Workshop, active learning methods, role playing, text and cases analysis, movies with examples, group discussions.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	PRACA PISEMNA/ ESEJ/ RECENZJA	**EP1,EP2,EP3**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP1,EP2,EP3,EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**To get a pass the student must get positive results of developed Negotiation Preparation Questionnaire and performed dialogue of Negotiation and actively collaborate and cooperate during the course.**	
	Grade calculation principles	
	The final grade is the grade from the laboratories. **The final grade is obtained on the basis of the following:** **- Results of developed Negotiation Preparation Questionnaire and performed dialogue of Negotiation (60%)** **- Commitment to collaboration and cooperative working (40%)**	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	6	negocjacje w biznesie (business negotiations)		Ważona	
	6	negocjacje w biznesie (business negotiations) [laboratorium]	zaliczenie z oceną		1,00

Basic reading	Fells Ray (2013): Effective negotiation : from research to results, Cambridge University Press, New York
	Lewicki R.J., Barry B., Saunders D.M. (2010): Negotiation., McGraw-Hill, New York
	Shell, Richard G. (2006): Bargaining for Advantage?Negotiations Strategies for Reasonable People., Penguin Books, New York
Supplementary reading	Hames D. S. (2012): Negotiation: closing deals, settling disputes, and making team decisions, SAGE, Thousand Oaks
	March R.M., Su-Hua Wu (2007): The Chinese Negotiator: How to Succeed in the World?s Largest Market, Kodansha International Ltd.

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**1**	**0**
Preparation for contact hours	**5**	**0**
Private reading and studying	**4**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**15**	**0**
Preparation for test / exam	**0**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Unit: **Rynek i konkurencja (Market and competition) [moduł]**	
Course title: **polityka regulacyjna państwa (state intervention policy) (KIERUNKOWE)**	Course code: **US71AIJ2860_58S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 5 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	discussion classes	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr MAGDALENA SOBOŃ**
Course instructor	**dr hab. TOMASZ BERNAT**
Course / module objectives	**The aim is to present the basic issues of state intervention policy, in particular the influance on individual markets, the behavior of individual corporate entities, consumers and businesses.**
Prerequisites	**The student knows the basics of economics and the principles of market economy, student versed in current economic events.** **The student is able to think analytically, properly formulate conclusions based on their knowledge of the news of economic life.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Students have knowledge of the nature and causes of state regulatory policy, premises of State influence on functioning of enterprises, the tools and methods of regulation of the market and the impact of regulation on businesses and their business models.**	**K_W01 K_W02 K_W03**
skills	**1**	**EP2**	**Student has the ability to determine the causes of regulatory policy and its impact on the functioning of the business, knows the tools and means to control the market process, is able to determine the impact of state regulatory policy on the business.**	**K_U01 K_U02 K_U03 K_U05**
social competences	**1**	**EP3**	**Student develops ability to assess the effectiveness of state regulatory policy in the functioning of enterprises and its impact on building business models.**	**K_K01 K_K02 K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **polityka regulacyjna państwa (state intervention policy)**			
Format of instruction: **lecture**			
1. **Introduction to the theory of regulation**	5	2	0
2. **Reasons of control - market failure, public goods, asymmetric information, dominant market position**	5	2	0

3. **Issues of political philosophy**	5	2	0
4. **Theories of state intervention - neo-classical approach**	5	2	0
5. **Theories of state intervention - public choice approach**	5	2	0
6. **Theories of state intervention - transactions costs approach**	5	2	0
7. **Theories of state intervention - information theoretic approach**	5	2	0
8. **Review and summary of the course**	5	1	0
Format of instruction: **discussion classes**			
1. **Reasons of state intervention - examples**	5	2	0
2. **Competition regulatory and law**	5	2	0
3. **Consumer protection**	5	2	0
4. **Taxes**	5	2	0
5. **Labour market regulations**	5	2	0
6. **Advertising regulations**	5	2	0
7. **Telecommunication market regulations**	5	2	0
8. **Review and summary of the course**	5	1	0

Modes of delivery	**Lectures with case studies are the main form of knowledge transfer. The main way to carry out the exercises is discussion about state intervention activities in different countries.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	PREZENTACJA	**EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Criteria: 85% attendance on classes, positive assessment of presentation and passed test.**
	Grade calculation principles
	The final grade of the course is calculated as the grade point arithmetic average of exercises (50%) and lectures (50%).

