
		<b>UNIVERSITY OF EAST SARAJEVO</b> Faculty of Technology Zvornik					
		<b>Study programme: Chemical Engineering and Technology</b>					
		Cycle I		Year IV			
<b>Course title</b>		ORGANIC CHEMICAL TECHNOLOGY 2					
<b>Department</b>		Department for Chemical Technologies– Faculty of Technology Zvornik					
<b>Course code</b>		<b>Course status</b>		<b>Semester</b>		<b>ECTS</b>	
04-1-059-8		Compulsory		VIII		7	
<b>Teacher</b>		Zoran Petrović, PhD, Assoc. Prof.					
<b>Teaching assistant</b>		Nebojša Vasiljević, MSc, Senior Teaching Assistant					
<b>Number of hours/ teaching workload (per week)</b>			<b>Individual student workload (in hours per semester)</b>			<b>Student workload coefficient S<sub>0</sub></b>	
<b>Lectures</b>	<b>Auditory exercises</b>	<b>Laboratory exercises</b>	<b>Lectures</b>	<b>Auditory exercises</b>	<b>Laboratory exercises</b>	<b>S<sub>0</sub></b>	
3	1	2	60	20	40	1.33	
3*15+1*15+2*15=90 hours			(3*15*1.33+1*15*1.33+2*15*1.33)=120 hours				
Total course workload 90 + 120=210 hours per semester							
<b>Learning outcomes</b>		After finishing the course, students will be able to: <ol style="list-style-type: none"> <li>1. demonstrate and utilize basic knowledge of product technologies based on natural raw materials, basics of conservation, pharmaceutical and cosmetic industry, as well as means for plant care and protection</li> <li>2. master the material and energy balance of the mentioned technologies</li> <li>3. demonstrate and utilize skills in controlling and managing optimal parameters of given technological processes</li> <li>4. demonstrate and utilize knowledge about methods for characterizing raw materials and products of the mentioned technologies</li> <li>5. master the process simulation in laboratory conditions.</li> </ol>					
<b>Prerequisites</b>							
<b>Teaching methods</b>		Lectures, auditory exercises, experimental exercises, industrial visits, seminar paper					
<b>Syllabus outline per week</b>		<ol style="list-style-type: none"> <li>1. Introduction to Organic Chemical Technology II. Raw materials and products of organic chemical technology. Ecological aspects.</li> <li>2. Wood processing (charcoal, dry distillation of wood, briquettes and pellets, thermal wood).</li> <li>3. Cellulose technology (sulfite and sulfate processes). Characterization and application of cellulose.</li> <li>4. Technology of cellulose derivatives (nitrocellulose, carboxymethylcellulose, other derivatives) and paper (basic properties and types of paper, technological processes of production and application of paper and cardboard).</li> <li>5. Technology of textile fibers (Concept and properties of textile fibers, natural fibers, chemical fibers and their classification, fibers from natural polymers, fibers from natural modified polymers, fibers from synthetic polymers, inorganic chemical fibers).</li> <li>6. Technology of leather processing (structural and chemical composition, raw leather preservation procedures, leather preparation for tanning, tanning agents, finishing and tanned leather clothing).</li> <li>7. Starch technology (structure and chemical composition, basic fractions, procedures for separating fractions, production of starch from corn and potatoes, starch hydrolysis and hydrolysis products, starch modification products).</li> <li>8. Sugar technology (structure, chemical composition and division of carbohydrates, basic and auxiliary raw materials for sugar production, description of the technological process of raw diffused juice production, raw sugar refining procedures, side products of sugar production, application of sucrose).</li> <li>9. Technology of natural oils and fats (structure and composition, raw materials for obtaining oil, preparation of oil plants for production, production procedures, refining of crude oil, limits and areas of explosiveness, preventive fire protection measures, side products in the production of edible oils, structure and production vegetable and animal fats, hydrolysis, hydrogenation and saponification of fats and oils).</li> <li>10. Fermentation technology (general about fermentation as a biochemical process, fermentable raw materials, alcoholic fermentation, production of ethanol from biological material, distillation, secondary products).</li> <li>11. Beer technology (basic and auxiliary raw materials, malt production, wort production, other stages of beer production).</li> </ol>					

	<p>12. Technology of soft drinks (general facts about soft drinks, classification of soft drinks, production of natural mineral water, production of all kinds of fruit juices and drinks, use of sweeteners, preservation of fruit raw materials).</p> <p>13. Basics of pharmaceutical and cosmetic technology (the concept of drugs, the process of producing drugs in tablets and capsules, technological processes of the production of acetylsalicylic acid, the concept of supplements, galenic preparations, tinctures, instant products, the concept of cosmetology, the production of some preparations for body care and beautification).</p> <p>14. Basics of conservation technology (importance of food conservation, basic causes of food spoilage, basic principles and procedures of conservation, chemical conservation, biological conservation).</p> <p>15. Technology of production of plant protection and care products (procedures of feeding and care of plants, basic concepts of nutrient addition; single, complex and foliar fertilizers; plant protection, types of pesticides, production of liquid pesticides, method of use and protection measures).</p>			
<b>Obligatory reading</b>				
<b>Author</b>	<b>Title, publisher</b>	<b>Year</b>	<b>Pages</b>	
Sadadinović, J.	Organska tehnologija, Ars grafika, Tuzla	2008	1-154, 212-313	
Ilišković, N.	Organska hemijska tehnologija, Svjetlost, Sarajevo	1992	5-98, 198-225, 287-334, 335-384, 417-452	
Lučić, P.	Proizvodnja jakih alkoholnih pića, Nolit, Beograd	2001		
Petrović, Z., Dugić, P., Aleksić, V.	Fizičko-hemijska ispitivanja u procesima organske industrije, Tehnološki fakultet Zvornik	2011		
<b>Additional reading</b>				
<b>Author</b>	<b>Title, publisher</b>	<b>Year</b>	<b>Pages</b>	
Jovanović, P.	Osnovi nauke o vlaknima, Građevinska knjiga, Beograd	1988		
Raljić-Popov, J.	Tehnologija šećera i skroba, Poljoprivredni fakultet Beograd	2009		
Juhac, E.	Metode konzervisanja prehrambenih proizvoda, Tehnološki fakultet Novi Sad	1987		
Vuleta, G.	Kozmetologija, Nauka, Beograd	1994		
<b>Obligations, assessment methods and grading system</b>	<b>Type of student evaluation</b>		<b>Grade points</b>	<b>Percentage</b>
	Pre-exam obligations			
	Attendance		6	6 %
	Mid-term test/Colloquium 1		14	14 %
	Mid-term test/Colloquium 2		14	14 %
	Mid-term test/Colloquium 3		10	10 %
	Laboratory exercises		20	20 %
	Seminar paper		6	6 %
	Final examination			
Final examination (oral)		30	30 %	
Total		100	100 %	
<b>Web page</b>	www.tfzv.ues.rs.ba			
<b>Date</b>	2023			