Course Unit Descriptor

Study Programme: Ph.D. in Computer Science	
Course Unit Title: Electronic Business and Modeling	
Course Unit Code: ID108	
Name of Lecturer(s): Miloš Radovanović, Mirjana Ivanović	
Type and Level of Studies: Doctoral Academic Degree	
Course Status (compulsory/elective): Elective	
Semester (winter/summer): Summer	
Language of instruction: Serbian (primary), English (secondary)	
Mode of course unit delivery (face-to-face/distance learning): Face-to-face	
Number of ECTS Allocated: 7	
Prerequisites: None	

Course Aims:

In the modern environment of electronic business, a competitive advantage is acquired by those who are able to collect, model and analyze large volumes of data from the environment of interest, and, based on this, make the right predictions and decisions.
The course goal is acquaintance with methods for modeling and analyzing different aspects of electronic business, through techniques for time-series analysis, probabilistic models, data/text/Web mining algorithms, etc.

Learning Outcomes:

A successful student will be able to:

- Critically assess aspects of electronic business suitable for modeling

- Critically assess techniques for analyzing and modeling different aspects of electronic business

- Critically assess and describe technical and research trends that can influence the design of an electronic business system

- Apply research methods in electronic business and modeling

Syllabus:

Theory
Topics: Motivation. Electronic business system. Collecting data from the environment. Time-series analysis. Probabilistic models. Data mining, text mining, Web mining. Prediction: classification, regression. Workflow diagrams, workflow mining. Modeling business processes with UML, etc.
Practice
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Required Reading:

1. B. Jošanov: Introduction to Electronic Business, University of Novi Sad, Higher School of Professional Business Studies, Novi Sad, 2006 (in Serbian)
2. P.-N. Tan, M. Steinbach, V. Kumar. Introduction to Data Mining. Addison Wesley, 2005
3. H.-E. Eriksson, M. Penker. Business Modeling with UML. Wiley, 2000

Weekly Contact Hours: 2	**Lectures:** 2	**Practical work:** 0

Teaching Methods:
Lectures are organized using classic teaching methods with use of a projector. Students independently explore various research topics, present and discuss results with other students and the lecturer.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	Points	**Final exam**	Points
Seminars	60	Seminar paper	40
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam,			

project presentation, seminars, etc.