UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study Program	Mechatronics and Control
Study Module (if applicable)	-
Course Title	Biomechatronics
Level of Study	☐Bachelor ☒ Master's ☐ Doctoral
Type of Course	☐ Obligatory ☒ Elective
Semester	☒ Autumn ☐ Spring
Year of Study	I
Number of ECTS Allocated	6
Name of Lecturer/Lecturers	Nenad T. Pavlović
Teaching Mode	☒ Lectures ☐ Group tutorials ☐ Individual tutorials ☒ Laboratory work ☒ Project work ☒ Seminar ☐ Distance learning ☐ Blended learning ☐ Other

Purpose and Overview (max. 5 sentences)

Gaining new knowledge in the field of biomechatronics as a synergy field of mechanics, microsystem technique, informatics and biology.

The ability to use engineering concept and methods in order to understand and solve problems in medicine and biology.

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

Introduction to Biomechatronics. Technical biology and bionics. Thermodynamics in biomechatronics. Biomechanics. Bioacoustics. Biolelectricity. Optics in biomechatronics. Radiation biophysics - ionizing radiation. Radiation biophysics - non ionizing radiation. Using of mechatronics in medicine - biomechatronics and rehabilitation

Language of Instruction

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

☒Serbian with English mentoring ☒Serbian with German mentoring

Assessment Methods and Criteria

Pre exam Duties	Points	Final Exam	Points
Activity During Lectures	5	Written Examination	0

Practical Teaching	**5**	**Oral Examination**	**50**
Teaching Colloquia	**40**	**Overall Sum**	**100**
***Final examination mark is formed in accordance with the Institutional documents**			