



COURSE DESCRIPTION
Forecasting in Tourism
Academic year 2026-2027

1. Programme-related data

1.1. Higher Education Institution	Babeș-Bolyai University
1.2. Faculty	Business
1.3. Department	Business
1.4. Field	Business Administration
1.5. Level of study	Master
1.6. Degree programme / Qualification	Business Administration in Hospitality and International Tourism /Master
1.7. Form of education	Full time

2. Information regarding the discipline

2.1. Name of the discipline	Forecasting in Tourism			Discipline code	IME0035
2.2. Course coordinator	Ioan Cristian CHIFU, PhD				
2.3. Seminar coordinator	Ioan Cristian CHIFU, PhD				
2.4. Year of study	1	2.5. Semester	2	2.6. Type of assessment	Exam
2.7. Course status	Compulsory			2.8. Course type	Core subject

3. Total estimated time (hours per semester of teaching activities)

3.1. Number of hours per week	3	of which: 3.2. course	2	3.3. seminar/ laboratory/ project	1
3.4. Total of hours in the curriculum	42	of which: 3.5. course	28	3.6. seminar/ laboratory	14
Time allocation for individual study (IS) and self-taught activities (ST)					hours
Learning from textbooks, course materials, bibliography, and notes (IS)					28
Additional research in the library, on subject-specific electronic platforms, and on-site					28
Preparing seminars/ laboratories/ projects, assignments, reports, portfolios, and essays					28
Tutoring (professional guidance)					2
Examinations					4
Other activities					18
3.7. Total hours of individual study (IS) and self-taught activities (ST)				108	
3.8. Total hours per semester				150	
3.9. Number of credits				6	

4. Prerequisites (where applicable)

4.1. curriculum-related	
4.2. skills-related	

5. Specific conditions (where applicable)

5.1. course-related	
5.2. seminar/laboratory-related	

6.1. Competencies resulting from the completion of the degree programme

Professional competencies	
Competency code	Competency
PC5	Drawing up various reports/ studies useful for the running of a hospitality/ tourism unit and the provision of consultancy in the field
Transversal competencies	
Competency code	Competency
TC1	Use of professional ethics standards and values specific to the field of hospitality and tourism

6.2. Learning outcomes relevant to the degree programme

Learning outcomes targeted by the subject		
Competency code	Knowledge and comprehension	Specific academic skills
PC5 TC1	1. The student/graduate explains the fundamental concepts of econometric analysis and forecasting applied in tourism. The student/graduate interprets the results of econometric models and the significance of the indicators used in forecasting economic phenomena in tourism.	1. The student/graduate applies statistical and econometric methods to analyze data and produce forecasts in tourism and hospitality. The student/graduate develops and presents forecasting analyses and reports to support managerial decision-making.

7. Subject-specific learning outcomes

Knowledge and understanding
1. The student/graduate knows the fundamental concepts and models of quantitative and econometric analysis used in hospitality and tourism.
2. The student/graduate understands the methods for estimating and validating simple and multiple linear regression models used in economic data analysis.
3. The student/graduate knows methods for time series analysis, trend estimation and seasonal component estimation used in forecasting economic phenomena in tourism and hospitality.
4. The student/graduate understands econometric models used in the analysis of complex economic phenomena, including dummy variable models, logit/probit models and dynamic models.
Specific academic skills
1. The student/graduate applies quantitative methods and software tools for analysing and processing economic data relevant to tourism and hospitality.
2. The student/graduate estimates and interprets econometric models using real data and appropriate analytical methods.
3. The student/graduate tests hypotheses and validates econometric models for managerial decision-making.
4. The student/graduate analyses time series and performs estimations and forecasts to support managerial decision-making.
5. The student/graduate prepares and presents econometric analyses and reports to support decision-making in the hospitality industry.

