GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	ECONOMIC FORECASTING, PG_00070612		
Field of study	Economics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	first-cycle studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	5	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Statistics and Econometrics -> Faculty of Management and Economics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Aneta Sobiechowska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	30.0	0.0	0.0	0.0	45

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	45	3.0	52.0	100

Subject objectives

Preparation of students for selecting and applying methods of forecasting micro- and macroeconomic phenomena based on knowledge of data integration and forecast quality assessment.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W05] possesses advanced knowledge in integrating data from various sources and in methods that enable a comprehensive analysis of economic problems.	knows and understands the principles of integrating data from multiple sources in order to analyze complex economic problems in the context of forecasting economic phenomena.	[SW1] Assessment of factual knowledge
[K6_K03] is prepared to critically assess the knowledge they possess, which is necessary for solving cognitive and practical problems, and to supplement any gaps with opinions from external experts.	is ready to critically evaluate their knowledge of economic forecasting methods, particularly by identifying the limitations of applied forecasting models	[SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice
[K6_U07] uses advanced information technologies to enhance data analysis and decision-making processes.	is able to select appropriate forecasting methods based on the time pattern of a phenomenon, applying suitable IT techniques and data analysis tools.	[SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment

Subject contents	Course content – lecture 1. Basic concepts and issues related to forecasting. 2. Types of forecasts, methods and variables. 3. Measurement of the quality of forecasts. 4. Naive and adaptive methods of forecasting - introduction. 5. Simple and weighted moving averages. 6. Exponential smoothing - Brown, Holt and Winters model. 7. Forecasting based on linear and nonlinear trends. 8. Forecasting based on autoregressive models. 9. Heuristic methods and analog forecasting. 10. Scenarios and warning forecasts. 11. Mega trends - forecasts for the world and Poland. 12. Forecasting selected elements of the macro-environment of the enterprise. 13. Forecasting selected elements of the micro-environment of the enterprise. 14. Forecasting variables in the enterprise. Course content – exercises 1. Basic concepts and issues related to forecasting. 2. Types of forecasts, methods and variables. 3. Measurement of the quality of forecasts. 4. Naive and adaptive methods of forecasting - introduction. 5. Simple and weighted moving averages. 6. Exponential smoothing - Brown, Holt and Winters model. 7. Forecasting based on linear and nonlinear trends. 8. Forecasting based on autoregressive models. 9. Heuristic methods and analog forecasting. 10. Scenarios and warning forecasts. 11. Mega trends - forecasts for the world and Poland. 12. Forecasting selected elements of the macro-environment of the enterprise. 13. Forecasting selected elements of the micro-environment of the enterprise. 14. Forecasting variables in the enterprise.
Prerequisites and co-requisites	microeconomics basic statistics macroeconomics statistics econometrics

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Written exam multiple-choice questions section	60.0%	25.0%
Written exam open-ended questions section	60.0%	25.0%
Assessment of the report and presentation from the academic webquest.	60.0%	50.0%

Recommended reading	Basic literature	1. Cieślak, M. (2022). Prognozowanie gospodarcze metody i zastosowania. Warszawa: PWN. 2. Dittmann, P.(2008). Prognozowanie w przedsiębiorstwie metody i ich zastosowania. Kraków: Wolters Kluwer. 3. Dittmann, P, Szabela-Pasierbińska, E., Dittmann, I., Szpulak, A. (2017). Prognozowanie w zarządzaniu przedsiębiorstwem. Warszawa: Wydawnictwo Nieoczywiste 4. Zeliaś, A., Pawełek, B., Wanat S. (2003). Prognozowanie ekonomiczne, teoria, przykłady, zadania. Warszawa; PWN.
	Supplementary literature	1. Bukowski, M., Śniegowski, A., (2017). Megatrendy. Od akceptacji do działań. Warszawa: WiseEuropa-Fundacja Warszawski Instytut Studiów Ekonomicznych i Europejskich. 2. Krys, Ch., Born, D.(2020). Trend Compendium 2050 Six megatrends that will shape the world. Munich: Roland Berger. 3. Future State 2030. Światowe wyzwania dla liderów i przywódców (2014), KPMG International, MOWAT.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Based on data from stat.gov.pl / macroeconomic indicators for the selected economic variable. • Make a graph of the analyzed variable and determine the nature of its changes in the analysed period. • Forecast this variable for the next period using an appropriate adaptive method and a trend or trend model with seasonality. • Assess the usefulness of the selected method on the basis of the ex-ante and ex-post quality measures. • Interpret the obtained results.	
Practical activites within the subject	Not applicable	

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