



SYLLABUS

Academic year 2024-2025

1. Information regarding the programme

1.1. Higher education institution	Universitatea Babeș-Bolyai
1.2. Faculty	Faculty of Business
1.3. Department	Business
1.4. Field of study	Business Administration
1.5. Study cycle	Bachelor
1.6. Study programme / Qualification	Hospitality Business Administration (English)

2. Information regarding the course

2.1. Name of the course	Introduction to Econometrics						
2.2. Code	ILE0048						
2.3. Course coordinator	Assoc.prof. Gabriela PETRUȘEL, PhD						
2.4. Seminar coordinator	Assoc.prof. Gabriela PETRUȘEL, PhD						
2.5. Year of study	2	2.6. Semester	I	2.7. Type of evaluation	E	2.8. Type of course	compulsory

3. Total estimated time (hours/semester of didactic activities)

3.1. Hours per week	4	Of which: 3.2. lecture	2	3.3 seminar/laboratory	2
3.4. Total hours in the curriculum	56	Of which: 3.5. lecture	28	3.6. seminar/laboratory	28
Time allotment:					or e
Learning using manual, course support, bibliography, course notes					14
Additional documentation (in libraries, on electronic platforms, field documentation)					14
Preparation for seminars/labs, homework, papers, portfolios and essays					28
Tutorship					2
Evaluations					2
Other activities:					9
3.7. Total individual study hours					69
3.8. Total hours per semester					125
3.9. Number of ECTS credits					5

4. Prerequisites (if necessary)

4.1. curriculum	
4.2. competencies	



5. Conditions (if necessary)

5.1. for the course	classroom with computer and projector;
5.2. for the seminar /lab activities	classroom with computer and projector;



6. Specific competencies acquired

Professional competencies	<p>C1 Gathering, processing, and analysing economic data for business management</p> <p>C1.3. Data collection, preparation, management and use of computer systems in data processing and analysis in order to solve specific problems of the company;</p> <p>C1.4. Analysis of empirical data and results, their evaluation and validation in order to avoid and eliminate interpretation errors;</p> <p>C1.5. Elaboration and proposal of projects for the use of empirical data from the economic field in the activity of companies;</p>
Transversal competencies	<p>CT1. Implementing ethical principles, norms and values within one's own rigorous, efficient, and responsible strategy of work</p>

7. Objectives of the course (outcome of the acquired competencies)

7.1. General objective of the course	<ul style="list-style-type: none"> Learning the techniques of statistical analysis and forecasting of economic phenomena.
7.2. Specific objective of the course	<ul style="list-style-type: none"> Understanding the concepts of estimator and statistical hypothesis; Learning techniques for analyzing the relationship between statistical variables; Learning techniques for analysis of time series;

8. Content

8.1. Course	Teaching method	Remarks
1. Review of some descriptive statistic concepts	interactive discussion	<ul style="list-style-type: none"> Organizing data Describing data
2. Sampling distribution	interactive discussion	<ul style="list-style-type: none"> Sampling distribution with replacement Sampling distribution without replacement Standard error of the sample mean Standard error of the sample proportion
3. Estimation I	interactive discussion	<ul style="list-style-type: none"> Point estimators Confidence intervals for the population mean Confidence intervals for the proportion



4. Estimation II	interactive discussion	<ul style="list-style-type: none"> Confidence intervals for two population mean Confidence intervals for two population proportion Confidence intervals for median
5. Hypothesis testing I	interactive discussion	<ul style="list-style-type: none"> Single population average Proportion
6. Hypothesis testing II	interactive discussion	<ul style="list-style-type: none"> Two population average Two population proportion
7. Hypothesis testing III	interactive discussion	<ul style="list-style-type: none"> Chi-squared test
8. Analysis of variance (ANOVA)	interactive discussion	<ul style="list-style-type: none"> Single factor analysis Two factor analysis
9. Relationships between variables I	interactive discussion	<ul style="list-style-type: none"> Simple linear regression
10. Relationships between variables II	interactive discussion	<ul style="list-style-type: none"> Multiple linear regression
11. Time series analysis I	interactive discussion	<ul style="list-style-type: none"> Components of time series Decomposition of time series Measurement of trend
12. Time series analysis II	interactive discussion	<ul style="list-style-type: none"> Measurement of seasonal variation Measurement of cyclical variation
13. Index numbers	interactive discussion	<ul style="list-style-type: none"> Composite price indexes Quantity indexes
14. Revision		
Bibliography	<ol style="list-style-type: none"> Carter Hill, R., Griffiths, W.E., Lim, G.C., Principles of Econometrics, 5th Edition, 2018, Wiley Briand, G., Carter Hill, R., Using Excel for Principles of Econometrics, 5th Edition, 2018, E-book. Brandimarte P., <i>Quantitative Methods - an introduction for Business Management</i>, Wiley&Sons, 2011 Berenson M.L., Levine D.M., Krehbiel T.C., <i>Basic Business Statistics. Concepts and applications</i>, 11th edition, Pearson Education, 2009; Anderson D., Sweeney D., Williams T., <i>Quantitative Methods for Business</i>, Thomas Learning, London, 2001. (biblioteca facultății) Fleming M.C., Nellis J.G., <i>Principles of Applied Statistics, Second</i> 	



