

"LUCIAN BLAGA" UNIVERSITY OF SIBIU
 FACULTY OF AGRICULTURAL SCIENCES, FOOD INDUSTRY AND ENVIRONMENT PROTECTION
 DOMAIN OF ACADEMIC LICENSE STUDIES: BIOTECHNOLOGIES
 SPECIALIZATION: BIOTECHNOLOGIES FOR FOOD INDUSTRY
 LEVEL OF ACADEMIC QUALIFICATION: ENGINEER
 DURATION OF STUDIES: 4 YEARS
 EDUCATION FORM: FULL TIME

APPROVED BY THE RECTOR,
 Prof. Ioan BONDREA, Ph.D.

CURRICULUM

YEAR I

No.	SUBJECT MATTERS	Code	Ist Semester						IInd Semester					
			C	S	L	P	FV	No. of credits	C	S	L	P	FV	No. of credits
FUNDAMENTAL SUBJECT MATTERS														
1.	Mathematical statistics	39.08.05.F.05.I.001	2	2	-	-	E	4	-	-	-	-	-	-
2.	Organic Chemistry	39.08.05.F.05.I.002	2	-	2	-	E	4	-	-	-	-	-	-
	Food Chemistry	39.08.05.F.05.I.002	-	-	-	-	-	-	2	-	1	-	E	4
3.	General Chemistry	39.08.05.F.05.I.003	2	-	1	-	E	3	-	-	-	-	-	-
4.	Biophysics	39.08.05.F.05.I.004	2	-	1	-	E	4	-	-	-	-	-	-
5.	General biology	39.08.05.F.05.I.005	2	2	-	-	E	3	-	-	-	-	-	-
6.	Computers programming and languages	39.08.05.F.05.I.006	2	-	2	-	C	3	-	-	-	-	-	-
	Computer Aided Graphics for biotechnologies	39.08.05.F.05.I.006	-	-	-	-	-	-	1	-	2	-	C	3
7.	Biochemistry	39.08.05.F.05.I.007	-	-	-	-	-	-	2	-	2	-	E	5
8.	Ecology and protection of environment in food industry	39.08.05.F.05.I.008	-	-	-	-	-	-	2	-	1	-	C	4
PREPARATORY SUBJECT MATTERS														
9.	Analytical Chemistry	39.08.05.D.05.I.009	2	-	2	-	C	5	-	-	-	-	-	-
	Instrumental Analysis	39.08.05.D.05.I.009	-	-	-	-	-	-	2	-	2	-	E	5
10	Drawing	39.08.05.D.05.I.010	-	-	-	-	-	-	1	-	2	-	E	3
11	Mechanical Engineering I	39.08.05.D.05.I.011	-	-	-	-	-	-	2	1	-	-	E	4
SUPPLEMENTARY SUBJECT MATTERS														
12	Foreign language I	39.08.05.C.05.O.012	1	1	-	-	C	3	-	-	-	-	-	-
	Foreign language II	39.08.05.C.05.O.012	-	-	-	-	-	-	1	1	-	-	C	3
Total compulsory hours per week			14	5	8	-	5E	29	13	2	10	-	5E	31
			27				3C	29	25				3C	31
13	Psysical education I	39.08.05.C.05.I.013	-	2	-	-	A	-	-	-	-	-	A	-
	Psysical education II	39.08.05.C.05.I.013	-	-	-	-	R	-	-	2	-	-	R	-

DEAN
 Prof. Ovidiu TIȚA, Ph.D.

HEAD OF DEPARTMENT
 Prof. Camelia SAVA, Ph.D

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YEAR II

No.	SUBJECT MATTERS	Code	IIIrd Semester						IVth Semester					
			C	S	L	P	FV	No. of credits	C	S	L	P	FV	No. of credits
FUNDAMENTAL SUBJECT MATTERS														
14	Food Microbiology I	39.08.05.F. 05.I.014	2	-	2	-	E	4	-	-	-	-	-	-
15	General enzymology	39.08.05.F. 05.I.015	2	-	2	-	E	4	-	-	-	-	-	-
16	Transfer Phenomena	39.08.05.F. 05.I.016	2	1	-	-	E	4	-	-	-	-	-	-
17	Genetics	39.08.05.F. 05.O.017	2	-	1	-	E	3	-	-	-	-	-	-
PREPARATORY SUBJECT MATTERS														
18	Cell biology	39.08.05.D. 05.I.018	2	-	2	-	E	4	-	-	-	-	-	-
19	Molecular biology	39.08.05.F. 05.I.019	-	-	-	-	-	-	2	1	-	-	C	4
20	Genetic Engineering	39.08.05.F. 05.I.020	-	-	-	-	-	-	2	-	1	-	E	3
21	Unit Operations and Equipments I	39.08.05.D. 05.I.021	-	-	-	-	-	-	3	-	2	-	E	5
22	Human Nutrition and Food Safety	39.08.05.D. 05.I.022	-	-	-	-	-	-	2	-	1	-	E	4
23	Food Microbiology II	39.08.05.D. 05.I.023	-	-	-	-	-	-	4	-	2	-	E	6
24	Special enzymology	39.08.05.D. 05.I.024	-	-	-	-	-	-	2	-	2	-	E	4
25	Cell culture and tissues	39.08.05.D. 05.I.025	-	-	-	-	-	-	2	-	2	-	E	4
26	Mechanical Engineering II Electrical Engineering	39.08.05.D. 05.O.026 39.08.05.D. 05.O.026	2	-	1	-	C	4	-	-	-	-	-	-
27	Industrial Training	39.08.05.D. 05.I.027	-	-	-	-	-	-	4 weeks x 5 days x 6 hrs./days = 120 hrs.				C	3
SPECIALIZATION SUBJECT MATTERS														
28	Toxicology and human innocuousness	39.08.05.S. 05.I.028	2	-	1	-	C	4	-	-	-	-	-	-
Total compulsory hours per week			14	3	9	-	5E 3C	29	17	3	10	-	6E 3C	35
SUPPLEMENTARY SUBJECT MATTERS														
29	Physical education	39.08.05.C. 05.I.013	-	2	-	-	<u>A</u> <u>R</u>	-	-	-	-	-	-	-
30.	English Language	39.08.05.C.05.O.012	-	2	-	-	<u>C</u>	2	-	2	-	-	C	2