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	polityka regulacyjna państwa (state intervention policy)		Arytmetyczna	
	5	polityka regulacyjna państwa (state intervention policy) [ćwiczenia]	zaliczenie z oceną		
	5	polityka regulacyjna państwa (state intervention policy) [wykład]	zaliczenie z oceną		

Basic reading	Karagiannis Nikolaos (2007): Modern State Intervention in the Era of Globalisation, Edward Elgar Publishing
	Karagiannis Nikolaos, King John E. (2019): A Modern Guide to State Intervention Economic Policies for Growth and Sustainability, Edward Elgar Publishing, Cheltencham UK
	Poynter G (2021): The Political Economy of State Intervention, Routledge, UK
Supplementary reading	Gerber L (2005): The Irony of State Intervention, Northern Illinois University Press

STUDENT WORKLOAD		
	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**0**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**4**	**0**
Participation in tutorials	**13**	**0**
Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**8**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**		
Course title: **problemy współczesnej ekonomii (modern economics) (PODSTAWOWE)**		Course code: **EFZ71AIJ3432_5S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 6 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	6	laboratory	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr hab. RAFAŁ NAGAJ**
Course instructor	**dr hab. RAFAŁ NAGAJ**
Course / module objectives	**Familiarizing the student with issues related to contemporary economy and economics and making students understand them and know the tools to solve these problems. Students will also acquire skills and qualifications to analyse basic economic phenomena in contemporary economies.**
Prerequisites	**The student has the ability to use basic quantitative methods and logical thinking. The student has knowledge of the basics of macroeconomics and basic macroeconomic aggregates**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student knows the contemporary macro- and microeconomic trends, has knowledge about economic growth and the business cycle.**	**K_W01**
	2	**EP2**	**Student knows the instruments used to monitor the economic situation.**	**K_W01 K_W05**
skills	**1**	**EP3**	**Student is able to correctly identify, classify and explain instruments of economic policy.**	**K_U01 K_U03**
social competences	**1**	**EP4**	**The student is ready to deepen knowledge and participate in the decision-making process in changing economic conditions.**	**K_K02 K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **problemy współczesnej ekonomii (modern economics)**			
Format of instruction: **lecture**			
1. **The main areas of interest of modern (contemporary) economics.**	6	2	0
2. **Economic growth and economic development. Cyclical fluctuations in the contemporary economy.**	6	4	0
3. **The role of the state in modern economy.**	6	2	0
4. **The functioning of the economy in the short and long term. Model IS-LM-BP and AD-AS.**	6	4	0
5. **Competitiveness of economies and globalization and economic development in the modern (contemporary) world.**	6	2	0
6. **Repetition and summary of modern economics issues.**	6	1	0
Format of instruction: **laboratory**			

1. **Basic economic problems in modern world economies. Statistical overview in major national and international institutions/organizations.**	6	4	0
2. **Economic growth in terms of mathematical and statistical: measures of calculation of economic growth.**	6	2	0
3. **Condition of the economy and the business cycle stages.**	6	3	0
4. **The relationship between short-term and long-term equilibrium in the economy.**	6	2	0
5. **Competitiveness of economies and socio-economic development - statistical data analysis.**	6	3	0
6. **Repetition and summary of modern economics issues.**	6	1	0

Modes of delivery	**Case study, multimedia lectures**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4**
	SPRAWDZIAN	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Evaluation of the classes: Students are assessed on the basis of a written colloquium. The colloquium consists of open questions/tasks solved using a computer with internet access.** **Evaluation of the lectures: students are assessed on the basis of a written test in the form of a test questions.** **EVALUATING:** **Student will receive a satisfactory grade, if shows a basic understanding of issues (has an elementary knowledge) related to economics and problems of contemporary economies in the world.**
	Grade calculation principles
	The final grade is the arithmetic mean of the grades obtained for the classes and lectures. If the result of this arithmetic mean is ambiguous, then the grade of the lectures is decisive.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	6	problemy współczesnej ekonomii (modern economics)		Arytmetyczna	
	6	problemy współczesnej ekonomii (modern economics) [laboratorium]	zaliczenie z oceną		
	6	problemy współczesnej ekonomii (modern economics) [wykład]	zaliczenie z oceną		

Basic reading	Hayek, F.A. (Ed. Klausinger H.) (2013): Business cycles. Part 1, Routledge/Taylor & Francis, London
	Hayek, F.A. (Ed. Klausinger H.) (2013) (2013): Business cycles. Part 2, Routledge/Taylor & Francis,, London
	Krugman, P., Wells, R. (2018): Macroeconomics, 5th Edition, Worth Publishers, New York
Supplementary reading	Jones, C.I. (2018): Macroeconomics 4th Edition, Norton & Company, Inc., London
	Kuroki, R. (2013): Keynes and modern economics, Routledge/Taylor & Francis Group, London
	Urbanek, P. (Ed.) (2016): Economy Today An Interdisciplinary Approach to Contemporary Economic Challenges, E-book

