

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Pharmacy	
Course ID: FaF.KFANF/13-Mgr-A/26	Course title: Radiopharmaceuticals
Educational activities: Type of activities: practicals / lecture Number of hours: per week: 1 / 2 per level/semester: 14 / 28 Form of the course: on-site learning	
Number of credits: 4	
Recommended semester: 5.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Compulsory participation on the course educational activities is one of the conditions while maintaining the possibility of excused absence. For the admission to the final exam, it is necessary to complete the continuous assessment from laboratory practicals to at least 60% of total points (consisting of fulfilment of all assigned tasks, submission of protocol (report) from every topic, as well as 1 control written test). The final exam (in written form) - it is necessary to obtain at least 60% of total points for successful passing the exam. Exam evaluation: A = 100-92%; B = 91,99-84%; C = 83,99-76%; D = 75,99-68%; E = 67,99-60%; FX = less than 60%. Scale of assessment (preliminary/final): 0/100	
Learning outcomes: The completion of the course contributes to the achievement of a comprehensive qualification and knowledge of a pharmacist and is connected with the laboratory of the faculty with distinctive requirements. The student acquires a basic theoretical knowledge about the rules of radioactivity, ionizing radiation, specifics of radioactive sources, diagnostic/therapeutic radiopharmaceuticals and related procedures as well as practical skills in a radiopharmaceutical preparation, quality control using proper analytical methods, as well as in ensuring radiation protection and safety. The acquired skills can be utilized in the field of preparation, quality control, and the use of radiopharmaceuticals (as a specific category of drugs) in the departments of nuclear medicine and other specialized departments in the diagnostic and/or therapeutic process of various diseases.	

Class syllabus:

The content and syllabus of the course is in compliance with requirements of the International and European Pharmacopoeia, which include several monographs on Radiopharmaceutical Preparations, as well as with current guidelines and requirements for radiation protection.

- Radiopharmaceuticals: fundamentals, characteristics, importance.
- Radiation protection.
- Production of radionuclides.
- Dosimetry and radiation detection.
- Effects of ionizing radiation on human organism.
- Preparation and quality control of radiopharmaceuticals.
- Radiopharmaceuticals in the clinical practice (diagnostics and therapy).
- Nuclear medicine imaging techniques.

Recommended literature:

SAHA, G.P. Fundamentals of Nuclear Pharmacy. New York : Springer, 2010, p.409. (textbook)
SAMPSON, C.B. Textbook of Radiopharmacy. Yverdon : Gordon and Breach Science Publishers, 1994.

Council of Europe. European Pharmacopoeia online, current version. Strasbourg : EDQM.
Current laws/ordinances/guidelines on radiation protection and on handling of the radioactive materials and substances.

Languages necessary to complete the course:

english language

Notes:**Past grade distribution**

Total number of evaluated students: 0

A	ABS	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Jozef Motyčka, PhD., Ing. Zoltán Kassai, PhD.

Last change: 30.05.2026

Approved by: RNDr. Jozef Motyčka, PhD.