



DEPARTMENT OF BIOLOGY AND ECOLOGY

UNDERGRADUATE ACADEMIC STUDIES
ECOLOGY

for obtaining the first higher education degree and professional title
Bachelor of Ecology

THE STRUCTURE OF THE STUDY PROGRAM

TITLE AND AIMS OF THE STUDY PROGRAM

Undergraduate academic studies of Ecology last four years (8 semesters, 240ECTS). The study program is structured with aims to educate and train experts for vocational and scientific work in jobs that require knowledge in the field of ecology and environmental protection. Upon completing this Undergraduate academic studies of Ecology student acquires the professional title:

Bachelor of Ecology (Bachelor with Honours)

Upon completion of Undergraduate academic studies of Ecology, experts are formed, able to perform and manage tasks in different areas where it can be applied the knowledge in ecology and environmental protection.

ADMISSION REQUIREMENTS FOR THE STUDY PROGRAM

Application for studies can submit persons with completed secondary education in four year duration. Persons who apply for admission to the first year of the undergraduate academic studies take an entrance exam in Biology course.

PURPOSE OF THE STUDY PROGRAM

The study program purpose of undergraduate academic studies of Ecology is education experts for a variety of jobs that require knowledge of biology and ecology, and the ability to apply current knowledge in these fields, as well as preparing students for further education. Respecting the importance of ecology in environmental protection and its incorporation into all spheres of life and work, experts of these profiles have socially justified and useful skills.

Study program has clearly defined and identifiable purposes and social roles (studying outcomes):

- education of expert, graduate ecologist, capable to perform and manage a variety of jobs and create policy in areas where are applicable knowledge of ecology: in inspection services, utilities, national parks and protected areas of nature, botanical gardens, natural history museums, scientific research and technological institutions, accredited laboratories for quality control, biotechnological and development laboratories, institutes for monitoring and protecting the environment, public and private agencies that deal with different aspects in the field of ecology and environmental protection, as well as in the fields of industry, agriculture and related areas.
- education of experts for management and policy creation in the institutions that deal with monitoring the environmental condition,
- education of experts trained to write environmental projects, development of case studies and studies on impact on the environment, etc.,
- training of experts for knowledge transfer in the field of biology and ecology and to motivate young people,
- encouragement of the development of ecology in whole.
- encouragement of the incorporation of environmental awareness in all spheres of life and work.

APPENDIX

A list of obligatory and elective courses per semester, weekly number of classes of lectures, exercises and individual work, ECTS for each subject at the undergraduate academic studies of Ecology (240 ECTS).

Labels used:

C - course code, which is set at the level of institutions
S - semester of the course

Type of course: **AG** - Academic general educational
TM - Theoretical and methodological
SP - Scientific professional
PA - Professional Applicative

Status of the course: **O** - obligative
EB - elective block.

Classes of active teaching: **L** - lectures
E - exercises
SR - Study and Research
OFT - Other forms of teaching (laboratory exercises, seminars, etc., depending on the specifics of the study program).