8. Contents

8.1. Course	Teaching and learning methods	Remarks
1. Introductory course – research methods in tourism	interactive presentation, problem-based learning, use of software applications	1 course
2. Data analysis in tourism and hospitality - The nature of data in tourism and hospitality Estimators - Hypothesis testing	interactive presentation, problem-based learning, use of software applications	1 course

• Comparison of samples		
3. Time series analysis • Component factors of time series • Analysis of the evolution of a time series • Smoothing methods – moving average method, exponential smoothing	interactive presentation, problem-based learning, use of software applications	1 course
4. The linear regression model: two-variable model • Population regression function • Sample regression function • Estimation of parameters: The method of ordinary least squares • Hypothesis testing • Coefficient of correlation. Coefficient of determination • Forecasting • Considerations on the ordinary least squares method	interactive presentation, problem-based learning, use of software applications	1 course
5. Multiple linear regression • The three-variable linear regression model • Estimation of parameters • Hypothesis testing in multiple regression • Coefficient of determination • Removing explanatory variables from the model • Adding explanatory variables to the model • Forecasting	interactive presentation, problem-based learning, use of software applications	1 course
6. Other types of regression • Models that reduce to the simple linear model • Choosing the best model • Models reduced to multiple linear model • Least squares method with restrictions	interactive presentation, problem-based learning, use of software applications	1 course
7. Least-Squares Trend Fitting and Forecasting • The Linear Trend Model • The Quadric Trend Model • The exponential Trend Model • Model Selection • The principle of parsimony	interactive presentation, problem-based learning, use of software applications	1 course
8. Time series forecasting of seasonal data • Least square forecasting with monthly or quarterly data	interactive presentation, problem-based learning, use of software applications	1 course
9. Regression on dummy explanatory variables • ANOVA models • ANCOVA models	interactive presentation, problem-based learning, use of software applications	1 course
10. Logit and probit models	interactive presentation, problem-based learning, use of software applications	1 course

11. Dynamic economic models • Autoregressive models • Distributed lag models	interactive presentation, problem-based learning, use of software applications	1 course
12. Autocorrelation • The nature of autocorrelation • Consequences of autocorrelation • Detection of autocorrelation • Remedial measures	interactive presentation, problem-based learning, use of software applications	1 course
13. Models with simultaneous equations • Estimating models with simultaneous equations • The problem of identification	interactive presentation, problem-based learning, use of software applications	1 course
14. Review and Project Presentation	Exercices, presentation, discussions	1 course

Bibliography

1. Bereson, M.L., Levine, D.M., Krehbiel, T.C., Basic Business Statistics, Pearson, Prentice Hall, NJ, 2009.
2. Gujarati, D., Porter, D.C., Basic Econometrics. New York: McGraw-Hill, 2009
3. Ruud, P.A., Classical Econometric Theory, Oxford University Press, 2000.
4. Wooldridge, J.M., Introductory Econometrics, South-Western College Publishing, 2000.
5. Reader_Forecasting_2026_2027 (Course's Teams class)

8.2. Seminar/ laboratory	Teaching and learning methods	Remarks
1. Introductory course – research methods in tourism	interactive presentation, problem-based learning, use of software applications	1 seminar
2. Data analysis in tourism and hospitality • The nature of data in tourism and hospitality Estimators • Hypothesis testing • Comparison of samples	interactive presentation, problem-based learning, use of software applications	1 seminar
3. Time series analysis • Component factors of time series • Analysis of the evolution of a time series • Smoothing methods – moving average method, exponential smoothing	interactive presentation, problem-based learning, use of software applications	1 seminar
4. The linear regression model: two-variable model • Population regression function • Sample regression function • Estimation of parameters: The method of ordinary least squares • Hypothesis testing • Coefficient of correlation. Coefficient of determination • Forecasting • Considerations on the ordinary least squares method	interactive presentation, problem-based learning, use of software applications	1 seminar
5. Multiple linear regression • The three-variable linear regression model • Estimation of parameters • Hypothesis testing in multiple regression • Coefficient of determination • Removing explanatory variables from the model	interactive presentation, problem-based learning, use of software applications	1 seminar

