

Study programme: BIOTECHNOLOGY
Module: BIOCHEMICAL ENGINEERING

No.	Subject Name	Semester	Classes			ECTS
			Lecture	Exercises	Laboratory	
1.	Calculus 1	1	4	4	0	9
2.	Engineering Physics	1	3	2	0	6
3.	General and Inorganic Chemistry	1	4	0	3	8
4.	Election Block 1	1	1	0	2	3
	English Language - Elementary Level					
	English Language - Upper-intermediate Level					
5.	Election Block 2	1	2	2	0	4
	Calculations in Chemistry					
	Chemical Laboratory Practicum					
6.	Calculus 2	2	4	4	0	9
7.	Organic Chemistry	2	4	0	3	9
8.	Analytical Chemistry	2	3	0	3	7
9.	Election Block 3	2	2	0	2	5
	Introduction to Engineering					
	Mechanical Engineering Elements					
10.	Technical Thermodynamics	3	4	3	0	8
11.	Physical Chemistry	3	4	0	3	8
12.	Applications of Computers	3	2	0	4	7
13.	Chemistry of Natural Products	3	3	0	3	7
14.	Unit Operations 1	4	3	3	1	9
15.	Biochemistry	4	3	0	3	8
16.	Microbiology	4	3	0	3	7
17.	Election Block 4	4	3	0	2	6
	Colloid Chemistry					
	Biocatalysts in Biotechnological Production					
18.	Unit Operations 2	5	3	2	1	7
19.	Bioprocess Engineering	5	3	3	0	6
20.	Industrial Microbiology	5	3	0	3	6
21.	Microbiological Bioprocess Control	5	2	0	3	5
22.	Election Block 5	5	2	0	3	6
	Measurements and Instrumental Technique					
	Raw Materials in Biotechnology					
23.	Instrumental Methods of Analysis	6	3	0	4	7
24.	Basics of Cell and Organism Biology	6	2	0	2	4
25.	Bioprocess Equipment	6	3	2	1	6
26.	Bioreactors	6	3	2	1	6
27.	Election Block 6	6	2	0	2	4
	Materials in Biotechnology					

	Bioprocess Monitoring					
28.	Practice	6				3
29.	Bioseparations Engineering	7	3	1	2	6
30.	Genetic Engineering	7	3	0	3	6
31.	Bioprocess Dynamics and Control	7	3	3	0	6
32.	Enzyme Engineering	7	3	0	3	6
33.	Election Block 7	7	3	3	0	6
	Wastewater Technology					
	Water Technology					
34.	Bioprocess Design	8	3	1	2	6
35.	Bioprocesses in Environmental Protection	8	3	0	3	6
36.	Election Block 8	8	2	1	0	3
	Management of Industrial Production					
	Small Production Systems					
37.	Preparation and Defense of Bachelor Thesis	8				15