

Program of study
medical biotechnology
 (undergraduate program)

1 st year

Semester	Course name	Number of hours			Total number of hours	The course completion	ECTS
		Lectures	Classes	Seminars			
I	obligatory courses						
	Cell biology	15	30	15	60	E	4
	Physics and biophysics	15	30	15	60	E	4
	Human Anatomy and physiology with elements of ergonomy	15	30	15	60	E	4
	Animal biology	30	30	15	75	GC	4
	Mathematics	15	30	0	45	GC	3
	General chemistry	15	30	0	45	GC	3
	Plant biology	15	15	15	45	GC	3
	Polish for foreigners	0	30	0	30	C	3
	optional courses/free choice modules						
	* Aerobic and forcible forms of body shaping	0	30	0	30	C	2
	* Correction of body posture	0	30	0	30	C	2
II	obligatory courses						
	Organic chemistry	15	30	15	60	E	4
	General genetics	15	0	30	45	E	3
	Polish for foreigners	0	30	0	30	GC	3
	Physical chemistry	15	45	0	60	GC	4
	Economics	0	0	15	15	GC	2
	optional courses/free choice modules						
	* Aerobic and forcible forms of body shaping	0	30	0	30	C	2

	* Correction of body posture	0	30	0	30	C	2
	6 ECTS points from the block of science courses	0	0	60	60	GC	6
	3 ECTS points from the block of biological courses	0	0	30	30	GC	3
	3 ECTS points from the block of biotechnological courses	0	0	30	30	GC	3

Where: * one of the courses to choose, OSH training is necessary to pass I year
E - exam GC - graded credit C - non-graded credit

2nd year

Semester	Course name	Number of hours			Total number of hours	The course completion	ECTS
		Lectures	Classes	Seminars			
III	obligatory courses						
	Biochemistry	30	30	30	90	E	6
	General microbiology	30	75	15	120	E	6
	Immunology	30	45	0	75	E	4
	Instrumental analysis	15	45	0	60	GC	4
	Principles of histology	15	15	0	30	GC	2
	Information technology	0	30	0	30	GC	2
	optional courses/free choice modules						
	6 ECTS points from the block of biological courses	0	0	60	60	GC	6
IV	obligatory courses						
	Molecular biology with elements of molecular diagnostics	30	60	30	120	E	7
	Biochemical technologies	15	60	15	90	E	6
	Introduction to drug biotechnology	15	45	0	60	GC	4
	Legal aspects of biotechnology	15	0	15	30	GC	2
	optional courses/free choice modules						

	3 ECTS points from the block of molecular and biochemical courses	0	30	0	30	GC	3
	3 ECTS points from the block of biological courses	0	0	30	30	GC	3
	JOB TRAINING/WORK EXPERIENCE/PLACEMENT					C	5
	TOTAL	195	435	195	825		60

Where: E – exam, GC - graded credit, C - non-graded credit

3 rd year

Semester	Course name	Number of hours			Total number of hours	The course completion	ECTS
		Lectures	Classes	Seminars			
V	obligatory courses						
	Enzymology and protein chemistry	30	60	0	90	E	4
	Drug biotechnology	15	60	15	90	E	5
	Genetic engineering	30	60	0	90	E	4
	Tissue and cell cultures of plants and animals	15	45	0	60	GC	3
	Laboratory diagnostics in medical biotechnology	15	15	0	30	GC	2
	optional courses/free choice modules						
	3 ECTS points from the block of biotechnological courses	0	0	30	30	GC	3
	3 ECTS points from the block of molecular and biochemical courses	0	0	30	30	GC	3
	6 ECTS points from the block of biomedical courses	0	0	60	60	GC	6
VI	obligatory courses						
	Bioprocess engineering	15	15	15	45	E	4

Molecular biotechnology	15	45	0	60	E	5
Emergency medical help	0	15	0	15	GC	1
optional courses/free choice modules						
3 ECTS points from the block of biotechnological courses	0	0	30	30	GC	3
3 ECTS points from the block of molecular and biochemical courses	0	0	30	30	GC	3
4 ECTS from the block of humanistic courses	0	0	30	30	GC	4
Bachelor seminars	0	0	60	60	GC	5
Bachelor thesis					E	5
TOTAL	135	315	300	750		60

Where: E – exam, GC - graded credit, C - non-graded credit