• Adding explanatory variables to the model • Forecasting		
6. Other types of regression • Models that reduce to the simple linear model • Choosing the best model • Models reduced to multiple linear model • Least squares method with restrictions	interactive presentation, problem-based learning, use of software applications	1 seminar
7. Least-Squares Trend Fitting and Forecasting • The Linear Trend Model • The Quadric Trend Model • The exponential Trend Model • Model Selection • The principle of parsimony	interactive presentation, problem-based learning, use of software applications	1 seminar
8. Time series forecasting of seasonal data • Least square forecasting with monthly or quarterly data	interactive presentation, problem-based learning, use of software applications	1 seminar
9. Regression on dummy explanatory variables • ANOVA models • ANCOVA models	interactive presentation, problem-based learning, use of software applications	1 seminar
10. Logit and probit models	interactive presentation, problem-based learning, use of software applications	1 seminar
11. Dynamic economic models • Autoregressive models • Distributed lag models	interactive presentation, problem-based learning, use of software applications	1 seminar
12. Autocorrelation • The nature of autocorrelation • Consequences of autocorrelation • Detection of autocorrelation • Remedial measures	interactive presentation, problem-based learning, use of software applications	1 seminar
13. Models with simultaneous equations • Estimating models with simultaneous equations • The problem of identification	interactive presentation, problem-based learning, use of software applications	1 seminar
14. Review and Project Presentation	Exercices, presentation, discussions	1 seminar
Bibliography		
1. Bereson, M.L., Levine, D.M., Krehbiel, T.C., Basic Business Statistics, Pearson, Prentice Hall, NJ, 2009. 2. Gujarati, D., Porter, D.C., Basic Econometrics. New York: McGraw-Hill, 2009 3. Ruud, P.A., Classical Econometric Theory, Oxford University Press, 2000. 4. Wooldridge, J.M., Introductory Econometrics, South-Western College Publishing, 2000. 5. Reader_Forecasting_2026_2027 (Course's Teams class)		

9. Evaluation

- **The same evaluation criteria are maintained for all exams sessions. The components of the evaluation process carried out during the semester cannot be recovered/redone in the examination sessions.**
- **To be able to accumulate the points obtained during the semester, it is mandatory to obtain a minimum of 5 (five) in the final exam (written/oral).**

Type of activity	9.1 Evaluation criteria	9.2 Evaluation methods	9.3 Percentage in the final grade
9.4. Course	Understanding econometric concepts and models used in analysing economic phenomena in tourism and hospitality	Final exam (held during examination session)	60%
	Correct application of econometric estimation and validation methods		
	Ability to analyse and interpret relationships between economic variables		
	Understanding time series, trends and seasonality		
	Ability to interpret regression model results and statistical indicators		
	Understanding assumptions and limitations of econometric models		
9.5. Seminar/ laboratory	Application of methods for analysing the evolution of a time series	Assignment 1 – Time series analysis (during the semester)	10%
	Appropriate use of smoothing methods and simple forecasting methods		
	Appropriate use of simple forecasting methods		
	Interpretation of results and formulation of economic conclusions		
	Correct specification of econometric models with dummy variables	Assignment 2 – Dummy variables (during the semester)	10%
	Correct introduction and interpretation of dummy variables		
	Analysis of economic relationships using ANOVA/ANCOVA models		
	Interpretation of the coefficients and model results		
	Selection and justification of the model	Project implementation (completed during the semester)	10%
	Correct estimation and validation		
	Appropriate use of data		
	Clarity of presentation	Project presentation (presented in week 14)	10%
	Interpretation of results		
	Ability to support and justify conclusions		
9.6 Minimum standard for passing			
In order to obtain the minimum passing grade (5), students must: • know the fundamental concepts and apply them to examples; • interpret the obtained results.			

10. SDG labels (Sustainable Development Goals)

		Sustainable Development Generic Label						
								
								
								Nu se aplică nici o etichetă
								

Date of entry:

22.05.2026

Signature of course coordinator

Prof. Ioan Cristian CHIFU, PhD

Signature of seminar coordinator

Prof. Ioan Cristian CHIFU, PhD

Date of approval in the department:

27.05.2026

Signature of the head of department

Prof. Ioan Cristian CHIFU, PhD