A distribution of the study program courses into semesters and academic years

UNDERGRADUATE ACADEMIC STUDIES ECOLOGY

	C	Course Title	S	Course Type	Course Status	Active teaching			Other classes	ESTC
						L	E	OFT		
FIRST YEAR										
1.	E101	Ecology as science	1	AG	O	1	0	0		3
2.	C164	Selected chapters of chemistry for ecologists	1	TM	O	2	0	2		5
3.	E102	Basics of Cytology	1	TM	O	2	2	0		5
4.	BE101	Plant Morphology	1	SP	O	3	3	0		8
5.	E103	Morphology and Systematics of invertebrates	1	SP	O	4	4	0		9
6.	P199	Biophysics	2	TM	O	2	0	2		5
7.	E104	Basics of animal embryonic development	2	SP	O	3	2	0		7
8.	E105	Systematics of algae and fungi	2	SP	O	4	3	0		8
9.	BE113	Statistics and Computing	2	AG	O	2	2	0		5
10.		Course of elective block 1 (one course)	2		EB	2	1	0		5
Total classes (L/E +OFT/other classes) and credits in year						25	17	4		60
Total classes of active teaching in year						690				
SECOND YEAR										
11.	BE102	Biochemistry	3	SP	O	3	0	2		7
12.	E106	Functional morphology of Chordates	3	SP	O	3	3	0		7
13.	E107	General Microbiology	3	TM	O	3	0	2		7
14.	E108	Basics of Genetics with genotoxicology	3	SV	O	3	2	0		7
15.	E109	Systematics and Phylogeny of Vascular Plants	4	PA	O	4	3	0		8
16.	E110	Systematics and Phylogeny of Chordates	4	PA	O	2	2	0		6
17.	E111	Microbial Ecology	4	PA	O	3	0	2		7
18.	E112	Basics of Pedology	4	TM	O	2	2	0		5
19.		Course of elective block 2 (one course)	4		EB	2	2	0		6
Total classes (L/E +OFT/other classes) and credits in year						25	14	6		60
Total classes of active teaching in year						675				
THIRD YEAR										
20.	E113	Animal Ecophysiology	5	SP	O	3	0	2		6
21.	E114	Plant Ecophysiology	5	SP	O	3	0	2		6
22.	E115	Molecular basics of the living world	5	SP	O	3	2	0		6
23-24.		Courses of elective block 3 (two courses)	5		EB	4	4(2)*	0(2)*		12
25.	E116	Plant Ecology and Geography	6	PA	O	3	3	0		7
26.	E117	Animal Ecology and Geography	6	PA	O	3	3	0		7
27.	E118	Hydroecology	6	PA	O	3	2	0		6
28.	E119	Soil Ecology	6	PA	O	3	2	0		6
29.		Course of elective block 4 (one courses)	6		EB	2	2(0)*	0		4
Total classes (L/E +OFT/other classes) and credits in year						27	18(14)	4(6)		60
Total classes of active teaching in year						675 (765)				

FOURTH YEAR										
30.	E120	Environment protection	7	SP	O	3	2	0		6
31.	E121	Introduction to Evolutionary biology	7	AG	O	3	2	0		6
32.	E122	Synecology	7	PA	O	3	2	0		6
33-34.		Courses of elective block 5 (two courses)	7		EB	4	0	0		8
35.	E123	Environmental impact assessment	8	PA	O	3	2	0		6
36.	E124	Ecosystem restoration and improvement	8	PA	O	3	2	0		6
37.	E125	Practical work and field researches in ecology	8	PA	O	3	0	6		7
38.		Course of elective block 6 (one courses)	8		EB	2	2(0)*	0(2)*		5
39.		Course of elective block 7 (one courses)	8		EB	2	2	0		5
40.		Course of elective block 8 (one courses)	8		EB	2	0	0		5
Total classes (L/E +OFT/other classes) and credits in year						28	14 (12)	6 (8)		60
Total classes of active teaching in year						690 (750)				
Total classes of active teaching, other classes and credits for all study years						2730 (2880)				
						240 ESTC				

* Number of active teaching classes depending on electivity

The list of elective courses in the study program

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	C	Course Title	Course Type	Course Status	Active teaching				ESTC
					L	E	OFT	SR	
Courses of elective block 1									
1.	K101	English1 (lower course)	AG	EB	2	1	0		5
2.	K105	English 2 (higher course)	AG	EB	2	1	0		5
Courses of elective block 2									
1.	BE104	Entomology	PA	EB	2	2	0		6
2.	BE105	Macromycetes	PA	EB	2	2	0		6
Courses of elective block 3									
1.	BE103	Human Ecology and Genetics	TM	EB	2	2	0		6
2.	BE109	Mechanisms of Plant Adaptation	TM	EB	2	2	0		6
3.	E126	Industrial pollutants	SP	EB	2	2	0		6
4.	C133	Atmospheric Chemistry	SP	EB	2	0	2		6
Courses of elective block 4									
1.	E127	Physiology of behavior	SP	EB	2	2	0		4
2.	BE106	Medicinal plants and sustainable use	PA	EB	2	2	0		4
3.	M142	Speech Culture	AG	EB	2	0	0		4
Courses of elective block 5									
1.	E128	Principles of Social ecology	AG	EB	2	0	0		4
2.	BE108	Bioethics	AG	EB	2	0	0		4
3.	K109	Psychology	AG	EB	2	0	0		4
Courses of elective block 6									
1.	BE110	Biodiversity of Serbia and Balkan peninsula	SP	EB	2	2	0		5
2.	BE111	Phytochemistry	PA	EB	2	0	2		5
Courses of elective block 7									
1.	BE112	Protected areas of Serbia	TM	EB	2	2	0		5
2.	BE107	Endemic flora and vegetation of the Balkan Peninsula	TM	EB	2	2	0		5
Courses of elective block 8									
1.	E129	Radioecology	PA	EB	2	0	0		5
2.	C154	Norms of environmental protection	TM	EB	2	0	0		5