Study program : Economics; Business Economics and Management

Type and level of studies:Undergraduate studies

Course unit: Information Systems

Teacher in charge : Dragana Rejman Petrović

Language of instruction (*English or other foreign language*):English

ECTS: 7

Prerequisites:

Semester *Winter Semester*

Course unit objective

The aim of the course is that students master the basics and structure of information systems, their strategic role in business organizations in globalization conditions, development of business information systems, maintenance and implementation of IS, IS management, integration and automation of business processes using IS, and IS concepts which are based on E-technologies.

Learning outcomes of Course unit

- Knowledge and understanding of the role, the basis and structure of information systems, information and communication technologies, the basics of structure and data management systems, databases, systems based on e-technologies, systems to support company management with the use of software tools and CASE tools to work on computers.
- Practical knowledge and skills on methods, techniques and software tools for the development of IS and their application to typical business processes, practical knowledge and skills in the use of contemporary application software solutions of business information systems.

Course unit contents

Module 1: Information Systems and Business

1) Information systems in the digital economy (Concept, role and importance of Information Systems, Information Systems and modern business, concepts and definitions of IS, IS classification,
2) Information systems in enterprise - Types of IS, relations between transactional and functional IS, IS to support business processes, IS for communication with the environment, Systems based on the Web,
3) Infrastructure and IS architecture.

Module 2: Information - Communication Technologies (ICT)

1) Organization and ICT technologies, Concept and structure of ICT, Impact of ICT on the organization, business, decision making processes, and defining business strategies,
2) Information and Communication Technologies and Information Systems, 3) Network computing and e-business communications,
3) E technologies - Main mechanisms of e-business, B2B, B2C, C2C, B2E applications, E government, E Learning, Mobile Computing, Ethical and Legal Aspects of E application technology.

Module 3: Data Management

1) The strategic role of data, Strategic importance of data for business and management of traditional ways of organizing a data, Contemporary approaches to organizing of data – Data Base,
2) Data Modeling - Introduction of data modeling, dependence of entities, data warehousing and data flows, Object oriented data models,
3) Fundamentals of Data Base Management Systems - DBMS, Logical organization of data.

Module 4: Development of Information Systems

1) Planning the development of information systems, Fundamentals of IS development, Fundamentals of IS development planning, Methods for planning the development of IS,
2) Analysis of information systems, Fundamentals of Systems Analysis, Phases in system analysis, Process modeling, Decomposition methods and systems analysis, Data modeling, network modeling,
3) Design of information systems, Fundamentals of system design, configuration of IS, Procurement of information resources, Design and integration of IS.

Module 4: Business Information Systems

1) Systems for transaction processing and reporting,
2) Information systems for process management Accounting and Finance, Marketing and Sales, Production and Operations, and Human Resources,
3) Integrated Management Information Systems,
4) Support IS for Business Intelligence.

Literature

Rainer R. K., Prince B., Cegielski G.C., *Introduction to Information Systems: Supporting and Transforming*

Business, 2013, John Willey				
Number of active teaching hours				**Other classes**
Lectures: 45 (15X3)	Practice: 30 (15X2)	Other forms of classes*: mentoring system)*	Independent work:	
Teaching methods Case studies and discussions, Exercises on computers (Microsoft Access DBMS, CASE tools for process modeling and data modeling, examples of application software for different business areas.				
Examination methods (maximum 100 points)				
Exam prerequisites	**No. of points:**	**Final exam**	**No. of points:**	
Student's activity during lectures	**5**	oral examination	**25**	
Practical classes/tests	**20+25**	written examination	**25**	
Seminars/homework		.....		
Project				
Other				

Grading system		
Grade	**No. of points**	**Description**
10	**91-100**	Excellent
9	**81-90**	Exceptionally good
8	**71-80**	Very good
7	**61-70**	Good
6	**51-60**	Passing
5	**0-50**	Failing

(Table 5.2) Course unit description