

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Economic Forecasting		Code 1011101361011136781
Field of study Logistics - Full-time studies - First-cycle studies	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: First-cycle studies	Form of study (full-time,part-time) full-time	
No. of hours Lecture: - Classes: 15 Laboratory: - Project/seminars: -		No. of credits 3
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art		ECTS distribution (number and %)
Responsible for subject / lecturer: dr Tomasz Brzęczek email: tomasz.brzeczek@put.poznan.pl tel. 61 665 33 92 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student knows economics terms and laws.
2	Skills	Student can use computer and Excel.
3	Social competencies	Student works individually and in team.
Assumptions and objectives of the course: 1. Acquiring knowledge about forecasting theory and time series econometrics. 2. Forming skills of simulating and forecasting of an economic variable.		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. Student knows forecasting theory terms (forecast, simulation, forecasting process, error, accuracy). - [K1A_W04] 2. Knows models of time series. - [K1A_W04] 3. Knows tests of statistical significance. - [K1A_W04] 4. Knows forecasting laws and forecast accuracy measures. - [K1A_W04] 5. Knows relation between estimated forecast error and stock quantity for a given level of demand realisation - [K1A_W26]		
Skills: 1. Student can use econometric modeling and forecasting in logistics. - [K1A_U05] 2. Can estimate a model, also using Excel and GRETL. - [K1A_U07] 3. Assesses statistical significance and fitness to data. - [K1A_U09] 4. Can estimate error of forecast ex ante and ex post. - [K1A_U09] 5. Matches a model to empirical data and logistics theory. - [K1A_U15]		
Social competencies: 1. Student is conscious about forecasting role and meaning in logistics. - [K1A_K01] 2. Is ready to work in forecasting field projects and teams. - [K1A_K03]		

Assessment methods of study outcomes

Forming mark on basis of questions about current themes.		
Summary mark (pass) on basis of written test with tasks and theoretical questions.		
Course description		
<ol style="list-style-type: none"> 1. Forecasting theory. Terms, forecast, simulation, forecasting process, error, accuracy. 2. Forecasting software. Functionality and examples. 3. Analysis of time series and choice of an appropriate model. 4. Stationary series forecasting: average, autoregression, seasonal fixed effects. 5. Trends. Linear and non-linear. Residuals autocorrelation. 6. Smoothing models: Brown's, Holt's and Winters'. 7. Simulation of a level of stocks with a given level of demand satisfying. 		
Dydidactical methods: lectura with analysis of time series cases.		
Basic bibliography:		
<ol style="list-style-type: none"> 1. Dittmann P., Prognozowanie w przedsiębiorstwie, PWE, Warszawa 2003. 2. Kufel T., Ekonometria. Rozwiązywanie problemów z wykorzystaniem programu GRET, WN PWN, Warszawa 2011. 3. Prognozowanie gospodarcze. Metody i zastosowania, Cieślak M. (red.), WN PWN, Warszawa 2002. 4. Witkowska D., Podstawy ekonometrii i teorii prognozowania, Oficyna Ekonomiczna, Kraków 2006. 		
Additional bibliography:		
<ol style="list-style-type: none"> 1. Borkowski B., Dudek H., Szczesny W., Ekonometria. Wybrane zagadnienia, WN PWN, Warszawa 2004. 2. Brzęczek T., Ocena efektów dywersyfikacji portfela produktowego w zakresie ryzyka sprzedaży całkowitej i trafności jej prognoz, Ekonometria I (55) 2017, s. 112-124. 3. Kufel T., Ekonometryczna analiza cykliczności procesów gospodarczych o wysokiej częstotliwości obserwowania, WN UMK w Toruniu, Toruń 2010. 		
Result of average student's workload		
Activity	Time (working hours)	
1. Classes	15	
2. Consultations	15	
3. Test	5	
4. Preparing to lectures and pass test	20	
5. Literature studying	15	
Student's workload		
Source of workload	hours	ECTS
Total workload	70	3
Contact hours	35	1
Practical activities	15	1