

Level : bachelor				
Course title: Non-ionizing radiation				
Status: elective				
ECTS: 6				
Requirements: Electromagnetism				
Learning objectives To teach students about the main aspects of non-ionizing radiation.				
Learning outcomes Understanding the principles of non-ionizing radiation.				
Syllabus Electromagnetic fields – quantities, units and Maxwell's equations. Black-body radiation. Radiation of electric dipole. General properties and classification of non-ionizing radiation. Interaction of electric and magnetic fields with the medium. Non-ionizing UV radiation. Visible light. Infrared radiation. Microwave radiation. Radio-frequency radiation. Low-frequency non-ionizing radiation. Artificial sources of radio-frequency and low-frequency radiation. Base stations for mobile telephony. Measurements of electromagnetic fields. The absorption of electromagnetic radiation in the human body. The dose of non-ionizing radiation. Exposure to non-ionizing radiation in the environment. Standards for protection against non-ionizing radiation.				
Weekly teaching load				Other:
Lectures: 3	Exercises: 1	Other forms of teaching: 1	Student research:	