

Iliia State University
 Faculty of Natural Sciences and Medicine
 Program Level-Bachelor
 Ecology (Major and Minor)
 Curriculum

Faculty/School	Faculty of Natural Sciences and Medicine
Program Title	Ecology (Major and Minor)
Academic Degree Awarded	Bachelor of Ecology
Program Duration/ECTS	8 semesters – 240 credits (1 credit – 25 hours) Main field of study – 120 credits Free component: General Module – 60 credits Minor / Free Components – 60 credits
Launching Date of the Program & Program Update	The program was developed in 2011, updated in 2020. The program can be updated before the start of each academic semester.
Language of Instruction	Georgian
Head/Heads of the Program	Natia Kopaliani, Professor
Admissions Requirements	
Those wishing to enroll in the program must have passed the Unified National Examinations in accordance with the regulations established by the Ministry of Education, Science, Culture and Sport of Georgia. Detailed information related to the exams will be posted on the website www.naec.ge .	
Program Objectives	
The goal of the program is to provide students with basic knowledge in disciplines related to ecology and conservation biology; to teach them ecological regularities, the dynamics of populations and their relationship with the environment; environmental problems and possible ways to solve them, to develop in them skills of working in the laboratory and in the field.	
The program is aimed at developing the skills of oral and written communication, analysis, argumentation, assessment and creative solving of a problem, effective teamwork.	
Learning Outcomes	
<ol style="list-style-type: none"> 1. The graduate demonstrates general knowledge about nutrients and energy flows in individuals, populations and communities; 2. The graduate can describe and explain the structure of ecosystems, characterize biogeography and diversity taking into account climatic, evolutionary and taxonomic factors; 3. The graduate demonstrates basic knowledge about the structure and diversity of communities, populations, and ongoing processes in communities and populations; 4. The graduate explains the principles of taxonomic and phylogenetic research of species, can determine the ecological factors that play a role in the distribution and diversity of species; 5. The graduate demonstrates basic knowledge about the genetics of organisms and explains the theoretical models in this field; 	

6. The graduate can assess human impacts on wild populations and natural ecosystems, including habitat modification, species exploitation and knowledge of species restoration and conservation;
7. The graduate can conduct a research project according to pre-defined instructions, through the use of appropriate ecological and/or molecular methods/instruments and data processing;
8. The graduate can carry out fieldwork, which includes the use of ecological observation methods, taxonomic identification of organisms and environmental impact assessment;
The graduate can assess the learning process and correctly identify further learning needs.

Program Structure

Within the program, the student must accumulate 240 credits in accordance with the structure of the chosen concentration:

Main field of study — 120 credits

Free component: General Module — 60 credits

Minor/free components — 60 credits

General Module (60 credits):

- Introduction to Modern Thought I and II — 12 credits
- Academic Techniques — 6 credits
- Practical Courses in English Language — 24 credits
- Introductory courses — 18 credits (Concentration — Physics with code INTROENGPYS; Concentration — Earth Sciences with code INTROENGESC; Concentration — Introductory Course of Life Sciences with code INTROLF)

Main field of study (120 credits):

1. Compulsory Courses — 60 credits, including:
 - Statistics — 6 credits
 - Principles of Chemistry — 6 credits
 - Compulsory courses of Ecology — 48 credits
2. Compulsory-Elective Courses in Ecology — at least 48 credits
 - Functionality and Diversity of plants (min. 6 credits)
 - Current Processes in Animal Populations and Ecosystems (min. 6 credits)
 - Evolutionary Ecology (min. 6 credits)
 - Conservation of Biodiversity (min. 6 credits)
 - Practical Work for Ecologists (min. 12 credits)
3. Elective Courses in Ecology — maximum 12 credits

Minor / free components (60 credits)

Teaching Methods

- Lecture;
- Seminar;
- Practical method (field and laboratory work);
- Laboratory method;
- Discussion/debate;
- Individual/group work;
- Demonstration method;

- Elements of e-learning;
- Projects.

Student Assessment

The assessment is based on a 100-point system. Points will be distributed and defined as follows:

- (A) 91-100 Excellent
- (B) 81-90 Very Good
- (C) 71-80 Good
- (D) 61-70 Satisfactory
- (E) 51-60 Sufficient
- (FX) 41-50 Insufficient – 41-50 points, more work is required to pass and the student is given one more chance to retake the exam through independent work
- (F) 0-40 Fail – 40 points and less, considerable further work is required and the student has to repeat the course

The assessment components and criteria are given in the syllabi of the training courses.

Employability

- Educational and scientific-research institutions of the relevant profile
- Zoos, botanical gardens and museums
- Public sector related to environmental protection and use of natural resources (Ministry of Environmental Protection and Natural Resources, Ministry of Economy and Sustainable Development, Ministry of Agriculture)
- Forestry, hunting and fish farms
- Consulting companies working in the field of environmental audit, natural resources management, Geographic Information System
- Enterprises and companies related to the use of natural resources
- Protected areas
- Ecotourism
- Non-governmental and international environmental organizations
- Environmental projects and programs

Teaching and Learning Resources

- Lecture halls
- Educational laboratories
- University library
- Electronic selection system Argus
- Educational portal e-learning and program Turnitin
- Scientific institutes and centers of the university (Institute of Ecology, Institute of Zoology, Dendrology, Laboratory)
- University bases (Kazbegi, Grigoleti, Dedoplistskaro, Akhaldaba, Gemi, etc.)