Study program: Information Technologies and Systems	
Course title: Business Intelligence	
Professor/assistant: PhD Miroljub Banković	
Type of course: Elective	
ECTS credits: 7	
Prerequisites: Completed course *Information System Management* (undergraduate studies)	

Aims of the course:

Training students to develop information system using business intelligence, which is understood as a set of methodologies and software tools that enables advanced data use and data conversion into information needed for management decision-making in order to increase business performance.

Learning outcomes:

Understanding the concept of business intelligence and mastering Microsoft BI tools.

Syllabus:

1. **Data Mining and Data Warehousing concept**

ETL (Extract-Transform-Load) processes; ROLAP, MOLAP, HOLAP; Operating Systems, Business Intelligence Systems (BI), BI Technologies, Study cases on the use of business intelligence.

2. **Multidimensional data analysis**

Multidimensional expressions (MDX). BI tools usage.

3. **Microsoft BI tools**

SQL Server Management Studio (SSMS), Microsoft Business Intelligence Development Studio (BIDS). Data analyzer. Microsoft Business Intelligence Accelerator.

4. **SSAS management (SQL Server Analysis Services)**

SSAS solution development using BIDS. Data mining implementation using BIDS.

5. **Using XMLA for scripting**

SSRS management (SQL Server Reporting Service). Report system development using SSRS.

6. **Development of solution for Business Intelligence using SSIS (SQL Server Integration Services)**

7. **SSIS package administration**

Literature:

1. Balaban, N., Ristic Z., Business Intelligence, Faculty of Economy Subotica, 2006.
2. Panian Z., Klepac G., Business Intelligence, Masmedia, 2004
3. Thomsen, E., and G. Spofford., OLAP Solutions: Building Multidimensional Information Systems, John Wiley & Sons, 1997.
4. Veljovic A., Information System Management, Technical faculty Cacak, 2006.
5. Arsovski 3. Et la. 2014. Integral models of business intelligence: multidisciplinary access to performance improvements and organization, Kragujevac: Faculty of Economy.

Total number of active classes: 6	Lectures: 3	Practical classes: 3

Teaching methods:

Lectures: interactive approach.

Practical classes: preparation of expert and term papers, experimental work and professional practice, practical work. Consultations.

Grading system (maximum 100 points)

grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51- 60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91- 100 points.

Pre-exam obligations:	Points:	Final exam:	Points:
Activity during theoretical lectures	5	Oral exam	60
Practical training	5		
Term papers/essays	30		