UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering in Nis

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

Purpose and Overview (max. 5 sentences)

The aim of the course is to make students familiar with the basis of Biomedical Engineering. Students will learn the principles of engineering, software tools, devices and technologies that are applied medicine and biology for the diagnosis, monitoring and therapy. This way produce engineers who can design new software tools, processes and products that are used in medicine, and to help doctors in their application.

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

Devices for diagnosis, monitoring and therapy. Medical images.
Aids, implants and bionics.
Measurement and monitoring in biomedicine
Modelling bodies and processes
Biomedical materials
Basics of biomechanics
Tissue engineering
Genetic engineering, neural engineering and pharmaceutical Engineering
Design and development of medical devices and systems
Design of implants and prosthetic devices

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