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YEAR III

No.	SUBJECT MATTERS	Code	Vth Semester						VIth Semester					
			C	S	L	P	FV	No. of credits	C	S	L	P	FV	No. of credits
PREPARATORY SUBJECT MATTERS														
30.	Unit Operations and Equipments II	39.08.05.D. 05.I.029	3	-	1	-	E	4	-	-	-	-	-	-
			-	-	-	2	Pr	2						
31.	General Biotechnology	39.08.05.D. 05.I.030	4	-	2	-	E	6	-	-	-	-	-	-
32.	Plant biotechnology	39.08.05.D. 05.I.031	2	-	1	-	C	3	2	-	1	-	E	4
33.	Experimental technique	39.08.01.D.05.O.032	2	-	1	-	C	4	-	-	-	-	-	-
34.	Refrigeration	39.08.05.D. 05.I.033	3	-	1	-	C	2	-	-	-	2	Pr	2
35.	Industrial Training	39.08.05.D. 05.I.027	-	-	-	-	-	-	4 weeks x 5 days x 6 hrs./days = 120 hrs.				C	3
SPECIALIZATION SUBJECT MATTERS														
36.	Hygiene	39.08.05.S. 05.I.034	-	-	-	-	-	-	2	-	1	-	C	3
37.	Immunology	39.08.05.S. 05.I.035	2	-	1	-	C	3	-	-	-	-	-	-
38.	Biotechnologies for obtaining biomass and proteins	39.08.05.S.05.O.036	-	-	-	-	-	-	3	-	2	-	E	6
	Biotechnologies for obtaining enzymes													
39.	Biotechnologies for obtaining polysaccharides	39.08.05.S.05.O.037	-	-	-	-	-	-	3	-	2	-	E	6
	Biotechnologies for obtaining nutritional supplements													
40.	Biotechnologies for obtaining colorants and flavours	39.08.05.S.05.O.038	-	-	-	-	-	-	3	-	2	-	E	6
	Biotechnologies for obtaining alcohols													
41.	Biotechnologies for obtaining starter cultures	39.08.05.S.05.O.039	-	-	-	-	-	-	3	-	2	-	E	6
	Residual products for food industry and recycling biotechnology													
Total compulsory hours per week			17	0	8	2	3E 4C 1Pr	24	14	-	9	4	5E 1C 2Pr	36
			27				27							

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YEAR IV

No.	SUBJECT MATTERS	Code	VIIth Semester						VIIIth Semester					
			C	S	L	P	FV	No. of credits	C	S	L	P	FV	No. of credits
PREPARATORY SUBJECT MATTERS														
43	Management	39.08.05.D. 05.I.040	-	-	-	-	-	-	2	1	-	-	E	3
44	Marketing	39.08.05.D. 05.I.041	-	-	-	-	-	-	2	1	-	-	E	3
45	Biotechnological process automation	39.08.05.D. 05.I.042	2	-	2	-	C	3	-	-	-	-	-	-
			-	-	-	-	-	-	2	-	1	-	E	3
46	Control and quality assurance in biotechnologies	39.08.05.D. 05.I.043	3	-	2	-	E	5	-	-	-	-	-	-
47	Plant biotechnology project	39.08.05.D. 05.I.044	-	-	-	-	-	-	-	-	-	2	Pr	3
48	Legislation for consumer protection	39.08.05.D. 05.I.045	-	-	-	-	-	-	1	1	-	-	C	3
SPECIALIZATION SUBJECT MATTERS														
49	Integrated manufacturing systems	39.08.05.S.05.I.046	-	-	-	-	-	-	2	-	2	-	C	4
50	Food biotechnology packet I Biotechnologies in wine industry Biotechnologies in fermentation industry	39.08.05.S.05.O.047	3	-	2	-	E	6	-	-	-	-	-	-
51	Food biotechnology packet II Biotechnologies in starch and glucose industry Biotechnologies in canning industry	39.08.05.S.05.O.048	3	-	2	-	E	6	-	-	-	-	-	-
52	Food biotechnology packet III Biotechnologies in milk industry Biotechnologies in meat and fish industry	39.08.05.S.05.O.049	3	-	2	-	E	6	-	-	-	-	-	-
53	Food biotechnology packet IV Biotechnologies in baking industry Biotechnologies in milling industry	39.08.05.S.05.O.050	3	-	2	-	E	6	-	-	-	-	-	-
54	Biotechnology project	39.08.05.S.05.O.051	-	-	-	2	Pr	3	-	-	-	-	-	-
55	Elaboration Drafting Diploma	39.08.05.S.05.O.052							4 weeks x 5 days x 6 hrs./day =120 hrs.				Pr.	3
SUPPLEMENTARY SUBJECT MATTERS														
56	Bioethics and professional ethics	39.08.05.C.05.I.053	-	-	-	-	-	-	2	1	-	-	C	3
Total compulsory hours per week			17	-	12	2	5E 1Pr 1C	35	12	4	3	2	3E 3C 2Pr.	25
			31						21					
57. License Exam													E	10

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