

PROGRAM OF BSC LEVEL STUDIES OF BIOTECHNOLOGY (2017/2018)

L - lecture, c – practices, seminars, laboratories

SEMESTER	No.	Course / module	ECTS	Exam (E) or completion (z)	Hours					Number of class hours											
										1 st year				2 nd year				3 rd year			
					In total	Lecture (L)	Practices (c)	Seminar (c)	Laboratories (c)	1st sem.		2nd sem.		3rd sem.		4th sem.		5th sem.		6th sem.	
										15 weeks	15 weeks	15 weeks	15 weeks	15 weeks	15 weeks	15 weeks	15 weeks				
L	c	L	c	L	c	L	c	L	c	L	c	L	c	L	c						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
I	1.	Biology	5 (3/2)	E/z	60	30	–	–	30	30	30	–	–	–	–	–	–	–	–	–	–
	2.	General and Inorganic Chemistry	8 (5/3)	E/z	60	30	–	–	30	30	30	–	–	–	–	–	–	–	–	–	–
	3.	Mathematics with Elements of Statistics	10 (6/4)	E/z	60	30	30	–	–	30	30	–	–	–	–	–	–	–	–	–	–
	4.	Introduction to Biochemical Calculations	3	z	30	–	30	–	–	–	30	–	–	–	–	–	–	–	–	–	–
	5.	Computer Sciences	4 (2/2)	z	45	15	30	–	–	15	30	–	–	–	–	–	–	–	–	–	–
	6.	Polish / Foreign language	–*	z**	60	–	60	–	–	–	60	–	–	–	–	–	–	–	–	–	–
30 ECTS / 315 h; 3 exams																					
II	7.	Physicochemical Methods in Biology	6 (3/3)	E/z	75	30	–	–	45	–	–	30	45	–	–	–	–	–	–	–	–
	8.	Structure and Function of Biomacromolecules	8 (4/4)	E/z	90	30	–	–	60	–	–	30	60	–	–	–	–	–	–	–	–
	9.	Organic Chemistry	8 (4/4)	E/z	90	45	–	–	45	–	–	45	45	–	–	–	–	–	–	–	–
	10.	Biochemical Calculations	4	z	45	–	45	–	–	–	–	–	45	–	–	–	–	–	–	–	–
	11.	Polish / Foreign language	–*	z**	60	–	60	–	–	–	–	–	60	–	–	–	–	–	–	–	–
	12.	Sport activities***	–	z	30	–	30	–	–	–	–	–	30	–	–	–	–	–	–	–	–
26 ECTS / 390 h; 3 exams																					

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
III	13.	Metabolism of Proteins, Carbohydrates, Nucleotides and Lipids	11 (6/5)	E/z	135	45	-	-	90	-	-	-	-	45	90	-	-	-	-	-	-
	14.	Metabolism of Nucleic Acids	4	E	20	20	-	-		-	-	-	-	20	-	-	-	-	-	-	-
	15.	Biophysical Chemistry	7 (4/3)	E/z	60	30	-	-	30	-	-	-	-	30	30	-	-	-	-	-	-
	16.	Plant Physiology	4 (2/2)	E/z	50	30	-	-	20	-	-	-	-	30	20	-	-	-	-	-	-
	17.	Genetics (L)	4	E	30	30	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-
	18.	Polish / Foreign language	-*	z**	60	-	60	-	-	-	-	-	-	-	60	-	-	-	-	-	-
	19.	Sport activities***	-	z	30	-	-	-	30	-	-	-	-	-	30	-	-	-	-	-	-

30 ECTS / 385 h; 5 exams

IV	20.	Microbiology	4 (2/2)	E/z	60	30	-	-	30	-	-	-	-	-	-	30	30	-	-	-	-
	21.	Animal Physiology	4 (2/2)	z	60	30	-	-	30	-	-	-	-	-	-	30	30	-	-	-	-
	22.	Genetics (c)	2	z	30	-	-	-	30	-	-	-	-	-	-	-	30	-	-	-	-
	23.	Techniques in Molecular Biology	4 (2/2)	z	65	20	-	-	45	-	-	-	-	-	-	20	45	-	-	-	-
	24.	Biophysics	6 (4/2)	E/z	60	30	-	-	30	-	-	-	-	-	-	30	30	-	-	-	-
	25.	Bionformatics	4 (2/2)	z	45	15	30	-	-	-	-	-	-	-	-	15	30	-	-	-	-
	26.	Seminar	2	z	30	-	-	30	-	-	-	-	-	-	-	-	30	-	-	-	-
27.	Intellectual property law	2	z	15	15	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	

28 ECTS / 365 h; 2 exams

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
V	28.	Molecular Organization of the Cell	7 (4/3)	E/z	90	30	-	-	60	-	-	-	-	-	-	-	-	30	60	-	-
	29.	Biotechnology	7 (4/3)	E/z	75	30	-	-	45	-	-	-	-	-	-	-	-	30	45	-	-
	30.	Preparative Biochemistry	5 (2/2)	E/z	45	15	-	-	30	-	-	-	-	-	-	-	-	15	30	-	-
	31.	Industrial Microbiology	3 (2/1)	E/z	60	30	-	-	30	-	-	-	-	-	-	-	-	30	30	-	-
	32.	Elective lecture	2	z	15	15	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-
	33.	Bioethics	2	z	15	15	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-
	34.	Seminar	2	z	30	-	-	30	-	-	-	-	-	-	-	-	-	-	30	-	-

28 ECTS / 330 h; 4 exams

VI	35.	Bioprocess Engineering	3 (2/1)	E/z	45	30	-	-	15	-	-	-	-	-	-	-	-	-	-	30	15	
	36.	Enzymology	5 (3/2)	E/z	75	30	-	-	45	-	-	-	-	-	-	-	-	-	-	30	45	
	37.	Economics	2 (1/1)	z	45	30	15	-	-	-	-	-	-	-	-	-	-	-	-	30	15	
	38.	Seminar	2	z	30	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	30
	39.	Immunology	5 (3/2)	E/z	60	30	-	-	30	-	-	-	-	-	-	-	-	-	-	30	30	
	40.	Cell Culture Techniques	3 (2/1)	E/z	45	15	-	-	30	-	-	-	-	-	-	-	-	-	-	15	30	
	41.	BSc seminar	12	z	5	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	5

32 ECTS / 305 h; 4 exams

186 ECTS; 2090 h

- Classes in the areas of humanities and social sciences
- Foreign language classes
- Sport classes

*12 ECTS will be awarded after successful completion of the course (3th semester), however it is allowed to take the final exam earlier.

** Students receive a „pass“ or „fail“ grade.

*** Sport activities – compulsory for everybody. In case of exemption from Sport activities because of some medical or health condition, non-sporting activities are available.