


		UNIVERSITY OF EAST SARAJEVO Faculty of Technology Zvornik					
		Study programme: Chemical Engineering and Technology					
		Study module: Food Technology					
		Cycle I		Year IV			
Course title		Confectionery Technology					
Department		Department for Food Technology – Faculty of Technology Zvornik					
Course code		Course status		Semester		ECTS	
04-2-120-8		Elective		VIII		5	
Teacher		Milan Vukic, PhD, Assistant Professor					
Teaching assistant		Milan Vukic, PhD, Assistant Professor					
Number of hours/ teaching workload (per week)			Individual student workload (in hours per semester)			Student workload coefficient S₀	
Lectures	Auditory exercises	Laboratory exercises	Lectures	Auditory exercises	Laboratory exercises	S₀	
3	0	2	45	0	30	1.00	
$3*15+0*15+2*15=75$ hours			$(3*15*1.00+0*15*1.00+2*15*1.00)=75$ hours				
Total course workload 75 + 75 = 150 hours per semester							
Learning outcomes		After finishing the course, students will be able to: <ol style="list-style-type: none"> analyze the chemical composition to assess the raw material's technological quality understand the biochemical and microbiological processes in confectionery raw materials participate in chocolate production processes participate in the production of candy products participate in the production of biscuits and related products define control and critical control points in production. 					
Prerequisites		None					
Teaching methods		Lectures, auditory and laboratory exercises, mid-term tests (colloquia).					
Syllabus outline per week		<ol style="list-style-type: none"> Introduction. Raw materials in confectionery production. Fats - specialized fats in confectionery technology. Leavening agents, sweeteners, foaming agents, gelling agents, and more. Other raw materials in confectionery production. Cocoa bean processing, cocoa mass production, cocoa flavor enhancement. Cocoa butter and cocoa powder production technology. Chocolate mass and chocolate production technology. Production of chocolate-like and cream products. Sugar and sugar syrup solution production. Technological processes of candy production. Special flours, raw materials, and rheological properties of biscuit dough. Technological processes for hard biscuits, savory biscuits, and tea pastries. Technology of gingerbread, biscuits, wafers, and related products. Extrusion-expansion in cereals processing. Safety and quality assessment of confectionery products. Mid-term tests are taken after the 8th week and the 15th week. Semester verification is required after the 15 th week.					
Obligatory reading							
Author		Title, publisher		Year	Pages		
Beckett, T S		The Science of Chocolate 2 nd Edition, RSC Publishing, Cambridge, UK		2008	(1-240)		
Edwards, P. W.		The Science of Sugar Confectionery, RSC Publishing, Cambridge, UK		2000	(1-166)		
Street, C. A.		Flour confectionery manufacture. John Wiley & Sons.		1991	(1-227)		
Additional reading							

Author	Title, publisher	Year	Pages	
Hartel, R. W., von Elbe, J. H., & Hofberger, R.	Confectionery Science and Technology, Berlin/Heidelberg, Germany: Springer.	2018	(1-510)	
Obligations, assessment methods and grading system	Type of student evaluation		Grade points	Percentage
	Pre-exam obligations			
		Attendance	6	6 %
		Mid-term test I	20	20 %
		Mid-term test II	20	20 %
		Laboratory exercises	24	24 %
	Final examination			
		Final examination (oral)	30	30 %
	Total	100	100 %	
Web page	www.tfzv.ues.rs.ba			
Date	2023			