Course Unit Descriptor

Study Programme: Information Systems Engineering

Course Unit Title: Business Process Management Systems

Course Unit Code: IZOI91

Name of Lecturer(s): Branislav Stevanov

Type and Level of Studies: Bachelor level

Course Status (compulsory/elective): compulsory

Semester (winter/summer): summer

Language of instruction:english

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated:4

Prerequisites: none

Course Aims:

The goal of course is mastering the methods and techniques for analysis, designing, implementation and evaluation of business process management systems.

Learning Outcomes:

The goal of course is to train students for: business process analysis, identification of their "bottlenecks", modeling and implementation of BPM systems processes, as well as simulation, evaluation and defining the possible points of improvement and optimization of business processes.

Syllabus:

Introduction to BPM and Workflow systems, basic concepts and definitions. Functions and architecture of BPM systems (conceptual, technological, organizational). Process designing and modeling, defining the business rules, user interface designing. Process simulation. Executive BPM environment, process analysis systems, Rules Engines. User interface, process and participants management, process monitoring and tracking systems (BAM). Evaluation and improvement of business processes. Organizations and standards of BPM area (BPMN, BPEL, XPDL...). BPM project patterns and their usage (Control Flow patterns, Workflow Resource patterns, Workflow Data patterns). The use of SOA and EAI principles on BPM technologies. Comparison and usage of commercial and Open-Source BPM solutions (TIBCO Business Studio, Oracle BPEL, jBPM, Drools, Activiti...). Usage examples of BPM solutions and integration capabilities with other enterprise information systems (ERP, CRM, DMS, GIS, HRM...).

Required Reading: Relevant literature in English TBD

Weekly Contact Hours:5	**Lectures:3**	**Practical work:2**

Teaching Methods:

Teaching activity includes lectures with the practice examples, computer laboratory exercises and consultations. Students solve specific problems in the field of XML technologies, independently and/or in group.

Knowledge Assessment (maximum of 100 points):100

Pre-exam obligations	points	**Final exam**	points
Project task	15	Written part of the exam - tasks and theory	50
Project	30		
Test	5		
Test			

Lecture attendance			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			