PARCE SECTION AND THE SECTION

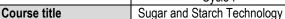
UNIVERSITY OF EAST SARAJEVO

Faculty of Technology Zvornik

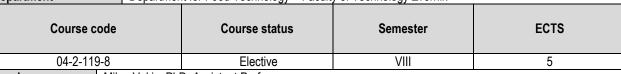
Study programme: Chemical Engineering and Technology

Study modul: Food Technology

Cycle I Year IV



Department Department for Food Technology – Faculty of Technology Zvornik



Teacher Milan Vukic, PhD, Assistant Professor.

Teaching assistant Milan Vukic, PhD, Assistant Professor.

Number of claweek)	Individual student workload (in hours per semester)			Student workload coefficient S _o			
Lectures	Auditory exercises	Laboratory exercises	Lecture	es	Auditory exercises	Laboratory exercises	S _o
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

	1.	T
Learning	2.	T
outcomes	3.	T
	1	Т

- After finishing the course, students will be able:
 - 1. To participate in sugar production from various raw materials.
 - 2. To participate in starch production from various raw materials.
 - 3. To participate in modified starch production.4. To participate in starch hydrolysate production.
 - To select control and critical control points in production.

Prerequisites None

Teaching methods Lectures, auditory and laboratory exercises, mid-term tests (colloquia).

- 1. Introduction. Carbohydrates, classification, and properties.
- 2. Sucrose production from sugar beet. Preparation for extraction.
- 3. Juice extraction and clarification. Juice concentration.
- 4. Crystallization and centrifugation. Post-centrifugation crystal treatment and storage.
- 5. Molasses properties, uses, quality control.
- 6. Raw materials in starch production. Physical and chemical properties of starch.
- 7. Starch production from corn, potatoes, and wheat.

Syllabus outline per week

- 8. Modified starch production.
- 9. Enzymes in starch technology. Production of starch hydrolysates.
- 10. Production of maltodextrin, starch syrup, glucose syrup, maltose syrups.
- 11. High fructose syrup and fructose production.
- 12. Crystalline glucose production.
- 13. Production of sugar alcohols (polyols).
- 14. Product quality control. Legislation.
- 15. Waste materials from sugar and starch production and their disposal.

Mid-term tests are taken after the 8th week and the 15th week. Semester verification is required after the 15th week.

Obligatory reading						
Author	Title, publisher	Year	Pages			
Van der Poel, P. W., Schiweck, H.,Schwartz, T.	Sugar Technology. Verlag Dr. Albert Bartens KG Berlin, Germany	1998	(1-343)			
BeMiller, J. Whistler, R.	Starch: Chemistry and Technology, Third edition, Elsevier Inc. Oxford, UK:	2009	(745-829)			
Additional reading						
Author Title, publisher			Pages			
Van der Poel, P. W., Schiweck, H.,Schwartz, T.	Sugar Technology. Verlag Dr. Albert Bartens KGBerlin, Germany	1998	(344-543)			



Jane, J. L.		Starch functionality in food processing. In: Starch: Structure and Funcionality, RSC Publishing, Cambridge, UK			(26-35)
	Type of student evaluation			Grade points	Percentage
	Pre-exam o	bligations			
Ob!:4:		Atter	dance	6	6 %
Obligations,		Mid-terr	n test I	20	20 %
assessment		Mid-term Mid-term	test II	20	20 %
methods and grading system		Laboratory exe	ercises	24	24 %
grauning system					
	Final exami	nation			
		Final examination	n (oral)	30	30 %
	Total			100	100 %
Web page	www.tfzv.ue	s.rs.ba		·	
Date	2023				