Course Unit Descriptor

Study Programme: Information Systems Engineering	
Course Unit Title: Information Systems Reengineering	
Course Unit Code: IZMO02	
Name of Lecturer(s): Sonja Ristić	
Type and Level of Studies: Master Academic Degree	
Course Status (compulsory/elective): compulsory	
Semester (winter/summer): winter	
Language of instruction:english	
Mode of course unit delivery (face-to-face/distance learning): face-to-face	
Number of ECTS Allocated:5	
Prerequisites: none	

Course Aims:

The aim of the course is to empower students with knowledge about the legacy information systems, motives and approaches for their evolution and methods and techniques for information systems reengineering.

Learning Outcomes:

Upon completing this course successfully, students will understand basic challenges, concepts and motives for legacy information systems evolution. They will be qualified to evaluate available methods, techniques and tools for legacy information system evolution, in a present context, and to make the adequate choice and to efficiently apply chosen methods, techniques and tools in order to improve legacy information system.

Syllabus:

Notion, classification and characteristics of legacy information systems (LIS). Commercial, business and technological motives for LIS evolution (modernization). LIS modernization approaches: migration, package implementation, re-hosting, restructuring, reengineering. Reengineering tasks and lifecycle. Reverse and forward engineering. LIS design reengineering. Maintenance and legacy code improvements. Techniques to support program code understanding. Database reengineering. Logical database structure extraction from database repository. Data mining techniques to extract LIS information: database constraints, business rules and business processes. Conceptualization process. Architecture Driven Modernization (ADM). Technical ADM, application ADM, data ADM. ADM business architectures. ADM standards. Model-driven LIS reengineering. Challenges, concepts, drivers and strategies of LIS integration in the context of LIS reengineering.

Required Reading: Relevant literature in English TBD		
Weekly Contact Hours:-	**Lectures:-**	**Practical work:-**

Teaching Methods:

Lectures; Tutorials (computer laboratory); Consultations; Individual work on required assignments. Students are encouraged to communicate, to participate in critical discussions; to work independently and to be actively involved in teaching process.

Knowledge Assessment (maximum of 100 points):100

Pre-exam obligations	points	**Final exam**	points
Project	30	Oral Part of the Exam	10

Complex Exercises	20		
Test	10		
Test	10		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			