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**15**	**0**

Participation in tutorials	**7**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Course title: **rynkowe zachowania konsumentów (consumers behaviour) (PODSTAWOWE)**	Course code: **EFZ71AIJ3433_4S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 5 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	lecture	15	0	pg	1
Total			**15**			**1**

Course / module coordinator	**dr hab. KATARZYNA WŁODARCZYK**
Course instructor	**dr MAŁGORZATA WIŚCICKA-FERNANDO**
Course / module objectives	**The transfer of knowledge in the field of consumer behaviour and the factors influencing them and the basic trends in consumers' behaviour and their decision-making process. Developing skills of both group and individually work and awareness of the need of life long learning.**
Prerequisites	**Knowledge of marketing issues, methods and techniques of marketing research, marketing strategy developmen.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the essence of the consumer behaviour. Student explains the importance of consumer behaviour as an important factor influencing the operation of the market entities.**	**K_W04**
skills	**1**	**EP2**	**The student can search for solutions to the issues which are discussed by using his knowledge and evaluate consumer behaviour. He is involved in the implementation of team tasks and can freely communicate in English in an international team.**	**K_U04 K_U16 K_U17**
social competences	**1**	**EP3**	**Student is ready to prepare and carry out consumer behaviour tasks and projects. The student has criticism of unfair market practices designed to manipulate the consumer.**	**K_K01 K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **rynkowe zachowania konsumentów (consumers behaviour)**			
Format of instruction: **lecture**			
1. **Consumer Behaviour- introduction to the subject**	5	2	0
2. **Factors Influencing Consumer behaviour**	5	2	0
3. **Perception, Motivation and Personality**	5	2	0
4. **Group aspects of behaviour**	5	3	0
5. **Consumer as decision Makers**	5	2	0
6. **Consumer research**	5	4	0

Modes of delivery	**Multimedia presentation, discussion, case studies, group work, presentation of the project by the students.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	PRACA PISEMNA/ ESEJ/ RECENZJA	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Scientific article and presentation of the article by the students. The final grade evaluation: Scientific article about consumer behavior. The student chooses / inventes the topic that interests him / her and makes presentation main topics.**	
	Grade calculation principles	
	The final grade is equal to the grade of the lectures.	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	rynkowe zachowania konsumentów (consumers behaviour)		Ważona	
	5	rynkowe zachowania konsumentów (consumers behaviour) [wykład]	zaliczenie z oceną		1,00

Basic reading	Ashutosh R. Patil ; contributors Richard P. Bagozzi, Dawn Iacobucci, Robert Meyer, Kent B. Monroe. (2011): Consumer behavior : information processing and decision making, SAGE
	J. O'Shaughnessy (2012): Consumer Behaviour: Perspectives, Findings and Explanations
	Leon G. Schiffman, Joseph Wisenblit (2015): Consumer behavior, Global ed.
	M. R. Solomon (2017): Consumer Behavior: Buying, Having, and Being, Prentice Hall College Div
	Zubin Sethna & Jim Blythe. (2016): Consumer Behaviour, 3th edition., SAGE Publishing, Los Angeles; | London; | New Delhi; | Singapore; | Washington; | Melbourne
Supplementary reading	C. Whan Park ; contributors William O. Bearden, Valerie S. Folkes, Mary Gilly, Flemming Hansen, David W. Stewart (2012): Consumer behavior: empirical research, SAGE
	P. Kotler, V. Wong, J. Saunders, G. Armstrong (2004): Principles of Marketing, European Edition

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**2**	**0**
Private reading and studying	**2**	**0**
Participation in tutorials	**2**	**0**
Preparation of project / essay / etc.	**1**	**0**
Preparation for test / exam	**1**	**0**
TOTAL workload	**25**	
ECTS credits	**1**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**		
Course title: **systemy wspomagania decyzji (decision support systems) (KIERUNKOWE)**		Course code: **EFZ71AIJ3433_3S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 5 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	laboratory	15	0	pg	2
		lecture	15	0	pg	
Total			**30**			**2**

