

Name of university, Name of faculty: Trnava University
Faculty of Health Care and Social Work

INFORMATION SHEET OF THE SUBJECT

Code: LMbD36		Name: Nuclear medicine	
Cover: Department of Theoretical Disciplines and Laboratory Investigation Methods			
Type of educational activity: Lecture, Seminar		Number of credits: 3	Recommended semester: ST
Scope of educational activity (in hours): Weekly: 2/2 For term of study: LS 60,60			Study grade: 1. PO
Method of educational activity:			
Recommended semester	Study programme		
2.year ST	Laboratory Medicine (D1-LVMvZ-22)		
Underlie subjects:			
Conditions for passing the course: Method of evaluation: Completion by taking an examination Continuous evaluation: none Final evaluation: - Preparation of a seminar thesis on a selected topic (max. 20% of evaluation) - Final written test (max. 80% of evaluation) Evaluation: A: 100 – 95%; B: 94 – 89%; C: 88 – 83%; D: 82 – 77%; E: 76 – 71%; FX: 70% and less Finished: exam - written test			
Learning outcomes: VV1 After completing the course, the student will know the basic knowledge of the current possibilities of using open emitters in the diagnosis and treatment of pathological processes, the principles of "metabolic" imaging of organs and pathological processes as well as the principles of detection and protection against ionizing radiation. VV2 The student will be able to classify the biological effects of IR VV3 The student will be able to describe the types of open emitters used in nuclear medicine and how they are used VV4 The student will be able to explain the principle of devices used in nuclear medicine VV5 The student will understand the relationship between variables, concepts and diagnostic methods VV6 The student will be familiar with the current legislation related to I&I and nuclear medicine			
Schedule of subject: Lectures: 1) History of radiation protection and nuclear medicine 2) Basic concepts of atomic physics, quantities and units 3) Ionizing radiation, its characteristics, interaction with matter 4) Biological effects of ionizing radiation 5) Radiopharmaceuticals, radionuclides, Open source workplace, workplace monitoring 6) Basic measuring equipment and instruments used in nuclear medicine, dosimetry 7) Principles and criteria of radiation protection in nuclear medicine, dose limits 8) Diagnostic methods in nuclear medicine - gamma camera, scintigraphy 9) Diagnostic methods in nuclear medicine - SPECT, SPECT/CT 10) Diagnostic methods in nuclear medicine - PET, PET/CT, PET/MRI 11) Diagnostic examinations in nuclear medicine 12) Therapeutic application of radiopharmaceuticals Seminars: 1) Radiation protection in nuclear medicine 2) Imaging technology in nuclear medicine 3) Endocrinology - case reports 4) Neurology - case reports 5) Cardiology - case reports 6) Pneumology - case reports 7) Nephrology - case reports 8) Osteology - case reports 9) Inflammation - case reports 10) Oncology - case reports 11) Therapy in nuclear medicine - case reports 12) New trends in nuclear medicine			
Recommended reading: 1) Legislatívne usmernenia týkajúce sa ionizujúceho žiarenia a nukleárnej medicíny / online: https://www.slov-lex.sk/ezz 2) LEPEJ, J.: Nukleárna medicína II. EQUILIBRIA, 2018. ISBN 9788081432231. 3) LEPEJ, J.: Nukleárna medicína III. EQUILIBRIA, 2018. ISBN 9788081432323. 4) LEPEJ, J.: Nukleárna medicína I. EQUILIBRIA, 2018. ISBN 9788081432224. 5) VONDRÁK, A.: Princípy radiačnej ochrany v nukleárnej medicíne. Grada, 2018. ISBN 9788027101689.			

Language requirements: Slovak					
Notes: Daily combined method consists of: lectures /on-line, distance, self-study/; seminars /on-line, discussion group in MS Teams/ Self-study is supported by e-learning. 100% participation is required.					
Course evaluation: Assessed students in total: 559					
A	B	C	D	E	FX
13%	20%	25%	19%	14%	8%
Lecturers: doc. RNDr. Martina Horváthová, PhD., MPH, lecturer, examiner, seminary supervisor Mgr. Radoslava Rusyn, seminary supervisor					
Date of last change: 01.09.2026					
Approved by: doc. Ing. Stanislava Blažíčková, PhD., MPH, univ.prof.					