Table 5.2. Course specification

Study program : Advanced Data Analytics in Business

Course title: Advanced Analytics with SPSS

Teachers: Stojanka Dakić, Dejan Brcanov

Status of the course: Elective

Number of ECTS: 7

Condition: None

Goal of the course

The main goal of this course is to familiarize students with the power and functionality of IBM SPSS Statistics as a data analysis tool and to cover standard exploratory statistical analysis of data. This course will introduce basic methods for data import, data management, graphics, basic and advanced statistical analysis by using the SPSS software package.

Learning outcome

Students will develop the fundamental skills needed to prepare data sets for analysis, and to conduct statistical analyses and report those analyses. At the completion of this course, students will be able to:

• Prepare and manipulate datasets for analysis in SPSS.

• Conduct simple descriptive and graphic analyses of data in SPSS.

• Conduct advance statistical analyses of data in SPSS.

• Prepare a report with a summary of analyses conducted in SPSS.

Content of the course

Theoretical part

1. week: Introduction to SPSS

2. – 3. week: Basic Statistical Concepts

4. – 5. week: Descriptive statistics

6. week: Comparing Means: One or Two Samples t-Tests

7. week: Comparing Means: Analysis of Variance

8. week: Chi-Square Test of Independence for Discrete Data

9. week: Correlation Analysis

10. – 11. week: Multiple Regression

12. week: Logistic Regression

13. week: Data Reduction and Scale Reliability: Factor Analysis

14. – 15. week: Advanced Data Handling in SPSS

Practical part

Work on practical tasks, helping students with writing of seminar paper.

Literature

1. Gaur, A., Gaur, S. (2009) Statistical Methods for Practice and Research. A guide to data analysis using SPSS (second editon). SAGE Publicaton, Inc, USA.
2. Field, A., (2009) Discovering Statistics Using SPSS - third edition. SAGE Publicaton, Inc, USA.
3. Landau, S., Everitt, B.S. (2004) A Handbook of Statistical Analyses Using SPSS. Chapman & Hall/CRC Press LLC, Florida USA.

Number of hours of active teaching	**Theoretical teaching: 2**	**Practical teaching: 2**

Teaching methods

Teaching and exercises will be done in computer labs using multimedia presentations and SPSS software package. Teaching takes place through lectures, exercises and independent work. Proof of knowledge is done through writting seminar paper, colloquiums, written and oral exams.

Assessment (maximum number of points 100)

Pre-exam obligations	Points	**Final exam**	Points
Activities during semester	**5**	Written exam	**20**
Practical part		Oral exam	**15**
Colloquium (2 colloquium)	**40**	.....	
Seminar paper	**20**		