Course / module coordinator	**dr inż. MARCIN MASTALERZ**
Course instructor	**dr Thomas Naprawski , dr inż. MARCIN MASTALERZ**
Course / module objectives	**The aim of the course is to show the possibility of using a computer to formalization of decision-making situations, their modeling and simulation, and usage of software tools and environments, which, on the modułu: basis of qualitative and quantitative data support the decisions of managers on the different levels of management.**
Prerequisites	**Knowledge of the basics of computer science, general knowledge of the functions and application areas of information systems management, good knowledge of spreadsheets.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student has basic knowledge in the area of methods and decision support tools, that, on the basis of the analysis of qualitative and quantitative data, support managers at various levels of the enterprise management.**	**K_W10**
skills	**1**	**EP2**	**Student uses tools to analyze quantitative and qualitative data for decision support.**	**K_U10 K_U14**
	2	**EP3**	**Student can easily communicate in English in an international group of people in order to carry out business tasks and projects.**	**K_U16**
social competences	**1**	**EP4**	**Student is ready to broaden their knowledge to solve social and business problems using decision models and decision support systems.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **systemy wspomagania decyzji (decision support systems)**			
Format of instruction: **lecture**			
1. **Division into groups of 2-3 people to describe the project for which the developed models and software tools will be used.**	5	2	0
2. **Computer modeling of decision-making problems based on qualitative and quantitative data using the Naylor procedure.**	5	4	0
3. **Computer modeling of qualitative multi-criteria decision-making problems based on AHP (Analytic Hierarchy Process) and ELECTRE.**	5	3	0
4. **Designing and generating analyzes supporting decisions for various levels of management.**	5	2	0
5. **Examples of using data warehouses.**	5	2	0

6. **Knowledge verification.**	5	2	0
Format of instruction: **laboratory**			
1. **1. Types of decisions at various levels of management, approaches to their formalization, information in decision-making, Decision support systems (DSS) - definitions, functions and characteristics of their elements.**	5	2	0
2. **The process of modeling decision-making situations. Computer analysis of economic systems.**	5	2	0
3. **Research on the possibilities of using software to support digital modeling of economies and decision-making situations. DSS systems, EIS MSS and the role of data banks, methods, models and knowledge in decision support. Integrated decision support system.**	5	3	0
4. **Problems of mapping multidimensional structures and hierarchical consolidation of results in decision support systems. data warehouses in decision support. Use of ETL, OLAP and Data Mining technologies.**	5	2	0
5. **Business Intelligence technology and Business Intelligence applications in supporting information management and delivery. Characteristics of the BI market in the world and in Poland.**	5	2	0
6. **Corporate Performance Management systems and the use of Internet technologies to support decisions in the company.**	5	2	0
7. **Artificial intelligence and expert systems as a class of knowledge-based systems.**	5	2	0

Modes of delivery	**As part of the course implementation, the method of using artificial intelligence is determined by the teacher in accordance with the best practices and standards of the University of Szczecin. The instructor informs students about the scope and possibilities of using SI during the first classes, indicating a catalog of tools or applications adapted to the learning outcomes and teaching needs and possibilities within a given subject.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	SPRAWDZIAN	**EP1,EP2**
	PROJEKT	**EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Credit for laboratory classes:** **Students are assessed on the basis of partial projects sent by the e-learning system. Such projects will be included in the final project. Sub-projects will be built on the basis of substantive and technical knowledge (regarding skills of using the computer applications) gained in laboratories during the realization of the thematic blocks (30% points of the final grade). Final project, expanded according to the guidelines provided in the lecture, will be presented by students in groups (40% points of the final grade).** **Credit for lectures: it is based on test. Knowledge test will be carried out using the e-learning platform (30% points of the final grade).**
	Grade calculation principles
	The final grade is a weighted average of the grades for lectures (0,7) and laboratories (0,3) **Rating:** **- The student receives a satisfactory grade when he is familiar with elements of the decision-making process, the categories of decisions and he can build a decision model based on the Naylor procedure using computer tools.** **- The student receives a good grade if he can also use selected domain computer tools in supporting decision.** **- The student receives a very good grade if he can also use this knowledge to build the concept of integrated decision support system as application of the lecture theses.**

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	systemy wspomagania decyzji (decision support systems)		Ważona	
	5	systemy wspomagania decyzji (decision support systems) [laboratorium]	zaliczenie z oceną		0,70
	5	systemy wspomagania decyzji (decision support systems) [wykład]	zaliczenie z oceną		0,30

Basic reading	Anna Maria Gil-Lafuente, Constantin Zopounidis (2015): Decision Making and Knowledge Decision Support Systems, Springer
	Ramesh Sharda, Dursun Delen, Efraim Turban (2014): Business Intelligence and Analytics: Systems for Decision Support.(10th Edition), Pearson
	Vaughn Robert H. (2010): Decision-making Training, American Society for Training and Development
	Wilfried Grossmann, Stefanie Rinderle-Ma (2015): Fundamentals of Business Intelligence, springer

