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:	1. Radiohalogens 2. Organic radionuclides 3. Metals as radionuclides 4. Selection of radionuclides for radiotherapy 5. Therapy with radionuclides 6. Radionuclides for heart research, isotopic search 7. Radionuclides for exploring the gastrointestinal system, radiation damage 8. Radionuclides for the study of the osteoarthritic system, radiological diagnostics 9. Development of radionuclides for monitoring gene therapy 10. 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 system[1]:

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

[1]The 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

Literature[2]:

Supplementary literature:

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

[2] The 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