Study program : Hotel Management and Tourism

Type and level of studies: Undergraduate academic studies, 1st level

Course unit: Quantitative software analysis in hotel industry and tourism

Teacher in charge: Marija Paunović, Nevena Vasovic

Language of instruction: Serbian and English

ECTS: 7

Prerequisites:

Semester: SS

Course unit objective

Transferring to students the necessary skills to acquire knowledge related to quantitative methods in various areas of the economy, especially in tourism. The knowledge acquired in this area should indicate the applicability and need to apply certain methods in the field of tourism, with the use of software tools.

Learning outcomes of Course unit

Upon completion of the course, students are able to implement mathematical-statistical instrumentation and to understand various quantitative and statistical methods, understand data and draw conclusions based on them, pose and solve problems in the field using the aforementioned methods on real data. The ability of students to successfully master knowledge for independent quantitative examinations of various economic connections, as well as in the decision-making process. The course will provide the student with the necessary skills to conduct a small-scale study using quantitative data and appropriate software tools.

Course unit contents

Theoretical classes: Repetitions of basic concepts of mathematics and statistics. Quantitative research in economics and economic models; Importance of quantitative methods in analysis and planning; Models based on functional dependencies. Supplies models. The problem of optimization of economic functions. Operational research and linear programming; Formulation and application of the LP model; Specific problems of solving the transport problem; Distribution and sampling. Parametric statistics. Regression analysis and forecasting. Time series. Indexes.

Practical teaching: Implementation of the model using an adequate software tool and working on a case study in the chosen field of application. Solving the model is provided by the application of software packages: LINDO/LINGO, EXCEL, SPSS and others.

Literature

- A.J. Veal. Research Methods for Leisure and Tourism, A Practical Guide, University of Technology, Sydney, 2006..
- Benninga, S.Financial Modeling, The MIT Press. Cambridge, Massachusetts, 2000.
- Prem S. Mann. Mann's Introductory Statistics, 9th Edition, Global Edition, 2017.
- Murray R. Spiegel, John Schiller, Alu Sinivasan. Probability and Statistics, McGraw Hills, 2009.
- Om Parkash (Ed.). Mathematical Modeling, Optimization and Information Technology, Lambert Academic Publishers, Germany, 2015.

Number of active teaching hours				**Other classes**
Lectures: 3	Practice: 2	Other forms of classes:	Independent work:	

Teaching methods. Lectures, practices, seminars, case studies

Examination methods (maximum 100 points)

Exam prerequisites	**No. of points:**	**Final exam**	**No. of points:**
Student's activity during lectures	**10**	oral examination	
practical classes/tests	**30**	written examination	**30**
Seminars/homework		.....	
Project	**30**		
Other			

Grading system

Grade	**No. of points**	**Description**
10	**91-100**	Excellent
9	**81-90**	Exceptionally good
8	**71-80**	Very good
7	**61-70**	Good
6	**51-60**	Passing
5	**....**	Failing