Supplementary reading	Blake Chris (2008): The art of decisions: how to manage in an uncertain world, Pearson Education
	Drążek Z. (2005): Aspekty metodologiczne modelowania w zarządzaniu, Uniwersytet Szczeciński, Szczecin
	Gluchowski P., Gabriel, Chamoni P. (2007): Management Support Systeme..Computergestützte Informationssysteme für Führungskräfte und Entscheidungsträger., Springer
	Howson C. (2013): Successful Business Intelligence, Second Edition, Unlock the Value of BI & Big Data 2nd Edition, McGraw-Hill
	Max H. Bazerman, Don A. Moore (2008): Judgment in managerial decision making, John Wiley & Sons

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**1**	**0**
Private reading and studying	**2**	**0**
Participation in tutorials	**4**	**0**
Preparation of project / essay / etc.	**6**	**0**
Preparation for test / exam	**5**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Unit: **Technologie internetowe w biznesie (IT in business) [moduł]**	
Course title: **tworzenie serwisów internetowych (websites design) (KIERUNKOWE)**	Course code: **US71AIJ2717_62S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 5 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	laboratory	30	0	pg	2
Total			**30**			**2**

Course / module coordinator	**dr GRZEGORZ SZYJEWSKI**
Course instructor	**dr MICHAŁ NOWAKOWSKI**
Course / module objectives	**Acquisition of knowledge in creating websites design on the Internet with the use of scripting languages and technologies CMS and application of knowledge in practical activities.**
Prerequisites	**Ability of using text editor and understanding of programming code structure concept.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student has the knowledge to be able to characterize the technology used on the server side web**	**K_W08**
	2	**EP4**	**Student has an understanding of key terms about semantic web, knowledge management and content management technologies**	**K_W13**
skills	**1**	**EP2**	**Student can implement a service project in CMS technology**	**K_U14**
social competences	**1**	**EP3**	**Student is ready to work in a team designed to service architecture.**	**K_K01**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **tworzenie serwisów internetowych (websites design)**			
Format of instruction: **laboratory**			
1. **Basics of HTML and CSS.**	5	6	0
2. **Creating simple HTML/CSS document.**	5	2	0
3. **Using external frameworks and projects to create website.**	5	6	0
4. **Advanced use of Bootstrap framework.**	5	4	0
5. **Using stock templates and graphics.**	5	6	0
6. **Using CMS to create website.**	5	6	0

Modes of delivery	**Working with the code editor and other on-line tools on the computer.**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	PROJEKT	**EP1,EP2,EP3,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Credit for laboratory classes: it depends on the prepared project evaluation and the quality of the project presentation.** **Complete website must be prepared and presented.** **Project quality (general design, used methods, code structure) - 85%** **Presentation of the project - 15%**	
	Grade calculation principles	
	Final grade is the same as the project evaluation grade (laboratory).	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	tworzenie serwisów internetowych (websites design)		Ważona	
	5	tworzenie serwisów internetowych (websites design) [laboratorium]	zaliczenie z oceną		1,00

Basic reading	Bootstrap (2021): Bootstrap framework, online
	w3schools.com (2021): Bootstrap 4 Tutorial, online
	w3schools.com (2021): HTML Tutorial, online
Supplementary reading	

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**5**	**0**
Private reading and studying	**3**	**0**
Participation in tutorials	**2**	**0**
Preparation of project / essay / etc.	**6**	**0**
Preparation for test / exam	**2**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**	
Unit: **Rynek i konkurencja (Market and competition) [moduł]**	
Course title: **wspólny rynek europejski (common european market) (KIERUNKOWE)**	Course code: **US71AIJ2860_59S**
Name of field of study: **Economics and IT Applications**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 5 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	lecture	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**dr hab. TOMASZ BERNAT**
Course instructor	**dr hab. TOMASZ BERNAT**
Course / module objectives	**The course addresses to the problems of systematically analyze of the European Union (EU) and the larger project of economic and political integration in Europe. The aim is to provide a thorough understanding of the complex process of the creation of a single internal market within the European Union.**
Prerequisites	**This is an middle level economics class and requires that you have taken elementary macroeconomics course**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Students have a good overview of the political, legal and economical theoretical discussions within the field of market integration.**	**K_W01 K_W02 K_W03**
skills	**1**	**EP2**	**Students are able to carry out and solve practical cases and problems regarding cross-national transactions of goods, services, labour and capital.**	**K_U01 K_U02 K_U03 K_U05**
social competences	**1**	**EP3**	**Students are ready to formulate their own ideas using their own knowledge as well as expert knowledge.**	**K_K02 K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **wspólny rynek europejski (common european market)**			
Format of instruction: **lecture**			
1. **Formation and development of common and internal market. Free movement of goods, services, people and capital, influence of these four freedoms on the environment of the entrepreneurship in the EU.**	5	3	0
2. **Stages of EU Economic Integration - Constructing the Common Market**	5	2	0
3. **New EU member states on the internal market**	5	2	0
4. **Stages of EU Economic Integration - the Economic and Monetary Union (EMU) and its policy-making**	5	2	0
5. **Financing the European Union - the Community Budget**	5	2	0
6. **I European Union Horizontal Policies - Regional and Structural Policy**	5	2	0

