

Study program / course: Mechanical Engineering				
Type and level of study: Master academic studies				
Course: Reliability methods of mechanical systems				
Lecturers: Dobrivoje M. Čatić, Ph.D.				
Status of course: Obligatory for module M ₂ , I semester				
Number of ECTS: 6				
Precondition: None				
The objective of course Acquirement knowledge, skills and competency necessary for using of methods theories of reliability in areas of mechanical engineering.				
The outcome of course Possession theoretical and practical knowledge linked for a big number of methods theories of reliability that can be use in phases of a lifetime of one mechanical system.				
Syllabus				
Theoretical study 1. Introduction, 2. Fault tree analysis and Success tree analysis, 3. Failure modes and effects analysis, 4. Allocation reliability, 5. Probabilistic design elements mechanical systems, 6. Accelerate testing for evaluation reliability.				
Practical Studies: Oral and laboratorial practical classes from areas predicted with contents of course. Independent production and defense of three domestic assignments from Fault tree analysis, allocation reliability and probabilistic design mechanical systems. In outline of study research work the students will be enabled for basic research in area of the course.				
Recommended reading 1. Čatić, D.: Reliability methods of mechanical systems, University text-book, Faculty of Mechanical Engineering from Kragujevac, Kragujevac, 2006., 201 p. 2. Ivanović G., Stanivuković D.: Reliability technical systems, collection of resolved tasks, Faculty of Mechanical Engineering, Beograd, 1987., 371 p. 3. Čatić, D.: Development and application of methods of theory of reliability, Monograph, Faculty of Mechanical Engineering from Kragujevac, Kragujevac, 2005., 241 p.				
The number of hours of active teaching:				Other classes: 1
Theory: 2	Practical classes: 1.6	Other forms of teaching: 0.4	Research study: 0	
Methods of teaching Lessons, auditorial and laboratorial practical classes, independent work, summary of practices.				
Evaluation of knowledge				
Pre-final exam obligations	points	Final exam	points	
Activities during the classes:	9	Written exam	30	
Practical classes:	21			
Colloquiums(s) :	40			
Seminar(s) :				