



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Doctoral Academic Studies		
Study Module (if applicable)	-		
Course Title	Metrology and design of experiments		
Level of Study	<input type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input checked="" type="checkbox"/> Doctoral
Type of Course	<input type="checkbox"/> Obligatory	<input checked="" type="checkbox"/> Elective	
Semester	<input checked="" type="checkbox"/> Autumn	<input type="checkbox"/> Spring	
Year of Study	II		
Number of ECTS Allocated	10		
Name of Lecturer/Lecturers	Dušan S. Stamenković, Dragan S. Milčić, Boban R. Anđelković, Jelena D. Stefanović-Marinović, Aleksandar V. Miltenović, Miroslav M. Mijajlović		
Teaching Mode	<input type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input checked="" type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	<input checked="" type="checkbox"/> Project work	<input type="checkbox"/> Seminar
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Blended learning	<input type="checkbox"/> Other

Purpose and Overview (max. 5 sentences)

Introduces students to experimental concept, design of experiments, data acquisition, as well as the presentation of experimental results. Acquiring of knowledge about measurement of mechanical quantities electrically, as well as gaining knowledge of signal processing for applications in control and information systems.

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

- 1) Fundamentals of measurement and measuring chain, 2) Principle of measurement of mechanical quantities electrically, 3) Transducers, 4) Resistive, inductive and capacitive transducers, 5) Processing and transmission of measurement signals, 6) Measurement of stress and strain state, 7) Measurement of force, torque and pressure, 8) Measurement of temperature, 9) Measurement of noise and vibration, 10) Theory and experiment in engineering, 11) Design and performing of the experiment, 12) Analysis and interpretation of experimental results

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
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Project work	50	Oral Examination	50
		Overall Sum	100

***Final examination mark is formed in accordance with the Institutional documents**