7. **European Union Sectoral Policies - Common Agricultural Policy**	5	2	0

Modes of delivery	**combination of lectures, class discussions, presentations and case studies**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	PROJEKT	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	
	Lectures will be assessed based on the performance during regular lectures, data gathering and analysis project.
	Grade calculation principles
	The final grade is equal to the grade received for the lectures.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	wspólny rynek europejski (common european market)		Ważona	
	5	wspólny rynek europejski (common european market) [wykład]	zaliczenie z oceną		1,00

Basic reading	
	Campbell Balfour (2020): Industrial Relations in the Common Market, Taylor & Francis Group, New York
	Cavusgil, S.T.; Knight,G.; Riesenberger, J.R. (2011): International Business: The New Realities, second edition, Pearson
	Cristina SinOrlanda TavaresSónia CardosoMaria J. Rosa (2018): European Higher Education and the Internal Market, Palgrave Macmillan, Switzerland
	Kristen Feiter (2020): The European Union's Single Market. Integration Towards the European Energy Union, GRIN Verlag

Supplementary reading	
	Council of the European Union http://ue.eu
	European Commission http://ec.europa.eu
	European Parliament www.europarl.eu
	European Union Studies Association www.eustudies.org
	Journal of Common Market Studies, Inderscience
	US Mission to the European Union www.useu.be

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**0**	**0**
Preparation for contact hours	**0**	**0**
Private reading and studying	**9**	**0**
Participation in tutorials	**7**	**0**
Preparation of project / essay / etc.	**14**	**0**
Preparation for test / exam	**5**	**0**

TOTAL workload	**50**
ECTS credits	**2**

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**		
Course title: **zarządzanie finansami przedsiębiorstw (corporate finance management) (KIERUNKOWE)**		Course code: **US71AIWNEiZ_70S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 5 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	discussion classes	15	0	pg	2
		lecture	15	0	pg	
Total			**30**			**2**

Course / module coordinator	**dr hab. AGNIESZKA PREŚ-PEREPECZO**
Course instructor	**dr hab. AGNIESZKA PREŚ-PEREPECZO**
Course / module objectives	**The aim of the course is to familiarize students with the issues relating to the financial management in the long and short term, including capital management, value management and liquidity management.**
Prerequisites	**The student has knowledge of the background of corporate finance, financial accounting, investment appraisal and civil and commercial law. The student has following skills: is able to make financial calculations, to analyze the processes in the company.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**The student knows the rules of strategic and operational financial management.**	**K_W07 K_W09**
	2	EP2	**The student knows the impact of financial and investment decisions on corporate value creation.**	**K_W07 K_W09 K_W10**
	3	EP3	**The student knows methods and tools of liquidity assessment, working capital and cash management.**	**K_W07 K_W09 K_W10**
skills	1	EP4	**The student is able to analyze costs and benefits of capital sources.**	**K_U07 K_U09 K_U10**
	2	EP5	**The student is able to analyze the impact of the financial and investment decisions on the company value creation.**	**K_U07 K_U09 K_U10**
	3	EP7	**The student is able to prepare the cash budget and the demand for external financing.**	**K_U07 K_U09 K_U10**
	4	EP10	**The student is able to complete and improve the knowledge and skills.**	**K_U18**
social competences	1	EP9	**The student is ready to think creatively.**	**K_K01 K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **zarządzanie finansami przedsiębiorstw (corporate finance management)**			
Format of instruction: **lecture**			

1. **The needs, objectives and complexity of corporate financial management.**	5	1	0
2. **The legal form, size of the company, firm's life cycle and access to sources of capital.**	5	1	0
3. **Financial and investments decisions and the company value creation.**	5	2	0
4. **Dividend policy: theory and practice**	5	2	0
5. **Mergers and acquisitions**	5	2	0
6. **Operating finance management**	5	1	0
7. **Working capital and cash management**	5	2	0
8. **Budgeting and reporting in operating finance management**	5	2	0
9. **Financial risk management**	5	2	0
Format of instruction: **discussion classes**			
1. **Costs and benefits of capital sources - case study**	5	3	0
2. **Case studies of sources of value creation**	5	3	0
3. **Measuring of the company value creation in examples**	5	4	0
4. **The assessment of liquidity and the risk of its loss**	5	1	0
5. **Working capital and cash management - case study**	5	2	0
6. **Financial risk management - case study**	5	2	0

