

Specification for the book of courses

Study program		Computing and Informatics		
Module		Data Science		
Type and level of studies		Master studies		
The name of the course		Business Intelligence		
Lecturer (for lectures)		Janković S. Dragan		
Lecturer/associate (for exercises)		Stanimirović S. Aleksandar		
Lecturer/associate (for OFE)				
Number of ECTS	4	Course status (obligatory/elective)	Elective	
Prerequisites				
Course objectives	The basic principles of business intelligence. History, importance and scope of business intelligence. Multidimensional database. OLAP cubes creation. Data extraction. Data cleansing. Transform and import data into OLAP cubes. BI analytics. MDX (Multidimensional Expressions) - the language of multi-dimensional expressions. Methods and types of reporting. Data visualization.			
Course outcomes	Practical work in the two development environments: commercial development environment Microsoft Business Intelligence Studio and noncommercial environment Pentaho Open Source (Data Integration, Mondrian, Design Studio - Eclipse). Practical work on the development of OLAP cubes and BI analytics to end users.			
Course outline				
Theoretical teaching	The basic principles of business intelligence. History, importance and scope of business intelligence. Multidimensional database. OLAP cubes creation. Data extraction. Data cleansing. Transform and import data into OLAP cubes. BI analytics. MDX (Multidimensional Expressions) - the language of multi-dimensional expressions. Methods and types of reporting. Data visualization.			
Practical teaching (exercises, OFE, study and research)	Practical work in the two development environments: commercial development environment Microsoft Business Intelligence Studio and noncommercial environment Pentaho Open Source (Data Integration, Mondrian, Design Studio - Eclipse). Practical work on the development of OLAP cubes and BI analytics to end users.			
Textbooks/references				
1	Turban Sharda, Delen King, Business Intelligence: A managerial Approach, Prentice Hall, 2011.			
2	Gordon Linoff, Michael Berry, Data mining techniques for marketing, sales, and customer relationship management, Wiley, 2011.			
3	N. Balaban, Ž. Ristić, Business Intelligence, (in serbian), Faculty of Economics, Subotica, 2006.			
4	Lectures in a form of Power Point presentations			
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	1	0		
Teaching methods	Lectures, Auditive exercises, Laboratory exercises. Student project realization.			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam	Points	
Activity during lectures	5	Written exam	30	
Exercises	15	Oral exam	20	
Colloquia	30			
Projects				