

Syllabus

1. Programme information

1.1. Institution	THE BUCHAREST UNIVERSITY OF ECONOMIC STUDIES
1.2. Faculty	Business Administration in Foreign Languages
1.3. Departments	Department of Statistics and Econometrics
1.4. Field of study	Business Administration
1.5. Cycle of studies	Licence
1.6. Education type	Full-time
1.7. Study programme	Business Administration (in French language)
1.8. Language of study	French
1.9. Academic year	2019-2020

2. Information on the discipline

2.1. Name	Econometrics								
2.2. Code	19.0154IF3.1-0005								
2.3. Year of study	3	2.4. Semester	1	2.5. Type of assessment	Exam	2.6. Status of the discipline	O	2.7. Number of ECTS credits	5
2.8. Leaders	C(C)	conf.univ.dr. VASILESCU M Maria Denisa				maria.vasilescu@csie.ase.ro			
	S(S)	conf.univ.dr. VASILESCU M Maria Denisa				maria.vasilescu@csie.ase.ro			

3. Estimated Total Time

3.1. Number of weeks	14.00
3.2. Number of hours per week	4.00 of which
	C(C) 2.00
	S(S) 2.00
3.3. Total hours from curriculum	56.00 of which
	C(C) 28.00
	S(S) 28.00
3.4. Total hours of study per semester (ECTS*25)	125.00
3.5. Total hours of individual study	69.00
<i>Distribution of time for individual study</i>	
Study by the textbook, lecture notes, bibliography and student's own notes	25.00
Additional documentation in the library, on specialized online platforms and in the field	10.00
Preparation of seminars, labs, assignments, portfolios and essays	25.00
Tutorials	5.00
Examinations	4.00
Other activities	

4. Prerequisites

4.1. of curriculum	Mathematics, Economics, Management, Marketing, Statistics
4.2. of competences	Strategic Management, Business Management, Micro and Macro-Economics

5. Conditions

for the C(C)	Courses are held in classrooms with internet and multimedia acces
for the S(S)	classrooms with internet and software

6. Acquired specific competences

PREFESSIONAL	C1	Data gathering, formatting and analysis related to the interaction between the external environment and the business/ organization
PREFESSIONAL	C5	Utilization of specific databases for business administration

7. Objectives of the discipline

7.1. General objective	presenting and explaining introductive methods of Econometrics for Business Administration
7.2. Specific objectives	Invatarea principalelor tehnici econometrice bazate pe studiul modelului liniar de regresie ai a modelului multiplu, prezentarea modelelor nonliniare si a celor pentru variabile binare, prezentarea metodelor de prognoza pe baza analizei de regresie

8. Contents

8.1. C(C)		Teaching/Work methods	Recommendations for students
1	Introduction to Econometrics. Concepts used in Econometrics, categories of data used for econometrical analysis and their main sources	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
2	Advanced Inferential Statistics concepts important for econometrical modeling: estimation using confidence intervals, hypothesis testing for mean and proportion	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
3	Testing hypotheses on the difference between two means, examples and applications in Excel	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
4	Fundamentals of regression analysis. Types of regression models. Indicators that characterize the intensity of the link between the variables. Linear single regression. Model identification and specification, estimation of coefficients by OLS.	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
5	Confidence intervals and hypothesis testing for the linear regression model, p-value method. The validity of the simple linear model. Fisher test, ANOVA method applied in regression analysis. The quality of the regression line. Predictions starting from the regression line. Examples in Excel	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
6	Linear regression model - Examples in Excel and EViews	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
7	Linear multifactorial regression. Model identification and specification, estimation of coefficients.	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project

8	Confidence intervals and hypothesis testing for the linear multiple regression model. Examples in Excel and EViews.	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
9	The hypotheses of the classic regression model. Data verification and multicolliniarity. Examples in Excel and EViews.	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	individual list with formulas
10	Hypotheses of the classic regression model: normality (Jarque-Bera test) and homoscedasticity (White test). Examples in Excel and EViews.	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
11	The hypothesis of the classic regression model: autocorrelation (Durbin-Watson test). Examples in Excel and EViews. Example of a complete application for a multifactorial linear regression model - estimation of coefficients, tests, verification of classical hypotheses.	written test	attending classes and usage of concrete data bases for project
12	Regression models with binary variables. Nonlinear regression. Linearization of models, lin-lin, lin-log, log-log.	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
13	Introduction to econometric modeling of time series. Estimation of the seasonal component. Prediction of the phenomena affected by seasonality	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project
14	Time series - examples. Presentation of the exam structure.	interactive teaching based on slides and free speech and acces to internet and multimedia equipment	attending classes and usage of concrete data bases for project

