STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Economic Forecasting**			Code **1011104461011136781**
Field of study **Logistics - Part-time studies - First-cycle**	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) **part-time**		
No. of hours Lecture: **16** Classes: **-** 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 **social sciences** **Economics**			ECTS distribution (number and %**)** **3 100%** **3 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Student knows economics terms and laws.
2	**Skills**	Student can use computer ane Excel.
3	**Social competencies**	Student works in team for project preparation.

Assumptions and objectives of the course:

C1 Forming skills of simulating and forecasting of economic variables.

C2 Aquiring knowledge about forecasting theory and methods.

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_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]

Skills:

1. Student can forecast and assess forecasts in scientifc way. - [K1A_U05]
2. Can forecast with smoothing methods (naive, moving average, exponential average, Holt - [K1A_U09]
3. Can forecast analitically 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]

Social competencies:

1. Student is concious 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]

Assessment methods of study outcomes

Forming mark:

on basis of questions about curent themes.

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.

Course description

1. Forecasting theory. Terms, forecast, simulation, forecasting process, error, accuracy.
2. Examination of autocorrelation and unity roots. Stationary series forecasting (average and autoregression) and non-stationary variance forecasting (naive method, moving average, exponential smoothing).
3. Trends. Linear and non-linear. Residuals autocorrelation.
4. Seasonality effects. Additive (mechanical and seasonal dummies method) and multiplicative (seasonality indices).
5. Case of revenue forecasting with software assistance.
6. Smoothing models with trends: Holt;s and Winters'.
7. Simulation in econometric deterministic model.

Basic bibliography:

1. Prognozowanie gospodarcze. Metody i zastosowania, Cieślak M. (red.), WN PWN, Warszawa 2002.
2. Gujarati D.N., Basic Econometrics, McGraw-Hill 2002.
3. Kufel T., Ekonometria. Rozwiązywanie problemów z wykorzystaniem programu GRETL WN PWN, Warszawa 2011.
4. Witkowska D., Podstawy ekonometrii i teorii prognozowania, Oficyna Ekonomiczna, Kraków 2006.

Additional bibliography:

1. Borkowski B., Dudek H., Szczesny W., Ekonometria. Wybrane zagadnienia, Wydawnictwo Naukowe PWN, Warszawa 2004.
2. Dittmann P., Prognozowanie w przedsiębiorstwie, PWE, Warszawa 2003.
3. Kufel T., Ekonometryczna analiza cykliczności procesów gospodarczych o wysokiej częstotliwości obserwowania, WN UMK, Toruń 2010.

Result of average student's workload

Activity	Time (working hours)
1. Lectures	15
2. Consultations	30
3. Student	30

Student’s workload

Source of workload	hours	ECTS
Total workload	75	3
Contact hours	45	3
Practical activities	30	2