Modes of delivery	**Multimedia presentation,calculations, case studies, discussion.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		
		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3**
	SPRAWDZIAN	**EP4,EP5,EP7,EP9**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP10,EP4,EP5,EP7, EP9**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**The final grade of lectures is positive when a student gives a correct answers to questions in a written test, more than 50% (kolokwium)** **The final grade of classes is a weighted average and consists of:** **- 80% positive solution of examples (Sprawdzian), more than 50%.** **- 20% current verification of knowledge and skills during the course.**
	Grade calculation principles
	The final grade of the Corporate Finance Management course is the average of positive marks achieved in lectures and classes.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	zarządzanie finansami przedsiębiorstw (corporate finance management)		Arytmetyczna	
	5	zarządzanie finansami przedsiębiorstw (corporate finance management) [ćwiczenia]	zaliczenie z oceną		
	5	zarządzanie finansami przedsiębiorstw (corporate finance management) [wykład]	zaliczenie z oceną		

Basic reading	Brigham E. F., Ehrhardt M. C. (2014): Financial Management. Theory and Practice, 14th edition, South-Western CENGAGE Learning
	Brigham E. F., Ehrhardt M. C. (2019): Financial Management. Theory and Practice, 16th edition, South-Western CENGAGE Learning
	Ehrhardt M.C, Brigham E.F. (2017): Corporate Finance: A Focused Approach 6th Edition., Cengage Learning, Boston,
Supplementary reading	Brigham E.F. Houston J. (2015): Zarządzanie finansami, Wydawnictwo Naukowe PWN , Warszawa

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**4**	**0**
Private reading and studying	**5**	**0**
Participation in tutorials	**5**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**4**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**		
Course title: **zarządzanie informacją (information management) (KIERUNKOWE)**		Course code: **US71AIJ2717_64S**
Name of field of study: **Economics and IT Applications**		
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**	Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 5 - english language**	

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	5	laboratory	30	0	pg	2
Total			**30**			**2**

Course / module coordinator	**dr KAROLINA MUSZYŃSKA**
Course instructor	**dr KAROLINA MUSZYŃSKA**
Course / module objectives	**The goal of the course is to familiarize the student with structures of information systems in organizations as well as methods, forms and tools of data collection, processing and sharing.**
Prerequisites	**Computer literacy**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student knows the concepts of information, knowledge, information management cycle, information architecture and methods of processing and protecting data as well as databases, data warehouses and content information systems**	**K_W08 K_W13**
	2	**EP2**	**Student knows different information systems used in organizations and IT professionals responsible for information management in organizations**	**K_W08 K_W13 K_W15**
skills	**1**	**EP4**	**Student can design the structure of a database, implement and use it with the support of appropriate tools**	**K_U08 K_U12 K_U16**
social competences	**1**	**EP5**	**Student is ready to supplement their knowledge regarding information management and use it to support organizations in solving information management problems**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **zarządzanie informacją (information management)**			
Format of instruction: **laboratory**			
1. **Importance of information in organizations management**	5	2	0
2. **Structure of the information system of an organization**	5	2	0
3. **Techniques of data collection in organizations (databases, data warehouses, content management systems)**	5	4	0
4. **Techniques for processing and analysis of information**	5	2	0
5. **Data sharing techniques in IT solutions of organizations. Data security**	5	2	0
6. **Introduction do databases and database management system**	5	2	0

7. **Defining database structure (tables, relationships) - exercises**	5	4	0
8. **Constructing queries, designing forms and reports - exercises**	5	10	0
9. **Summary of knowledge on information management and overview of developed projects**	5	2	0

Modes of delivery	**online presentations developed jointly by students, online tutorial regarding database creation and management**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2**
	PROJEKT	**EP4,EP5**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP1,EP2,EP4**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Student is evaluated on the basis of a written test, a project of designing and implementing a database and performing indicated tasks during the course. To get a positive grade from the test the student must get at least 51% of points. The same applies to the project. Performing 100% of course tasks raises the final grade by half grade. Performing 80-99% of course tasks has no influence on the final grade. Performing 60-79% of course tasks lowers the final grade by half grade. Performing less then 60% of course tasks lowers the final grade by one grade.**
	Grade calculation principles
	The final grade is the grade from the laboratories. **The final grade laboratories is an arithmetic average of the test and the project grades and can be additionally influenced by the performance of course tasks, as explained in the conditions for obtaining a pass.**

