



"ISMAIL QEMALI" UNIVERSITY, VLORE
FACULTY OF TECHNICAL AND NATURAL SCIENCES
DEPARTMENT OF BIOLOGY

APPROVED
Head of the Biology Department
Dr. Aurora BAKAJ

ENVIRONMENTAL KNOWLEDGE SUBJECT PROGRAM

SUBJECT:	Ecology and environmental science
Head/Teacher of the subject:	XXXXXXXXXXXXXXXXXXXX
Charge:	2 lectures / 2 seminars / 1 week of practice
Subject typology:	Of the characteristic formation of the program
Academic year/semester when it takes place:	Year I - Semester I
Subject type:	Mandatory
Study program:	Master's Professional Teacher AM in Biology with Minor Profile Chemistry
Credits:	6 credits
Subject code:	BIO 465
E-mail address of the holder/pedagogue:	ina.nasto@yahoo.com

summary AND LEARNING OUTCOMES:
The subject of Ecology and environmental science has at the center of its study the human-environment relationship. It deals with various environmental issues and the role that man should play in improving the state of the environment in Albania. Topics of applied ecology are also addressed, such as: Energy, food, health and population; conservative biology; sustainable development, global human impact on biodiversity, environmental dimension, economic dimension, social dimension.

- BASIC CONCEPTS:**
- 1 The main cycles in nature
 - 2 The nature of pollutants and their role in the ecosystem.
 - 3 Classification of pollutants into physical, chemical and biological pollution.
 - 4 Measures of conservative biology.
 - 5 The role of the elderly in nature, sustainable development.

- COURSE TOPICS:**
Topics to be covered in the lectures:
- Topic 1** AIR - ATMOSPHERE: Knowledge of ecology and the various biochemical processes that occur in the atmosphere. Acid rain, smog, the problem of ozone depletion.
- Topic 2** WATER AND ITS PROTECTION: Water as a habitat, the water cycle and the main environmental phenomena that occur in it. Environmental problems such as pollution, bioaccumulation, biomagnification.

- Topic 3** WATER AND AQUATIC ECOSYSTEMS: Knowledge of the main aquatic, brackish and freshwater ecosystems and the characteristics of each.
- Topic 4** SOIL: Soil as a habitat and its constituent elements, knowledge of the pedogenesis process and the main factors of soil loss.
- Topic 5** PLASTIC: The cycle of plastic, its types, why it is the main pollutant of the 20-21st century.
- Topic 6** POLLUTION: The concept of pollution as an ecological factor, dimensions and types of pollution, cycles of pollutants.
- Topic 7** POLLUTION: The concept of pollution as an ecological factor, dimensions and types of pollution, cycles of pollutants.
- Topic 8** BIODIVERSITY and ITS IMPORTANCE: The concept of biodiversity, dimensions of biodiversity and its protection.
- Topic 9** RED LIST OF SPECIES ACCORDING TO IUCN: categories and statuses of protected species according to IUCN
- Topic 10** PROTECTED AREAS: Categories of protected areas and what each of them includes.
- Topic 11** BIOMONITORING: what is biomonitoring and what are its aspects.
- Topic 12** Environmental Knowledge in secondary schools of the Educational System
- Topic 13** Sustainable development
- Topic 14** Conventions and international efforts to slow down global environmental problems.
- Topic 15** Teaching practice

Topics to be covered in the seminars:

- Topic 1** AIR - ATMOSPHERE: Knowledge of ecology and the various biochemical processes that occur in the atmosphere. Acid rain, smog, the problem of ozone depletion.
- Topic 2** WATER AND ITS PROTECTION: Water as a habitat, the water cycle and the main environmental phenomena that occur in it. Environmental problems such as pollution, bioaccumulation, biomagnification.
- Topic 3** WATER AND AQUATIC ECOSYSTEMS: Knowledge of the main aquatic, brackish and freshwater ecosystems and the characteristics of each.
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Topic 10 PROTECTED AREAS: Categories of protected areas and what each of them includes.

Topic 11 BIOMONITORING: what is biomonitoring and what are its aspects.

Topic 12 Environmental Knowledge in secondary schools of the Educational System

Topic 13 Sustainable development

Topic 14 Conventions and international efforts to slow down global environmental problems.

Topic 15 Teaching practice

assignments, etc.:

Teaching practice

Day 1 Shipping: waste collection and processing.

Day 2 Expedition: Human activity in natural ecosystems (Llogara, Vlore Sarande coastline.

Day 3 Expeditions: Human activity in natural ecosystems (Divjakë).

Day 4 Expeditions: the bay of Vlora. 5 hours

Day 5 Expeditions: Karaburun. 4 hours

FORM OF KNOWLEDGE CONTROL

control	Percentage assessment
Annual assessment Seminars and teaching practice	20%
Final check	80%

ATTENDANCE:

The student, who results in less than 75% attendance for the period that belongs to each partial exam, the period for which he will be tested, will not be included in the relevant exam, will be evaluated with M.

If the student has attended the course, but does not appear in the next exam, he is assessed NP (Did Not Appear).

COURSE FORMAT:

The subject will be evaluated on the basis of two partial exams, assignments and the final exam. Points earned will be cumulative. The exams will not be repeated, for any reason. If you miss an exam without any major reason, then you will lose points for that exam that you did not appear for.

COMMUNICATION:

Homework exercises, course assignments and any other announcements will be given in class or at the official address of the "Ismail Qemali" University of Vlora on the Internet: www.univlora.edu.al at the teacher's e-mail address ina.nasto@univlora.edu.al.

Email: It is the duty of every student to check e-mail regularly. There will be tasks and notifications will be given only via e-mail.

HONESTY CODE:

Students are encouraged to work in groups for the exercises and tasks that are given to them. Copying from one another in exams, course assignments, homework, etc. is not allowed. Violation of this rule will be accompanied by punitive measures up to the expulsion of the student from the university.

LITERATURE

a) **Mandatory basic literature:** N. Peja (2012). Basics of Ecology. Stepia of the university book, Tir
Prepared lectures - Environmental Knowledge

b) **Recommended literature:** DeSanto, RS (2012). Concepts of applied ecology. Springer
Science & Business Media.

Jørgensen, SE, Xu, L., & Costanza, R. (Eds.). (2016). Handbook of
ecological indicators for assessment of ecosystem health. CRC
press.

Newman, EI (2008). Applied ecology and environmental
management. John Wiley & Sons.

Palmeri, L., Barausse, A., & Jorgensen, SE (2013). Ecological
processes handbook. CRC Press.

Wetzel, R. 2001. Limnology - Lake and river ecosystems.
Academic Press.

Yang, Z. (Ed.). (2012). Eco-cities: a planning guide. CRC Press.

FINAL REMARKS FROM THE SUBJECT TEACHER

Homework exercises, coursework and any other notices will be given in class.
Students are also encouraged to work in groups for the homework exercises. Copying from one another in exams,
coursework homework etc. is not allowed. Violation of this rule will be accompanied by punitive measures up to
The use of mobile phones and smoking in the auditorium is not allowed.

SUBJECT TEACHER

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