UNIVERSITY
OF ECONOMICS AND HUMAN SCIENCES
IN WARSAW

Field of study:

Finance and Accounting

Subject: Statistical methods

Level of study: graduate studies
System of study: Full-time
Profile of studies: general academic
Subject: Statistical methods

Form of classes and the ECTS points

	Number of hours	ECTS points	Credit
conversation class	30		credit with mark
Total	30	5	

Aims of teaching

Familiarizing students with inferential statistics.

Intended learning outcomes

KNOWLEDGE		
SYMBOL	**DESCRIPTION**	**REFERENCE TO THE PROFILE OUTCOME**
P_W1	Student has the knowledge of basic techniques and methods of presentation, description, analysis and interpretation of statistical data.	FiR_WG07_Mgr
P_W2	Student understands the basic notions of probability theory, random variable and its distribution.	FiR_WG07_Mgr
P_W3	Student understands the differences between population and sample, parameter and its estimate.	FiR_WG07_Mgr
P_W4	Students understands the notion of dependence between variables.	FiR_WG07_Mgr
P_W5	Students understands the similarity between analyzed objects.	FiR_WG07_Mgr

SKILLS		
SYMBOL	**DESCRIPTION**	**REFERENCE TO THE PROFILE OUTCOME**
P_U1	Student applies statistical techniques and methods for presentation, description, analysis and interpretation of data.	FiR_UW04_Mgr FiR_UW05_Mgr
P_U2	Student estimates parameters on the basis of sample, formulates and verifies statistical hypothesis.	FiR_UW04_Mgr FiR_UW05_Mgr
P_U3	Student analyses the dependence of two or more variables.	FiR_UW04_Mgr FiR_UW05_Mgr
P_U4	Student analyses the dependence of objects in sample.	FiR_UW04_Mgr FiR_UW05_Mgr

SOCIAL COMPETENCES		
SYMBOL	**DESCRIPTION**	**REFERENCE TO THE PROFILE OUTCOME**
P_K1	Student can critically assess the data and analysis results provided to him, is prepared for further studying quantitative methods.	FiR_KK01_Mgr FiR_KO01_Mgr

Course content

NUMBER	DESCRIPTION	FORM OF CLASSES	NUMBER OF HOURS
1	Introduction to probability and statistics.	conversation class	1 / 1
2	Random variable. Distributions. Uniform distribution.	conversation class	2 / 2
3	Normal distribution.	conversation class	3 / 3
4	Sampling distributions of the mean and proportion.	conversation class	3 / 3
5	Point and interval estimators.	conversation class	2 / 2
6	Hypothesis testing. P-value.	conversation class	2 / 2
7	Relations between variables. Correlation.	conversation class	2 / 2
8	Relations between variables. Regression.	conversation class	6 / 6
9	Relations between variables. ANOVA.	conversation class	2 / 2
10	Relations between objects. Cluster analysis.	conversation class	6 / 6
11	Contingency table.	conversation class	1 / 1

Conditions of completion

TYPE OF CREDIT	CREDIT INFLUENCE (IN %)

Lack of definite importance.

Teaching methods

- group work
- exercises
- group projects

Reading (compulsory)

- Kowalczyk B., Witkowski B.. Mathematical statistics for management 2015
- Cochran J.J., Anderson D.R., Camm J.D., Williams T.A., Sweeney D.J.. Statistics for Business and Economics (International Edition) 2013

Reading (additional)

- Van Matre J., Gilbreath G.. Statistics for business and economics 1983
- Levin R.I., Rubin D.S., Rastogi S., Masood Husain Siddiqui. Statistics for management, 7e 2012
- T. Kuszewski, A. Sielska. On the Methods of Ranking Countries by Their Level of Development, [in:] Data Analysis Methods for Modelling and Forecasting Economic Processes, ed. J.Pociecha, Cracow University of Economic Press , pp. 76-85 2011

Odniesienie efektów przedmiotowych do efektów kierunkowych, treści kształcenia, metod weryfikacji

SYMBOL	REFERENCE OF A GIVEN OUTCOME TO THE PROFILE OUTCOME	REFERENCE OF A GIVEN OUTCOME TO THE COURSE CONTENT	REFERENCE OF A GIVEN OUTCOME TO THE VERIFICATION METHODS
KNOWLEDGE			
P_W1	FiR_WG07_Mgr	1 7 8	Active participation in classes in solving tasks, examples and case studies group projects Exam
P_W2	FiR_WG07_Mgr	2 3 4	Active participation in classes in solving tasks, examples and case studies group projects Exam
P_W3	FiR_WG07_Mgr	4 5 6	Active participation in classes in solving tasks, examples and case studies group projects Exam
P_W4	FiR_WG07_Mgr	7 8 9 11	Active participation in classes in solving tasks, examples and case studies Exam group projects
P_W5	FiR_WG07_Mgr	10	Active participation in classes in solving tasks, examples and case studies group projects Exam
SYMBOL	REFERENCE OF A GIVEN OUTCOME TO THE PROFILE OUTCOME	REFERENCE OF A GIVEN OUTCOME TO THE COURSE CONTENT	REFERENCE OF A GIVEN OUTCOME TO THE VERIFICATION METHODS
SKILLS			
P_U1	FiR_UW04_Mgr FiR_UW05_Mgr	1 11	Active participation in classes in solving tasks, examples and case studies group projects Exam

SYMBOL	REFERENCE OF A GIVEN OUTCOME TO THE PROFILE OUTCOME	REFERENCE OF A GIVEN OUTCOME TO THE COURSE CONTENT	REFERENCE OF A GIVEN OUTCOME TO THE VERIFICATION METHODS
SKILLS			
P_U2	FiR_UW04_Mgr FiR_UW05_Mgr	4 5 6	Active participation in classes in solving tasks, examples and case studies group projects Exam
P_U3	FiR_UW04_Mgr FiR_UW05_Mgr	7 8 9 11	Active participation in classes in solving tasks, examples and case studies group projects Exam
P_U4	FiR_UW04_Mgr FiR_UW05_Mgr	10	Active participation in classes in solving tasks, examples and case studies group projects Exam
SYMBOL	REFERENCE OF A GIVEN OUTCOME TO THE PROFILE OUTCOME	REFERENCE OF A GIVEN OUTCOME TO THE COURSE CONTENT	REFERENCE OF A GIVEN OUTCOME TO THE VERIFICATION METHODS
SOCIAL COMPETENCES			
P_K1	FiR_KK01_Mgr FiR_KO01_Mgr	1 2 3 4 5 6 7 8 9 10 11	Active participation in classes in solving tasks, examples and case studies group projects Exam