

<b>Level:</b> bachelor				
<b>Course title:</b> The physical basis of radiodiagnostic and radiotherapy				
<b>Status:</b> obligatory/elective				
<b>ECTS:</b> 6				
<b>Requirements:</b> Atomic physics, Physics of the human body				
<b>Learning objectives</b> The goal of this course is to teach students about the main aspects of radiodiagnostic and radiotherapy, including their applications.				
<b>Learning outcomes</b> Understanding the principles of radiodiagnostic and radiotherapy. Ability to work in medical centres as a medical physicist.				
<b>Syllabus</b>  <i>Theoretical instruction and Practical instruction</i> Radiation: Radiation types of radiological diagnosis and radiotherapy; interaction of radiation with matter (X-rays, electrons, protons, neutrons). Biological effects and radiation protection with regard to risk assessment. Radiological Diagnosis: Generation X-ray, Radiography, CT, Mammography Radiation therapy: The modalities of radiotherapy, radiation doses (definitions, conversion factors, measurement of radiation dose, Bragg-Gray principle); Radiation detectors (movement detection, filters, adjustments); metrology aspects, QA + QC, accidents and incidents.				
<b>Weekly teaching load</b>				<b>Other:</b>
Lectures: 3	Exercises: 1	Other forms of teaching: 1	Student research:	