
	<b>UNIVERSITY OF EAST SARAJEVO</b> Faculty of Technology					
	<b>Study program: Chemical Engineering and Technology / Food Technology</b>					
	Cycle I	Academic year IV				
<b>Course title</b>	TECHNOLOGY OF FOOD PACKAGING					
<b>Department</b>	Department of Food Technology - Faculty of Technology					
<b>Course code</b>	<b>Status</b>	<b>Semester</b>	<b>ECTS</b>			
TF-1-1-HIT-04-2-111-7-4-2-2	elective	VII	4			
<b>Teacher</b>	Dragan Vujadinović, PhD, Assistant Professor					
<b>Teaching assistant</b>	Milan Vukić, M.Sc. Senior Assistant					
<b>Number of classes/ teaching workload (per week)</b>		<b>Individual student workload (in semester hours)</b>		<b>Student workload coefficient S<sub>0</sub></b>		
<b>P</b>	<b>AV</b>	<b>LV</b>	<b>P</b>	<b>AV</b>	<b>LV</b>	<b>S<sub>0</sub></b>
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						
<b>Learning outcomes</b>	<p>Student will demonstrate knowledge / abilities to:</p> <ol style="list-style-type: none"> <li>1. understand the basic properties and function of food packaging materials;</li> <li>2. knows the materials and their properties / requirements for the manufacture and use of food packaging;</li> <li>3. understand the method of processing materials and making packaging from different materials for the needs of food packaging;</li> <li>4. understands and masters the processes of food and beverage packaging;</li> <li>5. apply appropriate methods for determining the basic parameters of quality control of food packaging materials;</li> <li>6. interprets the markings on the packaging and understands the markings;</li> <li>7. independently improves, applies available knowledge and experience.</li> </ol>					
<b>Conditionality</b>						
<b>Teaching methods</b>	Lectures, laboratory work					
<b>Syllabus outline per week</b>	<ol style="list-style-type: none"> <li>1. Introduction. History and division of food packaging.</li> <li>2. Functions and importance of packaging in food packaging. Barrier properties of packaging materials and packaging.</li> <li>3. Packaging materials (paper and cardboard, plastic, wood, glass, metal, complex packaging materials, biodegradable and edible packaging).</li> <li>4. Methods of processing, lines for the production of packaging materials and packaging.</li> <li>5. Packaging forms: wrappers, bags and sacks, boxes, crates, barrels, buckets, bottles, cans, jars, bottles, tubes, glasses.</li> <li>6. Packaging from complex (multilayer) packaging materials: properties and production and application of packaging from multilayer materials, packaging systems.</li> <li>7. Food packaging design.</li> <li>8. Packaging for certain types of food. Interaction of food and packaging.</li> <li>9. Migrations and factors influencing migrations. Barrier effect and permeability. Legislation on materials and objects in contact with food.</li> <li>10. Packaging systems, machines and devices for food packaging.</li> <li>11. Vacuum packaging, modified atmosphere packaging, aseptic packaging, active and intelligent packaging.</li> <li>12. Transport packaging, pallets and containers, dimensional and mechanical characteristics and conditions of application. Standardization of packaging materials and packaging.</li> <li>13. Legal regulations in the function of marking and declaring products. Design and quality of product declaration, Ean code and benefits of machine packaging.</li> <li>14. Trends and innovations in the application, packaging and production of food packaging.</li> <li>15. Packaging and environmental protection</li> </ol>					
<b>Required literature</b>						
<b>Author / s</b>	<b>Title of publication, publisher</b>	<b>Year</b>	<b>Pages (from-to)</b>			

Muhamedbegović, B., Juul, NV, Jašić, M.	Food packaging and packaging	2015	1-233	
Crnčević, V.	Food packaging. Privredni pregled, Beograd	1980	1-220	
<b>Supplementary literature</b>				
<b>Author / s</b>	<b>Title of publication, publisher</b>	<b>Year</b>	<b>Pages (from-to)</b>	
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	
<b>Obligations, assessment methods and grading system</b>	<b>Type of student work evaluation</b>		<b>Points</b>	<b>Percentage</b>
	Prerequisites			
	attendance at lectures / exercises		6	6%
	colloquium 1		20	20%
	colloquium 2		20	20%
	Laboratory exercises		24	24%
	Final exam (oral)		30	30%
TOTAL		100	100%	
<b>Website</b>	<a href="http://www.tfzv.ues.rs.ba">www.tfzv.ues.rs.ba</a>			
<b>Date</b>				