Module description (syllabus): Prognozowanie procesów ekonomicznych

Module title:	**Prognozowanie procesów ekonomicznych**	ECTS	**5**
Module title translation:	Economic Processes Forecasting		
Module for study direction:	**Ekonomia**		

Module language: **angielski**		Study level: **2**
Study cycle: **stacjonarne**	Module status: **kierunkowy - obowiązkowy**	Semester number: **2** **semestr letni**
Academic Year from which module description is valid :	**2019/2020**	Catalogue number: **EKR-E-2S-2-03-KO-2019-EN**

Person in charge of the module:	**Hamulczuk Mariusz, dr. hab.**		
Teachers responsible for classes:	**Hamulczuk Mariusz dr. hab. inż., pracownicy Katedry**		
Unit responsible for the module:	**Katedra Ekonomii Międzynarodowej i Agrobiznesu**		
Faculty in charge:	**Wydział Ekonomiczny**		
Objectives of the module:	a. Introduce students with forecasting process b. Introduce students with statistical techniques of predicting economic processes c. Showing of capability of analysis of economic reality and predicting of future with utilization of available statistic software d. Equip students with adequate statistical tools and knowledge to make precise decisions in business and economy **Lectures** The role of forecasting in management, The basic steps in a forecasting process, Selecting the forecasting method, Time series decomposition, Measuring the forecast accuracy, Time series forecasting techniques for different structure of data, Causal models and regression analysis, Forecasting by analogies, Judgmental forecasting, Technical analysis as a method of the financial market forecasting, The use of the forecasting methods in practice: combination approach. Scenario analysis and forecasting. **Classes** Data analysis, Selecting the forecasting method, Forecasting model, evaluation, forecasting errors, Time series decomposition, Moving averages, Exponential smoothing methods, Trend line extrapolation method, ARIMA models, Forecasting time series with cycles, Causal models and regression analysis: discovering relationships, choosing variables, model building, assessing adequacy of the model, Dynamic regression model, Forecasting by analogies, Technical analysis as a method of the financial market forecasting.		
Teaching forms and number of hours:	a. lectures - no of hours: full time study: 15, part-time study. 0 b. laboratory classes - no of hours: full time study: 30, niestacj. 0		
Teaching methods:	discussion, problem solving, consultation with the lecturer, lectures, case study, grupowe projekty studenckie		
Initial requirements and formal prerequisities:	matematyka, statystyka, ekonometria		
Learning outcomes:	**Knowledge - knows and understands:** 1. The student knows methods and techniques of analysis and forecasting of economic processes	**Skills - can:** 2. The student is able to choose the appropriate forecasting method to empirical data and to compute a forecast on its basis. 3. The student is able to assess the quality of the prognostic model and assess the feasibility of estimates and forecasts in the light of theoretical and empirical premises.	**Competences - is ready for:** 4. The student is ready to solve analytical and prognostic problems necessary in making economic decisions.
Assessement methods:	test on classes (efekty: 1, 2, 3), writing exam (efekty: 1, 2, 3), assessment of the project work (effects: 2, 3, 4)		
Formal documentation of the learning outcome:	tests, exams projects		
Elements of the final grade and their weights:	test during classes - 25%, writing exam - 50%, assessment of the project work - 25%		
Place of teaching:	sala dydaktyczna i laboratorium komputerowe		

Teaching materials (obligatory and additional):
1. Forecasting Methods and Applications. S. Makridakis, S.C. Wheelwright and R. Hyndman, Wiley (3rd Ed.), 1998. 2. Practical business forecasting. M.K. Evans, Oxford; Malden: Blackwell Publishers, corp. 2003. 3. Forecasting: Principles and Practice. R.J. Hyndman, & G. Athanasopoulos, OTexts: Melbourne, Australia, 2018. 4. Principles of Forecasting: A Handbook for Researchers and Practitioners. J. Scott Armstrong (ed.): Norwell, MA: Kluwer Academic Publishers 2001. 5. Long-Range Forecasting. J.S. Armstrong, John Willey and Sons, New York, 1978. 6. Forecasting in Business Economics. C. Granger, Academic Press 2005. 7. A companion to economic forecasting. M. Clements, Blackwell Companions to Contemporary Economics, 2004.
Remarks: +, ver-lw

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:	**123/0**
The total number of ECTS points which the student receives in module requiring direct participation of academic teachers or other persons:	**2.04/0 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. The student knows methods and techniques of analysis and forecasting of economic processes	EK2_KW03	3
Skills	2. The student is able to choose the appropriate forecasting method to empirical data and to compute a forecast on its basis.	EK2_KU01	3
	3. The student is able to assess the quality of the prognostic model and assess the feasibility of estimates and forecasts in the light of theoretical and empirical premises.	EK2_KU02	3
Competences	4. The student is ready to solve analytical and prognostic problems necessary in making economic decisions.	EK2_KK01	2

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