Module description (syllabus): Statystyka matematyczna

Module title:	**Statystyka matematyczna**	ECTS	**4**
Module title translation:	Mathematical statistics		
Module for study direction:	**Ekonomia**		

Module language: **angielski**		Study level: **2**
Study cycle: **stacjonarne**	Module status: **kierunkowy - obowiązkowy**	Semester number: **1** **semestr zimowy**
Academic Year from which module description is valid :	**2019/2020**	Catalogue number: **EKR-E-2S-1-08-KO-2019-EN**

Person in charge of the module:	**Monica Pratesi, prof.**
Teachers responsible for classes:	**prof. Monica Pratesi**
Unit responsible for the module:	**Katedra Polityki Rozwoju i Marketingu**
Faculty in charge:	**Wydział Ekonomiczny**
Objectives of the module:	a.The ability to use different measures to analyze the file of data b.The skills to use different methods of estimation c.Analyze the relation between explained variable and set of independent variables **Lectures** Theoretical introduction: Descriptive statistics (Data and Statistics, Frequency and Graphs, Means and Variance, Association) Probability (Assigning Probabilities, Discrete Distributions, Continuous Distributions) Sampling and Interval Estimates (Sampling Distribution, Interval Estimate) Testing-1pop-mean (Hypothesis Testing) Inference-2pops-mean (Means, Proportions) Regression (Simple Regression, Multiple Regression) **Classes** Excersises: Descriptive statistics (Data and Statistics, Frequency and Graphs, Means and Variance, Association) Probability (Assigning Probabilities, Discrete Distributions, Continuous Distributions) Sampling and Interval Estimates (Sampling Distribution, Interval Estimate) Testing-1pop-mean (Hypothesis Testing) Inference-2pops-mean (Means, Proportions) Regression (Simple Regression, Multiple Regression)
Teaching forms and number of hours:	a. lectures - no of hours: full time study: 15, part-time study. 0 b. classes - no of hours: full time study: 15, part-time study. 0
Teaching methods:	discussion, problem solving, consultation with the lecturer, lectures
Initial requirements and formal prerequisities:	basic statistics and mathematics

Learning outcomes:	**Knowledge - knows and understands:** 1. student knows and understands different statitics for analyzing various economic phenomena	**Skills - can:** 2. student is able to use different methods of estimation	**Competences - is ready for:** 3. student is ready for critical evaluation of economic relations basing of conlusions from statistical analysis

Assessement methods:	
Formal documentation of the learning outcome:	tests, exams individual student's projects
Elements of the final grade and their weights:	
Place of teaching:	blended learning

Teaching materials (obligatory and additional):

1. David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, 2018, Essential of Statistics for Business and Economics, Southwestern Cengage Learning
2. Materials and exercises provided by the teacher on the Moodle Platform

Remarks:
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Quantitative indicators describing the module:	
Estimated total number of student work hours (contact and own work) necessary to achieve the learning outcomes assumed for the module - on this basis, complete the ECTS field:	**91/0**
The total number of ECTS points which the student receives in module requiring direct participation of academic teachers or other persons:	**1.44/0 ECTS**

Table of compliance of the directional learning outcomes with the effects of the module			
Outcome category	Learning outcomes for module:	Reference to effects for the study program for the direction of study	The impact of classes on the directional effect*)
Knowledge	1. student knows and understands different statitics for analyzing various economic phenomena	EK2_KW03	3
Skills	2. student is able to use different methods of estimation	EK2_KU02	3
Competences	3. student is ready for critical evaluation of economic relations basing of conlusions from statistical analysis	EK2_KK01	3

*) 3 - advanced and detailed, 2 - significant, 1 - basic