

Study Programme: Engineering Management			
Course Unit Title: Reliability of technical systems			
Course Unit Code: IM1036			
Name of Lecturer(s): Dragoljub Šević			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): elective			
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 this course is to train students in the methods of determining the reliability and use of the data on the reliability of the elements / systems.			
Learning Outcomes: After passing the exam, students will be able to calculate the reliability of the elements of the basis of collected data, calculation of system reliability based on defined / specific elements reliability of the system and block diagram are defined in terms of the reliability of the observed system. In addition, students will gain a general knowledge of the construction and use of fault tree analysis and design elements on the basis of reliability.			
Syllabus. Mathematical basis of reliability, Reliability of the Elements, System Reliability, Reliability Allocation, Design Based on Reliability, Fault Tree Analysis.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours:2	Lectures: 2	Practical work: 2	
Teaching Methods: The program consists of two parts. The first part covers the theoretical issues, while the second part includes auditory and computational exercises where students apply the mathematical apparatus in order to determine the reliability of the observed elements / systems. During lectures and during exercise a laptop and projector beam are used, because of the need for more vivid and more accurate representation of the teaching units key elements. Whenever it is possible, prepared data and the diagrams will be used, with use of the simulation change of the certain parameters of theoretical distributions and graphical representation of these changes.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

