

Educational Objectives

Radiology is a multidisciplinary field that uses ionizing and non-ionizing radiation for diagnostic and therapeutic purposes. Graduates of the field of Radiological Technology are prepared not only to independently carry out diagnostic and therapeutic procedures in radiodiagnostics, radiotherapy and nuclear medicine, but they can use and apply their knowledge in fields that require experts to work with ionizing radiation.

As part of radiodiagnostics, graduates become acquainted with devices using ionizing and non-ionizing radiation to image the human body, with standard examination procedures for determining early diagnosis and performing therapeutic interventions. Skiagraphy and fluoroscopy are among the basic radiological imaging methods of the skeleton, chest, abdomen and other areas. Computed tomography (CT) is a radiological examination method that uses X-rays to provide detailed imaging of the internal organs of the human body. Digital subtraction angiography (DSA) is a minimally invasive method for imaging the vascular system. Magnetic resonance imaging (MRI) is used to obtain an image of organs and tissues using a strong magnetic field and radio frequency waves. Ultrasonography (USG) uses high-frequency sound waves to create images and, together with magnetic resonance imaging, are among the methods that do not use ionizing radiation. The principle of radiotherapy is the treatment of malignant tumours with ionizing radiation while sparing healthy tissue.

Graduates will gain skills in the application of ionizing radiation on irradiators used in radiotherapy departments. Nuclear medicine uses open emitters for diagnosis and therapy, which are applied to the body. Graduates gain an overview of the production and application of radiopharmaceuticals, knowledge of examination procedures on devices such as: SPECT, PET. With the help of these techniques as well as other techniques listed in the study program, graduates will contribute to the early diagnosis and treatment of many serious diseases.

Radiology, radiotherapy and nuclear medicine are the focus of the study program, in which great emphasis is placed not only on knowledge of modern instrumentation and the field of healthcare, such as human anatomy and physiology, but also has an overview of the principles and legislation of radiation protection. Graduates acquire skills in imaging data processing, information technology and radiology. Part of the study of the field is also clinical practice at selected diagnostic, therapeutic and nuclear medicine workplaces, where graduates are directly acquainted with the work of a radiological technician.