

## Biology, Specialization: Medical Biology (BSc) – study schedule (2019/2020)

(Language of instruction: English)

Cw – classes, K – conversation classes, T – field classes, S – seminar, the others – laboratory, E – examination, C – credit, Cwg – credit without grade, Cag – credit with grade included in average final grade

### 1st semester

Courses	No.of hours	Lecture	Classes	Form of course completion	Credits ECTS
<sup>A</sup> General and inorganic chemistry with elements of analytical chemistry	75	30	45	E	6
Physics with elements of biophysics	60	20	40	E	5
Mathematics with elements of statistics	60	30	30 K	E	5
Mycology	45	15	30	C	3
Intellectual property protection	15	15	–	C	1
Training	8	8	–	Cwg	1
Information technology	30	–	30	C	2
Physical education	30	–	30 Cw	C	–
Developmental biology	30	15	15	C	2
Microbiology	60	30	30	E	5
	413				30

### 2nd semester

Courses	No.of hours	Lecture	Classes	Form of course completion	Credits ECTS
<sup>A</sup> Physical chemistry	30	30	–	C	1.5
<sup>A</sup> The elements of organic chemistry for biology students	60	30	30	E	5
Foreign language B2	30	–	30	C	1.5
Human anatomy	60	30	30	C	3.5
General and taxonomic botany	75	30	45	E	6
Botany and zoology field classes	60	–	60	C	3
General and taxonomic zoology with principles of taxonomy	90	30	60	E	7.5
Parasitology	30	15	15	C	2
Physical education	30	–	30 Cw	C	–
	465				30

Total: 878 h, 60 ECTS

### 3rd semester

Courses	No.of hours	Lecture	Classes	Form of course completion	Credits ECTS
Animal physiology – an extensive course	90	30	60	E	7.5
Foreign language B2	30	–	30	C	1.5
Environmental protection – an extensive course	60	30	15 + 15 T	Cag	3
Biochemistry	90	30	60	E	7.5
Genetics with elements of human genetics	60	30	30	E	5
Radiology	15	15	–	C	1
Environmental toxicology	60	30	30	Cag	4.5
	405				30

### 4th semester

Courses	No.of hours	Lecture	Classes	Form of course completion	Credits ECTS
Cell biology – an extensive course	90	30	60	E	7.5
Ethics	15	15	–	C	1
<sup>A</sup> The history of philosophy with elements of natural philosophy	30	30	–	E	2.5
Foreign language B2	30	–	30	C	1.5
Basics of individual entrepreneurship	10	–	10 K	C	0.5
Evolutionary biology	30	15	15 K	C	2
Molecular biology with elements of molecular diagnostics	60	30	30	E	5
Ecology	75	30	40 + 5 T	E	6
Elements of pathophysiology	15	15	–	C	1
Basics of pharmacology	45	15	30 K	C	3
	400				30

Total: 805 h, 60 ECTS

## 5th semester

Courses	No.of hours	Lecture	Classes	Form of course completion	Credits ECTS
Genetic engineering – a basic course	45	15	30	Cag	3.5
Foreign language B2	30	–	30	E	3.5
Specialization practical training	3 w.			Cwg	4
Academic lecture	15	15	–	C	1
Biochemistry of nutrition	15	15	–	C	1
Applied biology in medicine	40	–	40	C	3
Biological basics of herbal medicine	70	30	40	E	6
Human evolution	30	15	15 K	C	1.5
Physical basis of instrumental diagnostics and physiotherapy	30	20	10	C	1.5
Human immunology with elements of virology	60	30	30	E	5
	335				30

## 6th semester

Courses	No.of hours	Lecture	Classes	Form of course completion	Credits ECTS
Biotechnology	30	30	–	C	1.5
Plant physiology – an extensive course	90	30	60	E	8
Mechanisms of evolution	30	15	15 K	E	2.5
Thesis + final exam				E	3
Seminar	45	–	45 S	C	3
Pharmacological botany	75	30	40 + 5T	Cag	6
Human ecology	30	15	15 K	C	1.5
Biomaterial engineering in medicine	15	15	–	C	1
Biochemical methods in clinical analysis	45	15	30	C	3.5
	360				30

Total: 695 h, 60 ECTS

Final count: 2378 h, 180 ECTS

### Module at choice 58 ECTS – 32%:

A or B courses **15 ECTS**: (*Chemia fizyczna*<sup>A</sup> or Physical chemistry<sup>B</sup> **1.5 ECTS**; *Chemia ogólna i nieorganiczna z el. chemii analitycznej*<sup>A</sup> or General and inorganic chemistry with elements of analytical chemistry<sup>B</sup> **6 ECTS**; *Elementy chemii organicznej dla biologów*<sup>A</sup> or The elements of organic chemistry for biology students<sup>B</sup> **5 ECTS**; The history of philosophy with elements of natural philosophy<sup>A</sup> or Contemporary problems in philosophy<sup>B</sup> **2.5 ECTS**).

The others **43 ECTS** (specialization courses 39; seminar 3; academic lecture 1).