

Ilia State University
Faculty of Natural Sciences and Medicine
Program Level - Master
Ecology
Curriculum

Faculty/School	Faculty of Natural Sciences and Medicine
Program Title	Ecology
Academic Degree Awarded	MSc in Ecology
Program Duration/ECTS	4 Semesters, 120 ECTS (1 ECTS – 25 hours)
Launching Date of the Program & Program Update	The program was established in 2011 and updated in 2020. To improve the program, it might be revised upon the start of each study year.
Language of Instruction	Georgian
Head/Heads of the Program	David Tarkhnishvili, Professor
Admissions Requirements	
<p>Admission to the master's program is based on the results of the general master's exams and the internal university exam. The in-university examination focuses on the student's motivation, awareness of environmental problems and issues, knowledge of the basics of general biology and natural sciences, as well as knowledge of English (min. B1), which is necessary for mastering the study material.</p> <p>Applicants for the Master's degree must have a bachelor's degree or equivalent in any of the major fields of science, mathematics, and statistics.</p> <p>Detailed information on the conditions, requirements, assessment of the internal university examination components, and criteria are given in the Program Admission Document and can be found on the university website under the heading "Admission".</p>	
Program Objectives	
<p>The program aims to prepare highly qualified researchers in the field of ecology, who will be competitive both on the employment market and at the postgraduate level and:</p> <ul style="list-style-type: none"> ● Be able to independently plan and conduct research in the field of animal ecology, plant ecology, or environment using modern methods; ● Be able to communicate effectively with the professional and academic community; ● Be equipped with analytical and decision-making skills. 	
Learning Outcomes	

Graduate:

1. demonstrates deep and systematic knowledge of modern achievements, theories and methods, ecological, population-biological, and evolutionary concepts in ecology and can assess them critically;
2. demonstrates knowledge about sustainable ecosystem management;
3. can use ecological knowledge to identify environmental problems and plan effective ways to solve them;
4. can independently plan and conduct research in a chosen field (plant ecology, animal ecology, or environmental protection), and describe and interpret research results using modern knowledge/theories;
5. can use relevant methods (ecological field methods, geographic information systems and molecular-genetic research methods and/or ecological and behavioral experiments), relevant field and laboratory techniques and equipment in the research/problem study process;
6. acts in accordance with the principles of professional ethics and academic integrity in the research process, adheres to safety rules as needed;
7. can effectively present the results, ideas, and opinions of research to the academic and professional community, using modern information technologies;
8. can identify learning and research needs and independently plan and implement relevant processes.

Program Structure

Under the program, students must earn 120 credits, including:

1. Mandatory courses - 24 credits
2. Animal Ecology - at least 12 credits
3. Plant Ecology - Minimum 12 credits
4. Environmental Block - Minimum 18 credits
5. Methodical block - at least 12 credits
6. Communication block - 6 credits
7. Elective courses - a maximum of 12 credits
8. Master Thesis - 24 credits

In exchange for the elective course, the student has the right to take additional courses from blocks other than the communication and compulsory block.

Teaching Methods

Lectures, seminars, discussions, laboratory work, presentation, practical method, fieldwork, supervision, analysis, and synthesis

Student Assessment

The assessment is conducted using a 100-point grading scale. The points are distributed and allocated 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 Unsatisfactory - meaning a student needs more effort to pass an examination and is given an extra chance to pass an additional examination through independent work.

Employability

Graduates of the Master of Ecology program can be employed in governmental and non-governmental organizations related to the protection and rational use of natural resources - in national parks, nature reserves, forestry, fishing, and hunting; In government agencies, national and international non-governmental organizations; Animal and plant storage facilities - zoos, botanical gardens, science museums; In scientific institutions - universities, research institutes, and laboratories; or continue studies at the next level - doctoral program.

Teaching and Learning Resources

Lecture auditoriums, Argus choice system, Elearning, Turnitin, illustration equipment, research laboratories, field stations, libraries, resources of university research institutes involved in the implementation of the program such as microscopes, collections, reagents, field and laboratory equipment.

- (1) molecular-genetic laboratory;
- (2) field stations in Stepantsminda, Dedoplistskaro, and Grigoleti;
- (3) Scientific ship "St. Iliia"
- (4) state-of-the-art equipment for environmental monitoring;
- (5) Research institutes of zoology and botany;
- (6) Forest Ecology Laboratory, Zoological Laboratory, Entomological Laboratory, Plant Clearance Laboratory;
- (7) GIS (Geographic Information Systems) class on campus.

Laboratory works will be carried out in the existing research centers in Tbilisi and the regions of Georgia, as well as in the Tbilisi Zoo, Botanical Garden, Plant Protection Institute.