

Protection of ecosystems (Environmental engineering, IInd Year of study, IVrd Semester)

Credit value (ECTS) 2

Course category

Domain (optional)

Course holder:

Assist. Prof. Dr. Nela T LMACIU

Discipline objectives (course and practical works)

The course aims at formation base necessary fundamental knowledge and understanding of working with concepts specific to the field of the environmental engineering and at the same time the discipline aims to acquaint students with the main notions and concepts related to: protection of natural ecosystems, the national strategy in the field of protection and conservation of the ecosystems, and national and European legislation in this field.

The practical works seek to familiarize students with the technique of identifying the main types of ecosystems with respect to the rules of environmental pollution prevention, knowledge and management of the environment, education on attitudes in relation to the environment, deepening the study on the interrelationships between living the organisms and their environment life

The content of the discipline (analytical program)

Course (chapters/subchapters)
Protection of the ecosystems: introduction to the course; the functions of natural ecosystems; the situation of ecosystems in the world and in Romania country; short history.
Organizing the environmental protection in Romania; The main ecosystems in Romania.
Ecology, ecological factors, ecology and environmental protection issues
Systematic unity of the live organism, general concepts about the environment: biotope, biocenosis, ecosystem.
The existing main ecosystems on Earth, the classification of terrestrial ecosystems; Anthropically modified ecosystems.
Organization and protection of ecosystems in Romania: legislation, norms, standards
Environmental pollution, the main sources of pollution, the general protection of ecosystems.
The atmospheric pollution: sources of pollution, characterization of pollutants, immediate and long-term effects; crossborder nature of air pollution, specific technologies for preventing and controlling air pollution
The water pollution: water sources, water quality parameters, types of pollutants, ways and means to prevent and control water pollution
The soil pollution: soil degradation: erosion, chemical pollution, irrational exploitation of agricultural land, direct and indirect effects of soil pollution
Protection of ecosystems: notions of biological agriculture, biotechnology, alternative sources of energy

Practical works
The abiotic ecological factors (light, temperature, humidity, wind regime, soil, etc.) and their influence on life and living organisms
Biotic and anthropogenic ecological factors, their influence on life and activity, adaptations to their influence of living organisms
Classification of terrestrial ecosystems
Notions of biocenosis, the relations between organisms within the biocenosis
Notions of ecosystem, biological productivity of the ecosystem
Environmental pollution, sources of pollution, ecosystem protection measures
Atmospheric, water and soil pollution: sources of pollution, characterization of pollutants, immediate and long-term effects; measures to prevent and control air pollution
Anthropically modified ecosystems
The protection of ecosystems: notions of biological agriculture, biotechnology, alternative energy sources
The nature tourists behavior, protection and conservation of natural ecosystems

Bibliography

1. Ionescu Al., Plotoag Gabriela, 1986 - Ecology and ecosystem protection.
2. Barnea M., Papadopol C., 1975 - Pollution and environmental protection, Scientific and Encyclopedic Publishing House
3. Cotiga C., 2008 - Ecology and ecosystem protection. Sitech Publishing House
4. Iordache V., Ardelean Florinela, 2007- Ecology and Environment protection. Matrixrom Publishing
5. Talmaciu M., 2003 - Plant protection - Entomology. "Ion Ionescu de la Brad" Iasi
6. Ro ca I., Oltean I., Mitrea I., Talmaciu M., Petanec D., Bunescu H., Istrate Rada, Talmaciu Nela, Stan C., Micu Lavinia, 2011 – Treaty of general and special entomology. Publisher Alpha MDN, Buzau.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Colloquium	Written examination	70%
Appreciation of the activity during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium.	30%

Contact

Assist. Prof. Dr. Nela T LMACIU

Faculty of Agriculture - USAMV Iasi

Aleea Mihail Sadoveanu nr. 3, Iasi, 700490, Romania

phone: 0040 232 407542, fax: 0040 232 219175

E-mail: ntalmaciu@uaiasi.ro