UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION			
Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Technical diagnostics		
Level of Study	☒Bachelor	☐ Master's	☐ Doctoral
Type of Course	☐ Obligatory	☒ Elective	
Semester	☐ Autumn	☒ Spring	
Year of Study	III		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Miloš D. Milovančević		
Teaching Mode	☒ Lectures	☐ Group tutorials	☐ Individual tutorials
	☒ Laboratory work	☒ Project work	☒ Seminar
	☐ Distance learning	☐ Blended learning	☐ Other

Purpose and Overview (max. 5 sentences)

Student who successfully pass exams will be able to: master the technical diagnostics of mechanical systems; define choose and use methods of technical diagnostics of mechanical systems

Syllabus (brief outline and summary of topics, max. 10 sentences)

Theoretical study. Introduction. The basic features and technical systems. Parameters of working ability and technical base diagnostics. Systems of technical diagnostics. Control of working capacity of mechanical systems. Classification diagnosis and diagnostic parameters. Stages in the process of diagnosis and determine the optimal procedure. Establishing the legality parameter changes the situation and their suitability for control. Methods of technical diagnostics. Subjective methods of diagnosis (testing audio, visual optical tests, etc.,.). Methods for measuring the operating parameters (temperature, angular velocity and number of revolutions, of torque, mechanical power). Test procedures wear debris (testing changes lubricant properties, diagnosis tribological assemblies). Vibro-acoustic methods of diagnosis. Diagnosis of the condition of working condition. The parameters of the state of working condition. Basic types of cancellation in machinery and equipment. Methods of detection and location of failure. Multi-parametric analysis. Hardware and software support. Definition of hardware and software technical support system diagnostics. Information systems of technical diagnostics. Practical teaching: Laboratory classes, Teamwork (3 to 6 students) on the preparation of term papers

Language of Instruction

☒Serbian (complete course) ☒ English (complete course) ☐ Other _____ (complete course)

☐Serbian with English mentoring ☐Serbian with other mentoring _____

Assessment Methods and Criteria

Pre exam Duties	Points	Final Exam	Points
Activity During Lectures	5	Written Examination	50
Practical Teaching	10	Oral Examination	Max. 35 (depending on Teaching Colloquia)
Teaching Colloquia	35	Overall Sum	100
*Final examination mark is formed in accordance with the Institutional documents			