Course ID: HOB413	**Course name: FOOD CONTAMINANTS**		
Cycle: FIRST	**Year: Fourth**	**Semester: VIII**	**ECTS credits: 3**
Course status: ELECTIVE		**Total course hours: 45** Lectures: 30 Laboratory: 15	
Teaching participants:	**Teachers and associates with expertise in the field to which the subject belongs**		
Prerequisite for enrollment:	NO		
Course aims:	The aim of course is to introduce students to basic food contaminants (origin of pollution, character of contaminants and their distribution in the food), the basics of preparing food samples and techniques for the identification and quantification of specific pollutants.		
Thematic course units:	1. Fundamentals of chemistry and biochemistry of food (composition, energy value, essential components, etc.). 2. Toxins (microbiological: bacterial and mycotoxins and plant from the sea organisms), species of toxins, identification, quantification and removal. 3. Genetically modified organisms. Advantages and disadvantages. Detection. 4. Additives, heavy metals and pesticides in food. 5. Longlasting organic pollutants in food. 6. Migration of toxins from packaging and food adulteration. 7. Biochemical methods in food analysis. 8. Methods of sample preparation for analysis (SPE, SPME, SBSE, etc.). 9. Combined methods in analysis of food contaminants. 10. The complex analysis of the contamination.		
Learning outcomes:	Knowledge: The student knows the origin and types of food contaminants and is familiar with the methods for determination of food contaminants and the basic legal regulations related to them. Skills: The student can apply the methods of preparing samples for analysis as well as biochemical methods in food analysis.		
Teaching methodology:	Classroom lectures and laboratory exercises		

Assessment methods and grading system[1]:

Grading criteria		
Criteria	Maximal score	Required score
1. Class attendance	5	3
2. Class activities	10	5
3. Midterms	45	25
4. Final exam	40	22
Total	100	55

Scores and grading		
Score	Grade (B&H)	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]:

Mandatory literature:

1. D'Mello J. P. F. (2003) Food Safety: Contaminants and Toxins, Scottish Agricultural College, Edinburgh, UK.
2. Pazarinčević, J., Mirić, M., Rajković, V., Baras J. (1974) Analiza životnih namirnica, Tehnološko-metaluški fakultet, Beograd.

Supplementary literature:

1. Wilson, D., Cooke, M., Poole, C. F. (2000) Encyclopedia of Separation Science, Academic Press, 2000.

[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

[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