



UNIVERSITY OF NIŠ

Course Unit Descriptor**Faculty**

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Physics		
Level of Study	<input checked="" type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input type="checkbox"/> Doctoral
Type of Course	<input checked="" type="checkbox"/> Obligatory	<input type="checkbox"/> Elective	
Semester	<input checked="" type="checkbox"/> Autumn	<input type="checkbox"/> Spring	
Year of Study	I		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Dragiša D. Nikodijević, Živojin M. Stamenković		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	<input 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)

The aim of the course is to introduce all students to certain areas of physics, which are of fundamental importance for technical studies. The course is targeting both the theoretical and practical aspects of the physics.

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

1) Matter, substance, physical field. SI system of units. 2) Motion, mechanical motion, the relativity of motion. 3) Newton's laws of mechanics. Work, energy, power. 4) The law of conservation of mechanical energy. 5) Oscillatory movement, harmonic motion. 6) Wave motion, propagation of elastic deformation, interference of waves, polarization of waves, Standing waves. 7) Sound, resonance, Kundt's tube, the Doppler effect. 8) Optics. 9) Thermal radiation, the electromagnetic radiation, photoelectric effect. 10) Atomic physics. 11) Nuclear energy, fission, fusion, nuclear reactors.

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
Lecture (participation) and homework	5 + 5	Written Examination	0* (60)

Laboratory	10	Oral Examination	Max. 30
Two midterm exams	50	Overall Sum	100

* Refers to students who have already gained points by completing pre-exam requirements