



# UNIVERSITY OF NIŠ

**Course Unit Descriptor**

**Faculty**

Faculty of Mechanical Engineering

## GENERAL INFORMATION

Study Program	<b>Mechanical Engineering</b>
Study Module (if applicable)	Mechatronics and Control
Course Title	Manufacturing Procedures of Mechatronic Elements
Level of Study	<input checked="" type="checkbox"/> Bachelor <input type="checkbox"/> Master's <input type="checkbox"/> Doctoral
Type of Course	<input type="checkbox"/> Obligatory <input checked="" type="checkbox"/> Elective
Semester	<input type="checkbox"/> Autumn <input checked="" type="checkbox"/> Spring
Year of Study	IV
Number of ECTS Allocated	5
Name of Lecturer/Lecturers	Dušan S. Stamenković Miloš S. Milošević
Teaching Mode	<input checked="" 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 checked="" type="checkbox"/> Seminar <input type="checkbox"/> Distance learning <input type="checkbox"/> Blended learning <input type="checkbox"/> Other

## Purpose and Overview (max. 5 sentences)

Introduction to modern technologies applied in the manufacturing procedures of elements of mechatronic systems. Understanding the basic physical and chemical principles at different technological procedures whose priority are demands for high accuracy of measurements and quality of surface treatment. Introduction to the techniques of designing technological processes for numerically controlled machines, as well as techniques for programming numerically controlled machines. Selection of appropriate technological process of producing the responsible elements of mechatronic systems.

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

Manufacturing tolerances. Variety of Technologies. Technologies of the initial design (casting, pressing of metals). Technologies of changing shapes (plastic deformation processing, processing of the material removal, joining technologies of parts, technologies of material application). Technologies of changes material properties. Designing of technological processes for numerically controlled machines. Programming of numerically controlled machines. Measurement of surface roughness by profilometer. Determination of the processing technology of elements of mechatronic systems based on the technical documentation. Design of the virtual technological processes and programming of numerically controlled milling machines.

## Language of Instruction

- Serbian (complete course)       English (complete course)       Other \_\_\_\_\_ (complete course)  
 Serbian with English mentoring       Serbian with other mentoring \_\_\_\_\_

## Assessment Methods and Criteria

<b>Pre exam Duties</b>	<b>Points</b>	<b>Final Exam</b>	<b>Points</b>
<b>Activity During Lectures</b>	<b>10</b>	<b>Written Examination</b>	<b>0</b>
<b>Practical Teaching</b>	<b>10</b>	<b>Oral Examination</b>	<b>20</b>
<b>Teaching Colloquia</b>	<b>60</b>	<b>Overall Sum</b>	<b>100</b>

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