Bibliography

- Bourbonnais, R., Econometrie, maison d'Edition Dunod, 1998, Paris, 1998, Franta
- Curvin J., , quantitative methods for Business Decisions, Prentice Hall, NY, 2001, Statele Unite
- Mitrut, C., Serban, D., Basic Econometrics for Business Administration, ASE, BUCHAREST, 2005, România
- STOCK JH, Watson, MW, Introduction to Econometrics, Pearson International, NY, 2007, Statele Unite
- Tanasoiu, OE, Iacob, AI,, Introduction a l'econometrie, ASE, BUCHAREST, 2008, România
- Ergun, U., Goksu, A., Applied Econometrics with Eviews Applications, International Burch University Publication, 2013, Sarajevo
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- Wooldridge, J.M., Introductory Econometrics – A Modern Approach, Fifth Edition, South-Western Cengage Learning, 2013.
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- Tanasoiu, OE, Iacob, AI,, Introduction a l'econometrie, ASE,, Bucuresti, România, 2008

8.2. S(S)		Teaching/Work methods	Recommendations for students
1	Presentation of various types of econometric models. Types of data used in econometric analyzes. Discussing the requirements for the individual project.	using excel as support together with manual computations	attending classes and usage of concrete data bases for project
2	Overview of statistical notions: mean, depression, least squares method, and correlation intensity indicators.	using excel as support together with manual computations	attending classes and usage of concrete data bases for project
3	Inferential statistical applications. Test hypothesis for the population mean, proportion testing.	using excel as support together with manual computations	attending classes and usage of concrete data bases for project
4	Test hypothesis for 2 normal samples, hypothesis testing for 2 small samples. Examples in Excel	using excel as support together with manual computations	attending classes and usage of concrete data bases for project
5	Simple linear regression model: model specification, data collection and organization, parameter estimation and interpretation	using excel as support together with manual computations	attending classes and usage of concrete data bases for project
6	The simple linear regression model: confidence intervals, tests, model validity.	using excel as support together with manual computations	attending classes and usage of concrete data bases for project
7	The simple linear regression model -Interpretation of the output from Excel and EViews	using excel as support together with manual computations	attending classes and usage of concrete data bases for project
8	Test	using excel and EViews as support together with manual computations	attending classes and usage of concrete data bases for project
9	Multiple regression. Estimation of coefficients, confidence intervals, tests, validity of the model. Interpretation of the output from Excel and EViews	using excel and EViews as support together with manual computations	attending classes and usage of concrete data bases for project
10	Classical assumptions of a regression model: data verification, multicollinearity, normality.	using excel and EViews as support together with manual computations	attending classes and usage of concrete data bases for project
11	Classical assumptions of a regression model: homoscedasticitate, autocorrelation	using excel and EViews as support together with manual computations	attending classes and usage of concrete data bases for project
12	Project presentation	using excel and EViews as support together with manual computations	attending classes and usage of concrete data bases for project
13	Nonlinear models, models with binary variables	using excel as support together with manual computations	attending classes and usage of concrete data bases for project
14	Time series applications	using excel as support together with manual computations	attending classes and usage of concrete data bases for project

Bibliography

- Tanasoiu, OE, Iacob, AI,, , Introduction a l'econometrie, , ASE, BUCURESTI, 2008, România
- STOCK JH, Watson, MW, , Introduction to Econometrics, , Pearson International, , NY, 2007, Statele Unite ale Americii
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9. Corroboration of the contents of the discipline with the expectations of the representatives of the epistemic community, of the professional associations and representative employers in the field associated with the programme

Discussing the content of the discipline with expert from the Romanian Society of Econometrics, the National Institute of Statistics, the National Bank and representants of entrepreneurs and large companies in order to improve the practical character of the discipline.

10. Assessment

Type of activity	Assessment criteria	Assessment methods	Percentage in the final grade
10.1. C(C)	written exam	written exam	60.00
10.2. S(S)	Test 10% of the final grade, project 20% of the final grade, attendance and seminar activity 10% of final grade	written and oral activity evaluation	40.00
10.3. S(S)	Test 10% of the final grade, project 20% of the final grade, attendance and seminar activity 10% of final grade	written and oral activity evaluation	40.00
10.4. Final assessment	Written exam	40% during year activity + 60% exam mark	
10.5. Modality of grading	Whole notes 1-10		
10.6. Minimum standard of performance	5 points obtained after the algorithm application: during year mark*0.4 + exam mark*0.6		

Date of listing,
05/26/2022

Signature of the discipline leaders,

Date of approval in the
department

Signature of the Department Director,