<i>Edition, Thomas Learning, 2000. (biblioteca facultății)</i>		
8.2. Seminar / laboratory	Teaching method	Remarks
1. Review of some descriptive statistic concepts	interactive discussion	<ul style="list-style-type: none"> Organizing data Describing data
2. Sampling distribution	interactive discussion	<ul style="list-style-type: none"> Sampling distribution with replacement Sampling distribution without replacement Standard error of the sample mean Standard error of the sample proportion
3. Estimation I	interactive discussion	<ul style="list-style-type: none"> Point estimators Confidence intervals for the population mean Confidence intervals for the proportion
4. Estimation II	interactive discussion	<ul style="list-style-type: none"> Confidence intervals for two population mean Confidence intervals for two population proportion Confidence intervals for median
5. Hypothesis testing I	interactive discussion	<ul style="list-style-type: none"> Single population average Proportion
6. Hypothesis testing II	interactive discussion	<ul style="list-style-type: none"> Two population average Two population proportion
7. Hypothesis testing III	interactive discussion	<ul style="list-style-type: none"> Chi-squared test
8. Analysis of variance (ANOVA)	interactive discussion	<ul style="list-style-type: none"> Single factor analysis Two factor analysis
9. Relationships between variables I	interactive discussion	<ul style="list-style-type: none"> Simple linear regression
10. Relationships between variables II	interactive discussion	<ul style="list-style-type: none"> Multiple linear regression
11. Time series analysis I	interactive discussion	<ul style="list-style-type: none"> Components of time series Decomposition of time series Measurement of trend
12. Time series analysis II	interactive	<ul style="list-style-type: none"> Measurement of



	discussion	seasonal variation <ul style="list-style-type: none"> Measurement of cyclical variation
13.Index numbers	interactive discussion	<ul style="list-style-type: none"> Composite price indexes Quantity indexes
14.Revision		
Bibliography	<ol style="list-style-type: none"> Carter Hill, R., Griffiths, W.E., Lim, G.C., Principles of Econometrics, 5th Edition, 2018, Wiley Briand, G., Carter Hill, R., Using Excel for Principles of Econometrics, 5th Edition, 2018, E-book. Brandimarte P., <i>Quantitative Methods - an introduction for Business Management</i>, Wiley&Sons, 2011 Berenson M.L., Levine D.M., Krehbiel T.C., <i>Basic Business Statistics. Concepts and applications</i>, 11th edition, Pearson Education, 2009; Anderson D., Sweeney D., Williams T., <i>Quantitative Methods for Business</i>, Thomas Learning, London, 2001. (biblioteca facultății) Fleming M.C., Nellis J.G., <i>Principles of Applied Statistics, Second Edition</i>, Thomas Learning, 2000. (biblioteca facultății) 	

9. Corroborating the content of the course with the expectations of the epistemic community, professional associations and representative employers within the field of the program

- The course content is correspondence with what is done in other universities in the country and abroad.
- To adapt to the market demands of the contents meetings were held with representatives of the business community.

10.Evaluation

- the same evaluation criteria hold for all exam sessions
- to be considered passed, the student has to obtain at least 5 (five) in the final written exam.

Type of activity	10.1 Evaluation criteria	10.2 Evaluation method	10.3 Share in the grade (%)
10.4. Course	<ul style="list-style-type: none"> correct logical and coherent application of the concepts learned logical and accurate explanation and interpretation of the 	final exam	50%



10.5. Seminar/lab activities	results;		
	<ul style="list-style-type: none">the ability to apply concepts learned in practicecorrect logical and coherent application of the concepts learnedeconomic explanation of the results;interest in the individual preparation throughout the whole semester	applicative activities (projects, essays, reports, etc.)	20%
		control papers	20%
		the active participation in seminars	10%
10.6. Minimum performance standards			
<ul style="list-style-type: none">➤ Knowledge of the fundamental concepts and their applicate examples;➤ The economic interpretation of the results.			

Date
02.04.2024

Course coordinator
Gabriela PETRUȘEL, PhD

Seminar coordinator
Gabriela PETRUȘEL, PhD

Date of approval
17.04.2024

Signature of the head of department
Prof.dr. Cristian Ioan CHIFU