



Course ID: HRHI01	Course name: RADIONUCLIDES		
Cycle: SECOND	Year: FIRST	Semester: I	ECTS credits: 4
Course status: ELECTIVE		Total course hours: 30 Lectures: 30	
Teaching participants:	Teachers and associates with expertise in the field to which the subject belongs		
Prerequisite for enrollment:	-		
Course aims:	The goal of the module is to get acquainted with radionuclides and their application.		
Thematic course units:	<ol style="list-style-type: none">1. Radiohalogens2. Organic radionuclides3. Metals as radionuclides4. Selection of radionuclides for radiotherapy5. Therapy with radionuclides6. Radionuclides for heart research, isotopic search7. Radionuclides for exploring the gastrointestinal system, radiation damage8. Radionuclides for the study of the osteoarthritic system, radiological diagnostics9. Development of radionuclides for monitoring gene therapy10. Peptides in radiotherapy		
Learning outcomes:	Knowledge: Students will gain knowledge about different radionuclides. Skills: Students will be able to interpret the application of radionuclides. Competences: Application of radionuclides in various analyzes.		
Teaching methodology:	Lectures (oral presentation and interactive classes)		
Assessment methods and grading system¹:	Grading criteria		
	Criteria	Maximal score	Required score
	1. Class attendance	5	3
	2. Midterm I	25	13,5
	3. Midterm II	30	16,5
4. Final exam	40	22	
Total	100	55	

¹The grading structure for each subject is determined by the Council of the organizational unit before the beginning of the academic year in which the subject is taught as per Article 64, paragraph 6 of the Law on Higher Education of Sarajevo Canton

	Scores and grading		
	Score	Grade (BiH)	Grade (ECTS)
	< 55	5	F, FX
	55–64	6	E
	65–74	7	D
	75–84	8	C
	85–94	9	B
	95–100	10	A
Literature²:	<p>Supplementary literature:</p> <ol style="list-style-type: none"> 1. A. Hebrang, R. Klarić-Čustović, Radiologija, Medicinska naklada, Zagreb, 2007 2. D.R. Dance, S.Christofides, A.D.A.Maidment, I.D. McLean, K.H. Ng, Diagnostic Radiology Physics, IAEA, Vienna, 2014 3. S.M.Qaim, F.Tarkanyi, R. Capote, Nuclear data for Product of Therapeutic Radionuclides, IAEA, 2011 4. S.Vallabhajosula, Molecular Imaging, Radiopharmaceuticals for PET and SPECT, Springer, 2009 5. M.J.Welch, C. S.Redvanly, Handbook of Radiopharmaceuticals, Radiochemistry and Applications, Wiley Inc.USA, 2003 6. W. Loveland, D.J. Morrissey, G.T. Seaborg, Modern Nuclear Chemistry, Wiley Inc.USA 		

²The Senate of the higher education institution, as an institution, or the Council of the organizational unit of the higher education institution, as a public institution, determines by a special decision, which is published on its website before the beginning of the academic year obligatory, mandatory and recommended textbooks and manuals, as well as other recommended literature based on which exams are prepared and taken as per Article 56, paragraph 3 of the Law on Higher Education of the Sarajevo Canton