

Course Unit Descriptor

Study Programme: Industrial Engineering			
Course Unit Title: Business Process Simulation			
Course Unit Code: IM1106			
Name of Lecturer(s): Danijela Gracanin, Buchmeister Borut			
Type and Level of Studies: Bachelor level			
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 objective of the course is to acquire the basic knowledge in the field of discrete simulation techniques (modeling, simulation and analysis) which allow students to perform the analysis of various solutions in the process design.			
Learning Outcomes: Students will be able to model, simulate and analyze the processes and design improvements that achieve the optimum parameters of the process. B.Sc. in Industrial Engineering and Management acquires competence for advanced level in production system design with the use of simulation as an analytical tool.			
Syllabus: Simulation as a method for improving the business processes. Simulation application. Process modeling. Research productivity of production processes. Advantages and disadvantages of simulation techniques. Basic concepts. Queuing theory. Quantitative analysis of discrete systems in the field of production, transport, storage and services. Specifics of the service simulation system. Process simulation planning. Input data collecting. Model shaping. Model testing. Examples of the manual and computer simulation.			
Required Reading: Relevant literature in English TBD			
Weekly Contact Hours:-	Lectures:-	Practical work:-	
Teaching Methods: Lectures, computer and laboratory practice will be performed in the specific lab with a various solutions of discrete event simulation software.			
Knowledge Assessment (maximum of 100 points):100			
Pre-exam obligations	points	Final exam	points
Group Assignment	-	Examination Assignment	-
Exercises	-		
Test	-		
Test	-		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			