Study Program: Biology

Type and level of studies: Bachelor studies

Course name: Fundamentals of ecotoxicology

Lecturer: Kosanović V. Katica

Status: Elective

ECTS: 5

Attendance Prerequisites:

Course aims

Providing students with the necessary knowledge in the field of ecotoxicology; substance toxicity, and its effect on living systems. Introducing students to the routhes of toxicants entrance into living organisms, the mechanisms of their biotransformation and their elimination from the organism.

Course outcome

The students are able to apply their knowledge and skills acquired in the field of ecotoxicology through lectures, laboratory exercises, seminar papers, practical applications

Course content

Theoretical part

The subject of study and ecotoxicological research. Toxic substances and living systems. Microbiological toxins. Mycotoxins. Plant and animal toxins. Plant poison. Animal poison. Toxic metals. Hydrocarbons. Petroleum and its derivatives. Polychlorinated aromatic hydrocarbons, biphenyls, dibenzodioxins and polychlorinated dibenzofurans. Phenols. Carbon monoxide and carbon dioxide. Dioxin. Detergents. Cyanides. Aliphatic alcohols. Genotoxic substances. Ionizing radiation toxicology. Radon. Electromagnetic fields as a consequence of human activity. Thermal pollution. Noise and vibration.

Practical part

Methods for analysis and detection of toxicants, the influence of toxic substances on various biochemical and physiological parameters of blood, toxicity tests and determination of the LD_{50}, LD_{100} degree of toxicity on experimental animals.

Literature

1. Штајн А., Жикић В. и Саичић З. Екофизиологија и екотоксикологија животиња. ПМФ Крагујевац, Институт за биолошка истраживања" Синиша Станковић", Београд. 2007.
2. Жикић Р. В., Штајн А.Ш., Саичић З.С., Спасић М.Б., Миловановић С.Р.: Токсиколошки значај заштите од оксидационих оштећења, Природно-математички факултет, Крагујевац, 2000.

Number of active classes				Other classes:
Lectures: 2	Practical classes: 0	Other forms of teaching: 2	Students' research work	

Teaching methods

Lectures, term tests, tests.

Assessment (maximum 100 points)

Course assignments	**points**	Final exam	**points**
activity during lectures	5	written exam	
practical classes	5	oral exam	30
Term test/s	30	tests	30
Total	40		60