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	5	zarządzanie informacją (information management)		Ważona	
	5	zarządzanie informacją (information management) [laboratorium]	zaliczenie z oceną		1,00

Basic reading	Laudon K.C., Laudon J.P. (2019): Management Information Systems: Managing the Digital Firm, Global Edition, Pearson
Supplementary reading	McKnight W. (2014): Information management : strategies for gaining a competitive advantage with data , Morgan Kaufmann Publishers
	Steenbeek I. (2019): The Data Management Toolkit: A step-by-step implementation guide for the pioneers of data management, Data Crossroads
	Whitman M.E., Mattord H. (2018): Management of Information Security 6th Edition, Cengage Learning

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**4**	**0**
Private reading and studying	**3**	**0**
Participation in tutorials	**4**	**0**
Preparation of project / essay / etc.	**3**	**0**
Preparation for test / exam	**4**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USEFZ-EalTA-O-I-S-24/25Z**						
Course title: **zarządzanie projektami (project management) (KIERUNKOWE)**					Course code: **US71AIJ2717_44S**	
Name of field of study: **Economics and IT Applications**						
Mode and cycle of study: **first-degree, full - time**		Profile of study: **general academic**			Specialty:	
Course / module status **obligatory**			Language of instruction: **semester: 6 - english language**			
Year	**Semester**	**Form of instruction**	**No. of hours**		**Type of credit**	**ECTS**
				including e-learning		
3	6	laboratory	15	0	pg	3
		lecture	15	0	pg	
Total			**30**			**3**
Course / module coordinator	**dr TOMASZ ŁUKASZEWSKI**					
Course instructor	**dr GRZEGORZ SZYJEWSKI**					
Course / module objectives	**The objective of this course is to introduce students to the fundamentals of project management framework, with special emphasis on the problems of defining, planning and implementation of projects.**					
Prerequisites	**No requirements.**					

LEARNING OUTCOMES

Category	**No.**	**Code**	**Description**	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Student has knowledge about system and object lifecycle problems in the area of software engineering.**	**K_W13**
skills	**1**	**EP2**	**Student has ability to plan, to schedule and to implement systems or processes using proper methods and techniques**	**K_U12 K_U17**
social competences	**1**	**EP3**	**Student is ready to prepare projects and cooperate within a group and be its leader.**	**K_K01 K_K03**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **zarządzanie projektami (project management)**			
Format of instruction: **lecture**			
1. **Introduction to Project management**	6	2	0
2. **Scope management in projects**	6	3	0
3. **Time management in projects**	6	2	0
4. **Cost management and project finance**	6	4	0
5. **Risk management in projects**	6	2	0
6. **Project tracking and controlling**	6	2	0
Format of instruction: **laboratory**			
1. **IT Project Scheduling**	6	2	0

2. **Development of Work Breakdown Structure (WBS)**	6	3	0
3. **Time analysis using Critical Path Method**	6	2	0
4. **Resource definition and assignment.**	6	2	0
5. **Cost management and project budgeting**	6	2	0
6. **Using IT application (MS Project) to support Project management**	6	2	0
7. **Project tracking**	6	2	0

Modes of delivery	**Project development** **Working in groups** **Case studies** **Lectures with visual techniques** The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	PROJEKT	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**The grade for laboratories depends on evaluation of the project developed in MS Project** **The grade for the lecture and the cvaluation of the Project Control Book** **To get a pass student has to be able to develop a project and to analyze it.** Grade calculation principles **The final grade is the arithmetic average of grades obtained from the lecture and laboratories.**

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	6	zarządzanie projektami (project management)		Arytmetyczna	
	6	zarządzanie projektami (project management) [laboratorium]	zaliczenie z oceną		
	6	zarządzanie projektami (project management) [wykład]	zaliczenie z oceną		

Basic reading	Project Management Institute (2013): A guide to the project management body of knowledge : (PMBOK Guide), Project Management Institute
Supplementary reading	Kathy Schwalbe (2012): An Introduction to project management , Kathy Schwalbe, LLC, Trevor Leonard Young (2013): Successful project management, Kogan Page

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**4**	**0**
Preparation for contact hours	**5**	**0**
Private reading and studying	**5**	**0**
Participation in tutorials	**8**	**0**
Preparation of project / essay / etc.	**15**	**0**
Preparation for test / exam	**8**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	