

Study Program: Physics			
Type and level of studies: Bachelor studies			
Course name: Physics of Ionised Gases			
Lecturer: Vučković Biljana			
Status: Compulsory			
ECTS: 5			
Attendance prerequisites: Electromagnetism 1, 2			
Course aims Introducing students to the processes in ionized gases and plasma.			
Course outcome The students have acquired: <ul style="list-style-type: none"> • General abilities: monitoring professional literature; knowledge about new experiments applicable in electronics, atomic physics, physics of new materials, etc. • Subject-specific abilities: acquiring knowledge about the elementary processes in ionized gases and plasma. Getting acquainted with an extensive range of possibilities of applying ionized gases in all areas of life. 			
Course content <i>Theoretical part</i> Ion formation in gases. Kinetics of elementary processes. Degree of ionization and the principle of detailed balance. Particle motion in a gaseous medium. Non-self-sustaining discharge. Townsend regions. Self-sustaining discharge. Glow discharge, corona discharge, arc discharge, spark and high-frequency discharge. Application of electric discharge in gases. Basic characteristics of the plasma state. <i>Practical part</i> Computational exercises are in accordance with theoretical classes			
Literature <ol style="list-style-type: none"> 1. Божић Милић, Основе физике гасне плазме, Научна књига, Београд, 1991 2. А. Вон Енгел, Јонизовани Гасови, Научна књига, Београд, 1970 3. Др Јарослав Лабат: Физика јонизованих гасова, Физички факултет, Београд, 1991 4. В. Љ. Марковић: Физика јонизованих гасова, ПМФ Ниш, Ниш 2004 			
Number of active classes			Other classes
Lectures: 2	Practical classes: 2	Other forms of teaching:	
Teaching methods Lectures (2 classes per week during the semester), computational exercises (2 classes per week) during the semester.			
Assessment (maximum 100 points)			
Course assignments	points	Final exam	points
Lectures	10	written exam	30
Practical classes	20	oral exam	40
Laboratory exercises		
Total	30		70