

Study program: Modern computer technologies			
Course title: Physics			
Professor/assistant: Violeta Stojanović			
Type of course: compulsory			
ECTS credits: 6			
Pre-requisites: none			
Aims of the course: Introduce students to the major physical phenomena and laws, major methods of scientific opinion, and help them to form the scientific view of the world and advancement of modern technology.			
Learning outcomes: After taking the exam, students are trained to understand correctly the laws, principles and categories which enable the proper way of scientific research and better definition of physical reality.			
Syllabus			
<u>Theoretical part</u> Mechanics: kinematics of rectilinear and curvilinear motion, basic laws of dynamics, work and energy, statics, the force of gravity, elastic deformations, oscillations, hydrostatics, hydrodynamics. Waves: genesis, types, basic elements, propagation rate, equation, sound, intensity, level, range of electromagnetic waves. Heat and thermodynamics: thermal expansion of solids and liquids, molecular – kinetic theory, gases, laws, the equation of ideal and real gas states, thermos-dynamical processes, laws of thermodynamics, critical points, triple point, heat conversion. Oscillations and waves: origin, types, basic elements, propagation rate, equation, sound, intensity, level, acoustic room, noise. Photometry: photometric units and laws of lights, photometers. Geometrical optics: laws of reflection and refraction of light, dispersion, reflection, lens, lens image forming, equation of thin lenses.			
<u>Practical part:</u> Computational exercises. Laboratory exercises.			
Literature 1. Jakšić M., Stojanović V., <i>Fizika</i> , Nis, 2009. 2. Jakšić M., Stojanović V., <i>Fizika</i> , VTS Nis, 2003. 3. Jakšić M., Stojanović V., <i>Zbirka zadataka iz fizike</i> , VTS Nis, 2002.			
Number of active classes			Other forms of teaching:
Lectures: 30	Practical classes: 30	Research work:	
Teaching methods Combination of interactive approach with practical problem solving.			
Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.			
Pre-exam obligations	points	Final exam	points
activity during theoretical lectures	10	written exam	40
practical training	20	oral exam	
colloquium(s)/seminar papers	30		
Sum	60	Sum	40