Title of Course	Econometrics and applications		
Semester	Spring/Winter		
Teaching Hours per Course:	Total	- Lectures:	- Tutorials:
	45	30	15
ECTS Credits	3		
The content of education			
Aims of Course	The course will present the basic models of quantitative analysis of the phenomena and economic systems and their applications: structural models (one- and multi equations), input-output models and decision models.		
Program	I. Modeling of economic phenomena - introductory issues, concept of an econometric model, classification of econometric models, econometric study phases II. Optimization models: Fundamentals of linear programming linear programming model, constraints, criterion function, typical decision models of linear programming (programming production, issue of diet, cutting issue), graphical method for solving PL simplex algorithm, the types of solutions III. single equation econometric models III.1 Ordinary least squares method (OLS) estimation of model parameters, estimation of parameters of stochastic structure (mean error, average errors of parameter of estimates) III.2 Verification of a model evaluation of model fit (mean errors, determination coefficient, autocorrelation, collinearity, significance of parameters (t-Student test), evaluation and interpretation of parameters III.3 The use of single-equation models Assumptions for forecasting, measures the accuracy of forecasts; standard specification of econometric models (production, consumption, foreign trade, employment) IV. Multi equation models, problems of estimation of multi-equation models, the concept and types of simulation, multipliers, examples of models V. Input-output models.1 Basic relationships in the input-output table (values and quantities), production balance equations, the coefficients direct input-outputcoefficients, V.2 Leontief model and price model, input-output models as multiequation models, total multipliers		
Conditions of completion	Exam - test		
Teacher	dr Katarzyna Osiecka		