
	UNIVERSITY OF EAST SARAJEVO					
	Faculty of Technology Zvornik					
	Study program: <i>Chemical Engineering and Technology / Food Technology</i>					
	Cycle I	Academic year IV				
Course title	FOOD PACKAGING TECHNOLOGIES					
Department	Department of Food Technology - Faculty of Technology Zvornik					
Course code	Status	Semester	ECTS			
TF-1-1-HIT-04-2-111-7-4-2-2	Elective	VII	4			
Teacher	Dragan Vujadinović, PhD, Associate Professor					
Teaching assistant	Milan Vukić, PhD, Assistant Professor					
Number of classes/ teaching workload (per week)		Individual student workload (in semester hours)			Student workload coefficient S₀	
P	AV	LV	P	AV	LV	S₀
2	0	2	45	0	45	1.50
total teaching load (in hours, semester) 2 * 15 + 0 * 15 + 2 * 15 = 60 h			total student workload (in hours, semester) 2 * 15 * 1.50 + 0 * 15 * 1.50 + 2 * 15 * 1.50 = 90			
Total course workload (teaching + student): 60 + 90 = 150 hours per semester						
Learning outcomes	<p>After finishing the course, students will be able to:</p> <ol style="list-style-type: none"> 1. understand the basic properties and function of food packaging materials; 2. demonstrate and utilize the knowledge of the materials and their properties / requirements for the manufacture and use of food packaging; 3. understand the method of processing materials and making packaging from different materials for the purpose of food packaging; 4. understand and master the processes of food and beverage packaging; 5. apply appropriate methods for determining the basic parameters of quality control of food packaging materials; 6. interpret and understand the labels on the packaging; 7. independently improve and apply available knowledge and experience. 					
Prerequisites						
Teaching methods	Lectures, laboratory work					
Syllabus outline per week	<ol style="list-style-type: none"> 1. Introduction. History and division of food packaging. 2. Functions and importance of packaging in food packaging. Barrier properties of packaging materials and packaging. 3. Packaging materials (paper and cardboard, plastic, wood, glass, metal, complex packaging materials, biodegradable and edible packaging). 4. Methods of processing, lines for the production of packaging materials and packaging. 5. Packaging forms: wrappers, bags and sacks, boxes, crates, barrels, buckets, bottles, cans, jars, bottles, tubes, glasses. 6. Packaging from complex (multilayer) packaging materials: properties, production and application of packaging from multilayer materials, packaging systems. 7. Food packaging design. 8. Packaging for certain types of food. Interaction of food and packaging. 9. Migrations and factors influencing migrations. Barrier effect and permeability. Legislation on materials and objects in contact with food. 10. Packaging systems, machines and devices for food packaging. 11. Vacuum packaging, modified atmosphere packaging, aseptic packaging, active and intelligent packaging. 12. Transport packaging, pallets and containers, dimensional and mechanical characteristics and conditions of application. Standardization of packaging materials and packaging. 13. Legal regulations on food product labelling. Design and quality of product labels, EAN code and benefits of machine packaging. 14. Trends and innovations in the application, packaging and production of food packaging. 					

15. Packaging and environmental protection.				
Required literature				
Author / s	Title of publication, publisher	Year	Pages (from-to)	
Muhamedbegović, B., Juul, NV, Jašić, M.	Food packaging and packaging	2015	1-233	
Crnčević, V.	Food packaging. Privredni pregled, Beograd	1980	1-220	
Supplementary literature				
Author / s	Title of publication, publisher	Year	Pages (from-to)	
Robertson, GL	Food Packaging - Principles and Practice, Marcel Dekker, Inc., New York	2013	1-380	
Jung HH	Innovations in Food Packaging, Elsevier Ltd	2005	61-235	
Da-Wen S.	Handbook of frozen food packaging and processing, Taylor & Francis Group, LLC	2006	1-503	
Obligations, assessment methods and grading system	Type of student work evaluation		Points	Percentage
	Prerequisites			
	Attendance at lectures / exercises		6	6%
	Mid-term test (colloquium) 1		20	20%
	Mid-term test (colloquium) 2		20	20%
	Laboratory exercises		24	24%
	Final exam (oral)		30	30%
	TOTAL		100	100%
Website	www.tfzv.ues.rs.ba			
Date	2023			