

1.	Subject	DIAGNOSTIC METHODS IN NUCLEAR MEDICINE			
2.	Code	MLD – 316			
3.	Study program:	Three-year professional studies of medical laboratory diagnostics			
4.	Conducted by	UKIM – Medical faculty Department of Nuclear medicine			
5.	Degree of education (first or second cycle)	First cycle			
6.	Academic year/semester	II/V	7.	Credits	2
8.	Professor	Prof. D-r Venjamin Majstorov			
9.	Prerequisite	Fulfilled condition for enrolment into third year			
10.	Goals	Getting acquainted with the foundations of nuclear medicine and gaining knowledge of the basic principles of diagnostic and therapeutic use			
11.	<p>Content summary:</p> <p>Theoretical lessons: Physical bases of radioactive decay. Types of decay. Principles of detecting radiation. Scintillation and ionization detectors of radiation. Creation of radionuclide in a reactor, cyclotron and generator. Marking of specific pharmacological substances with isotopes and their use in nuclear-medical practice. Marking of blood cells. Using in vitro tests in nuclear medicine (radioimmunoassay, immunoradiometric assay) for diagnosing thyroid gland problems. Biological effects of ionizing radiation and general principles of ionizing radiation protection.</p> <p>Practical lessons: Radiometry (standard geometry, visible field and collimation, statistic of radiation measurements). Dosimetry and radiation protection. Contamination and decontamination. Production of radiopharmaceuticals from a generator system and quality control. Determining concentration of test of thyroid function. Determining blood volume.</p>				
12.	Teaching methods: theoretical lessons, practical lessons and learning at home				
13.	Total classes:	30			
14.	Organization				
15.	Types of teaching activities	15.1	Lessons: theoretical classes	15 lessons Nuclear medicine 4 – 6 min.-max.	
		15.2	Practical lessons	15 lessons Nuclear medicine 10 – 16 min.-max. The student can miss only one of the lessons.	
16.	Other types of activities	16.1	Projects		
		16.2	Self-supporting practice	During the practical lessons	
		16.3	Learning at home	35	
17.	Knowledge assessment		Points		
	17.1	Tests			
	17.2	Final exam – Nuclear Medicine test	10 – 16 min.-max.		
	17.3	Practical lessons	10 – 16 min.-max. Participation:		

			Average 8 Good 10 Excellent 13
	17.4	Active participation	
18.	Grading criterion (points/grades)	Up to 59	5 (five) F
		60-68	6 (six) E
		69-76	7 (seven) D
		77-84	8 (eight) C
		85-92	9 (nine) B
		93-100	10 (ten) A
19.	Requirements for obtaining a signature and attending the final examination	Attended lectures and finished praxis	
20.	Language	Macedonian	
21.	Method of evaluating the quality of the lessons	Students' anonymous evaluation of the subjects, the professors and collaborators who hold the lessons.	
22.	Literature:		
	22.1	Mandatory literature	
		1.	Authorized lectures of the Department
	22.2	Additional literature	
		1.	O. Vaskova, S. Miceva Ristevska, D. Pop Gjorcheva, D. Miladinova, S. Loparska, E. Janevikj Ivanovska. Foundations of Nuclear Medicine. Skopje, Boro Grafika; 2008