

Course Information Sheet (in the structure according to Decree No. 614/2002 Coll.)

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| University: University of Prešov in Prešov | |
| Faculty: Faculty of Humanities and Natural Sciences | |
| Code: 2BIO/EROSJEKOX/22 | Title of Course: Ecotoxicology |
| Type, scope and method of educational activities: Obligatory elective course | |
| Form of Study: Lecture | |
| Number of contact hours: 2 | |
| per week: 2 per level/semester: 26 | |
| Study method: combined | |
| Student load: 90 hours | |
| Direct education: 19,5 hours | |
| Self-study: 50 hours | |
| Guided work: 20,5 hours | |
| Number of credits: 3 | |
| Semester: 3 rd | |
| Degree/Level: 2 nd | |
| Prerequisites: - | |
| Grading Policy (Assessment/Evaluation): Exam | |
| Continuous assessment (oral and written examination) seminar work, continuous written test 20% final test 80% ongoing evaluation | |
| To successfully complete the course, active participation in lectures is required. A student may have no more than 2 absences justified by a doctor. The student will receive substitute assignments, resp. attendance consultations for missed lectures. Students will not be given credits for unjustified or multiple absences. The credit test is a result of the course evaluation. | |
| Success criteria: A: 100.00 – 90.00%, B: 89.99 – 80.00%, C: 79.99% - 70.00%, D: 69.99 % - 60.00 %, E: 59.99 % - 50.00 %. FX: 49.99 % and less %. | |
| Aims and Objectives: | |
| Knowledge gained: | |
| Graduate of the course: | |
| - has knowledge and basic and applied knowledge in the field of environmental toxicology, effects of environmental pollutants, biodegradation and effects of xenobiotics on organisms, including humans. | |
| Skills acquired: | |
| The student: | |
| - is able to search for relevant professional information in the field of environmental toxicology in the literature and information media, work with relevant information, develop reading literacy in the field of professional biological text, | |
| - be able to use knowledge creatively and know how to apply it | |
| - can independently prepare a seminar paper on ecotoxicology, | |
| - can prepare a PowerPoint presentation, | |
| - has the ability to discuss a given issue, argue and defend their own position. | |
| Competences acquired: | |
| The student: | |
| - has developed competences for further self-education, | |
| - can apply the acquired theoretical knowledge and practical skills in solving problems in the field of ecotoxicology, | |
| - is able to use and apply the acquired knowledge in the context of the content of other subjects. | |

Syllabus/Indicative Content:

Ecotoxicology, environmental toxicology - definition, introduction to the issue. Man as a factor of environmental pollution. Allocation of sources of environmental pollution. Toxicity, poison, pollutant, types of toxic effects. Chemical interactions. Pollutant identification, distribution and elimination of pollutants. Mutagenic, teratogenic and carcinogenic effect of foreign substances, poisons and their classification. Toxic effect of elements and substances. Toxic effect of organic compounds. Toxic effect of pesticides. Radiotoxicity. Preventive toxicology. Toxic substances in terms of causes and consequences of growing environmental problems. Phytoremediation. Preventive toxicology, NPK of chemical substances in the working and environment, hygienic regulations, exposure tests. Occupational hygiene and safety, method of protection against pollutants.

Suggested readings:

SEDLÁK, V.; PORÁČOVÁ, J. 2015. Environmentálna toxikológia. Prešov: Prešovská univerzita v Prešove, FHPV, 162 s. ISBN: 978-80-555-1484-0.

FARGAŠOVÁ, A. 2008. Environmentálna toxikológia a všeobecná ekotoxikológia. ORMAN; 1. vydanie. 348 s. ISBN 789-80-969675-6-8.

FARGAŠOVÁ, A. 2008. Ekotoxikologické biotesty. PERFEKT; 1. vydanie. 320 s. ISBN 978-80-8046-422-6.

CALOW, P. 1993. Handbook of Ecotoxicology. Vol. I., Vol. II, Oxford: Blackwell Scientific Publications. 478pp. ISBN 0-632-03573-0, 416 pp. ISBN 0-632-02989-7.

Language of Instruction: Slovak language

Other course information:**Grading history**

| A | B | C | D | E | FX |
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Lecturer/Instructor: doc. RNDr. Vincent Sedlák, PhD., lecturer, examiner

Last update: 20. April 2026

Approved by: prof. RNDr. Jarmila Bernasovská, PhD., guarantor