

Study Programme: Engineering Management			
Course Unit Title: Business process modeling			
Course Unit Code: IM1112			
Name of Lecturer(s): Branislav Stevanov			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): elective			
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 subject is that students gain the basic knowledge for the application of the methods and techniques for business process modeling on all levels of the business process architecture, for the application of the methods for modeling the procedures and rules needed for the making and execution of enterprise business decisions and for the application of the methods for automatic process discovery. The aim of the subject is that students gain the knowledge about the methods for measuring the quality of business process model and to gain the knowledge and competences for the business process analysis with the usage of the created model.			
Learning Outcomes: Students will be able to apply the methods for the identification of business processes on all three levels of enterprise business process architecture, to create business process models with the use of modern modeling methods and techniques which represent the standard in this field and which have wide business application, to apply the methods for modeling the procedures and rules needed for the making and execution of enterprise business decisions, to apply the methods and modern software tools for the data analysis for the purpose of automatic creation of process models. Students will gain competences for the application of methods for business process model validation and verification and for the application of methods and software tools for business process simulation and analysis for the purpose of better management of the enterprise system.			
Syllabus. Introduction into modeling of business systems and business processes; Architecture of business processes in the enterprise; Modeling of business processes with the usage of BPMN modeling language (basic and complex modeling concepts); Modeling of business processes with non-standard activity execution flows with the usage of CMMN modeling language; Modeling the procedures and rules needed for the making and execution of enterprise business decisions with the usage of DMN modeling language; Modeling of business process with the method of automatic process discovery; Determination of the quality of the created business process models by applying the methods for model validation and verification; Business process simulation and results analysis.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours:2	Lectures: 3	Practical work: 0	
Teaching Methods: Lectures are auditory and include practical examples and case studies to demonstrate the application of business process modeling methods in real business systems. The exercises are carried out in computer laboratory. Within exercises, the teamwork is encouraged and different software tools are applied, thus enabling the application of methods for business process modeling, methods for modeling the procedures and rules needed for the making and execution of business decisions, methods for automatic process discovery, methods for the quality measurement of business process models and methods for the simulation and analysis of business processes.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			

Tests (4x)			
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