

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Economic Forecasting</b>		Code <b>1011104461011136781</b>
Field of study <b>Logistics - Part-time studies - First-cycle</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>3 / 6</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>elective</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>part-time</b>	
No. of hours Lecture: <b>16</b> Classes: <b>-</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>3</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>social sciences</b> <b>Economics</b>		ECTS distribution (number and %) <b>3 100%</b> <b>3 100%</b>
<b>Responsible for subject / lecturer:</b> dr Tomasz Brzęczek email: tomasz.brzeczek@put.poznan.pl tel. 61 665 33 92 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		<b>Responsible for subject / lecturer:</b> dr Tomasz Brzęczek email: tomasz.brzeczek@put.poznan.pl tel. 61 665 33 92 Wydział Inżynierii Zarządzania ul. Strzelecka 11 60-965 Poznań
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Student knows economics terms and laws.
2	<b>Skills</b>	Student can use computer and Excel.
3	<b>Social competencies</b>	Student works in team for project preparation.
<b>Assumptions and objectives of the course:</b> C1 Forming skills of simulating and forecasting of economic variables. C2 Acquiring knowledge about forecasting theory and methods.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Student knows forecasting theory terms (forecast, simulation, forecasting process, error, accuracy). - [K1A_W26] 2. Knows methods classification. - [K1A_W04] 3. Knows methods appropriate for stationary time series. - [K1A_W04] 4. Knows methods appropriate for nonstationary time series, including trends. - [K1A_W04] 5. Knows seasonality effects and their types and methods of estimation. - [K1A_W04] 6. Knows software useful in forecasting. - [K1A_W04]		
<b>Skills:</b>		
1. Student can forecast and assess forecasts in scientific way. - [K1A_U05] 2. Can forecast with smoothing methods (naive, moving average, exponential average, Holt - [K1A_U09] 3. Can forecast analytically trends, seasonality and correlated random effects (OLS, GLS). - [K1A_U09] 4. Can forecast using Excel and GRETL. - [K1A_U07] 5. Can estimate error of forecast ex ante and ex post. - [K1A_U15]		
<b>Social competencies:</b>		
1. Student is conscious about forecasting role and meaning in management. - [K1A_K01] 2. Promotes forecasting in management. - [K1A_K06] 3. Is ready to work in forecasting field projects and teams. - [K1A_K03]		

<b>Assessment methods of study outcomes</b>		
<p>Forming mark:                      on basis of questions about current themes.</p> <p>Summary mark:                      on basis of written project entitled "Revenues forecasting in a chosen enterprise? or on the simulation or forecasting of other economic variable in enterprise. Project form and content are marked.</p>		
<b>Course description</b>		
<ol style="list-style-type: none"> <li>1. Forecasting theory. Terms, forecast, simulation, forecasting process, error, accuracy.</li> <li>2. Examination of autocorrelation and unit roots. Stationary series forecasting (average and autoregression) and non-stationary variance forecasting (naive method, moving average, exponential smoothing).</li> <li>3. Trends. Linear and non-linear. Residuals autocorrelation.</li> <li>4. Seasonality effects. Additive (mechanical and seasonal dummies method) and multiplicative (seasonality indices).</li> <li>5. Case of revenue forecasting with software assistance.</li> <li>6. Smoothing models with trends: Holt's and Winters'.</li> <li>7. Simulation in econometric deterministic model.</li> </ol>		
<b>Basic bibliography:</b>		
<ol style="list-style-type: none"> <li>1. Prognozowanie gospodarcze. Metody i zastosowania, Cieślak M. (red.), WN PWN, Warszawa 2002.</li> <li>2. Gujarati D.N., Basic Econometrics, McGraw-Hill 2002.</li> <li>3. Kufel T., Ekonometria. Rozwiązywanie problemów z wykorzystaniem programu GRETL WN PWN, Warszawa 2011.</li> <li>4. Witkowska D., Podstawy ekonometrii i teorii prognozowania, Oficyna Ekonomiczna, Kraków 2006.</li> </ol>		
<b>Additional bibliography:</b>		
<ol style="list-style-type: none"> <li>1. Borkowski B., Dudek H., Szczesny W., Ekonometria. Wybrane zagadnienia, Wydawnictwo Naukowe PWN, Warszawa 2004.</li> <li>2. Dittmann P., Prognozowanie w przedsiębiorstwie, PWE, Warszawa 2003.</li> <li>3. Kufel T., Ekonometryczna analiza cykliczności procesów gospodarczych o wysokiej częstotliwości obserwowania, WN UMK, Toruń 2010.</li> </ol>		
<b>Result of average student's workload</b>		
Activity	Time (working hours)	
1. Lectures	16	
2. Consultations	30	
3. Student	30	
<b>Student's workload</b>		
Source of workload	hours	ECTS
Total workload	76	3
Contact hours	45	3
Practical activities	30	2