

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 Business Administration in foreign languages (UNESCO chair)
1.4. Field of study	Business Administration
1.5. Cycle of studies	Master Studies
1.6. Education type	Full-time
1.7. Study programme	Entrepreneurship and Business Administration
1.8. Language of study	German
1.9. Academic year	2020-2021

2. Information on the discipline

2.1. Name	Quantitative methods for the decision process in business								
2.2. Code	20.0246IF2.1-0004								
2.3. Year of study	2	2.4. Semester	1	2.5. Type of assessment	Exam	2.6. Status of the discipline	O	2.7. Number of ECTS credits	6
2.8. Leaders	C(C)	prof.univ.dr. AGAPIE Alexandru- Licinius				alexandru.agapie@csie.ase.ro			
	S(S)	prof.univ.dr. AGAPIE Alexandru- Licinius				alexandru.agapie@csie.ase.ro			

3. Estimated Total Time

3.1. Number of weeks	14.00
3.2. Number of hours per week	3.00 of which
	C(C) 1.00
	S(S) 2.00
3.3. Total hours from curriculum	42.00 of which
	C(C) 14.00
	S(S) 28.00
3.4. Total hours of study per semester (ECTS*25)	150.00
3.5. Total hours of individual study	108.00
<i>Distribution of time for individual study</i>	
Study by the textbook, lecture notes, bibliography and student's own notes	50.00
Additional documentation in the library, on specialized online platforms and in the field	20.00
Preparation of seminars, labs, assignments, portfolios and essays	30.00
Tutorials	5.00
Examinations	3.00
Other activities	

4. Prerequisites

4.1. of curriculum	basic cours in mathematics applied in economics basic course in econometrics basic course in statistics
4.2. of competences	basic knowledge in mathematics, econometrics, statistics

5. Conditions

for the C(C)	power point presentations, working at the blackboard
for the S(S)	blackboard explanations, working with PC

6. Acquired specific competences

PREFESSIONAL	C1	Identification, analysis, interpretation and development of the business management concepts in the German space
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7. Objectives of the discipline

7.1. General objective	This course is aimed at communicating, analyzing and applying a number of quantitative techniques for sustaining the decision process at the level of a company.
7.2. Specific objectives	

8. Contents

8.1. C(C)		Teaching/Work methods	Recommendations for students
1	Causal and non-causal models	The rule of teaching is the interaction with the students. The courses are delivered in Power Point.	It is recommended for the students to read in advance the lecture notes, in order to be able to communicate along the course.
2	Data structure at a micro level: observational data, data from social experiments, data from natural experiments	idem	idem
3	Linear models: regression and the loss function, weighted least squares, misspecification, instrumental variables, practical considerations	idem	idem
4	Maximum likelihood method and the nonlinear least squares	idem	idem
5	The method of generalized moments and the econometric estimation for system equations	idem	idem
6	Hypothesis testing: Wald test, first order and second order error, Monte Carlo simulations	idem	idem
7	The specification of a statistical test and model selection: testing a model for misspecification, diagnosis, Hausman test, practical considerations	idem	idem
8	Semiparametric methods: kernel density estimation	idem	idem
9	Numerical optimization: general considerations, specific methods, practical considerations.	idem	idem
10	Methods based on numerical simulations: bootstrap, simulated annealing, genetic algorithms	idem	idem
11	Intelligent techniques in economic modelling	idem	idem
12	Basic notions for models with panel data	idem	idem
13	Nonlinear panel models	idem	idem
14	Survey design using stratified data	idem	idem
<p>Bibliography</p> <p>- Baltagi, B. , Econometric Analysis of Panel data,, John Wiley & sons, LTD,, 2009,, Statele Unite ale Americii</p>			

8.2. S(S)		Teaching/Work methods	Recommendations for students
1	The seminars closely follow the content of the courses.	The work is done individually and alltogether. The personal notebooks must be used.	It is recommended to read the course notes.
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Bibliography

- Baltagi, B. , Econometric Analysis of panel Data,, John Wiley & Sons,, 2009, Statele Unite ale Americii

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

The discussion regarding the content with specialists from the Institute of Economic Forecasting, as well as business representatives.

10. Assessment

Type of activity	Assessment criteria	Assessment methods	Percentage in the final grade
10.1. C(C)	Periodical testing	test	30.00
10.2. S(S)	Periodical testing	test	10.00
10.3. Final assessment	Written exam	Written exam	60.00
10.4. Modality of grading	Whole notes 1-10		
10.5. Minimum standard of performance	Achieving a minimal mark equal to 5.		

Date of listing,
04/27/2025

Signature of the discipline leaders,

Date of approval in the
department

Signature of the Department Director,