

Study Programme: Biomedical engineering			
Course Unit Title: Application of lasers in medicine			
Course Unit Code: BMIM1A			
Name of Lecturer(s): Sekulić Dalibor, Bajić Jovan			
Type and Level of Studies: Master			
Course Status (compulsory/elective): elective			
Semester (winter/ summer): winter			
Language of instruction: english			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 6			
Prerequisites: none			
Course Aims: Acquiring knowledge in the field of laser application in medicine: radiation sources and their applications, the impact of radiation on humans, the development of laser technology, principles of lasers, types of lasers, the characteristics of the laser radiation, laser surgery, the advantages and disadvantages of laser surgery (surgery), the use of lasers in dentistry, the use of lasers in ophthalmology, the use of lasers in dermatology, other laser application in modern medicine.			
Learning Outcomes: - Ability of knowledge of radiation sources and their applications - Ability of knowledge the impact of radiation on humans - Ability of knowledge of the principles of the laser and its features - Ability of knowledge of the principles of laser surgery - Ability of knowledge of the principles of lasers in dentistry - Ability of knowledge of the principles of lasers in ophthalmology - Ability of knowledge of the principles of lasers in dermatology			
Syllabus. - Radiation sources and their applications - Effect of radiation on humans - The development of laser technology - Principles of laser operation - Types of lasers - The characteristics of laser radiation - Laser surgery - Advantages and disadvantages of laser surgery (surgery) - The use of lasers in dentistry - The use of lasers in ophthalmology - The use of lasers in dermatology			
Required Reading:			
Weekly Contact Hours: 2	Lectures: 3	Practical work: 1	
Teaching Methods: Lectures, laboratory (L) practice, consultations.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

