

**Subject card**

<b>Subject name and code</b>	Business Forecasting, PG_00200445						
<b>Field of study</b>	Logistics and Mobility						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2027/2028		
<b>Education level</b>	Master's studies	<b>Subject group</b>			Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	2	<b>Language of instruction</b>			English		
<b>Semester of study</b>	3	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Department of Logistics -> Faculty of Economics -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Beata Chmiel				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	15.0	0.0	15.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		0.0		20.0	50
<b>Subject objectives</b>	<p>The aim of the subject is to acquaint students with forecasting methods used in an enterprise and to acquire practical skills in their application.</p> <p>In addition, the aim of the subject is to acquaint students with the possibilities of using the Statistica program for business forecasting.</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[LMMU2_W03] has a knowledge of relations between economic entities and organisations functioning in the national, international and intercultural spheres; understands importance logistics and mobility for their operation	The student knows and understands the importance of forecasting in the management of a business entity.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
	[LMMU2_U13] can manage teamwork as well as interact and work in a team (including in an international environment) assuming a leading role in it	The student is able to work in a team, taking a leading role in it.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[LMMU2_U07] can independently propose solutions to complex logistics and mobility problems, select methods of analysis and conduct conclusive procedures in this respect	The student is able to independently propose solutions to complex problems, select methods of analysis and carry out conclusive procedures in this regard.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[LMMU2_W06] has an in-depth knowledge of statistical and econometric methods and tools for description and macro- and microeconomic modelling of logistics and mobility processes and systems	The student knows and understands the methods and tools for describing economic processes and systems, enabling the construction of a forecasting model.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
	[LMMU2_K02] is aware of the level of his/her knowledge in the field of logistics and mobility; understands the need to extend and update this knowledge throughout his/her life	The student is aware of the level of her/his knowledge of business forecasting; understands the need to expand and update this knowledge throughout her/his life.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written [SK8] observation of student's independent or team work
	[LMMU2_U04] can forecast and model complex economic and social processes, as well as logistics and mobility processes and systems using quantitative and qualitative methods and tools developed by economic sciences (including statistics and econometrics)	The student student is able to forecast complex economic processes using quantitative and qualitative methods and tools developed by economic sciences (including statistics and econometrics).	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[LMMU2_K05] correctly identifies, diagnoses and solves dilemmas and alternative solutions related to the profession	The student correctly identifies, diagnoses and solves dilemmas and alternatives related to the business forecasting.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written [SK8] observation of student's independent or team work
	[LMMU2_K01] recognises the importance of knowledge in the field of logistics and mobility in the process of identifying and solving work-related problems and of consulting experts when having difficulties in solving them independently	The student recognizes the importance of knowledge of business forecasting in the process of identifying and solving work-related problems and consulting experts in case of difficulties in solving them independently.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written [SK8] observation of student's independent or team work
	[LMMU2_U02] can use acquired knowledge to describe and analyse the causes and course of logistics and mobility processes and systems, and can formulate his/her own opinions and critically select data and analysis methods based on the achievements of economic and social sciences	The student is able to select and apply quantitative and qualitative methods and tools developed by the economic sciences, including advanced IT tools.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work

Subject contents	<p><b>1) Introduction to the Statistica package</b></p> <p>Documents in Statistica, worksheet elements, variable specification window, program modules, importing data from another application, data validation, creating subsets, creating own worksheet</p> <p><b>2) The essence of forecasting</b></p> <p>Definitions of forecast and forecasting, functions and classifications of forecasts, parameters of the evaluation of forecasting quality, costs of forecasting</p> <p><b>3) Forecasting methods</b></p> <p>Time series models (trend estimation, adaptive models), cause-effect econometric model, brain storming, Delphi method, surveys, scenario building, forecasts by analogy</p> <p>Any doubts regarding the issues discussed will be dispelled during the consultation.</p>											
Prerequisites and co-requisites	Knowledge of the nature of the econometric model and the skills to apply it in selected areas.											
Assessment methods and criteria	<table border="1"> <thead> <tr> <th>Subject passing criteria</th> <th>Passing threshold</th> <th>Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td>Active participation in classes (extra points possible)</td> <td>0.0%</td> <td>0.0%</td> </tr> <tr> <td>Assessment test</td> <td>51.0%</td> <td>100.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Active participation in classes (extra points possible)	0.0%	0.0%	Assessment test	51.0%	100.0%
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Active participation in classes (extra points possible)	0.0%	0.0%										
Assessment test	51.0%	100.0%										
Recommended reading	Basic literature	<ol style="list-style-type: none"> <li>1. G. Elliott, A. Timmermann, <i>Economic Forecasting</i>, Princeton University Press, Princeton, Oxford 2016</li> <li>2. J. W. Wisniewski: <i>Microeconometrics in Business Management</i>, Wiley 2016</li> <li>3. N. Vandepu, <i>Data Science for Supply Chain Forecasting</i>, De Gruyter, 2021</li> </ol>										
	Supplementary literature	<ol style="list-style-type: none"> <li>1. M. K. Evans: <i>Practical Business Forecasting</i>, Blackwell Publishers, 2009</li> <li>2. M. H. Spencer: <i>Business and Economic Forecasting, an Econometric Approach</i>, Hassell Street Press, 2021</li> <li>3. L. Reszka: <i>Econometric Forecasting in Logistics Support System for Small Enterprise</i> [w:] N. Fabbes-Coste, M.</li> <li>4. Koulikoff-Souvion (red.): Ninth ELA Doctorate Workshop 2004. European Logistics Association 2004</li> </ol>										
	eResources addresses											
Example issues/ example questions/ tasks being completed	-											
Work placement	Not applicable											

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