



Univerza v Mariboru
University of Maribor

Fakulteta za naravoslovje in
matematiko / Faculty of Natural
Sciences and Mathematics



OPIS PREDMETA / SUBJECT SPECIFICATION

Predmet:	Ekotoksikologija
Subject Title:	Ecotoxicology

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Biologija in ekologija z naravovarstvom / Biology and ecology with nature conservation	Biologija; Ekologija z naravovarstvom / Biology; Ecology with nature conservation	2	3

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30	10		30		170	8

Nosilec predmeta / Lecturer:

Jeziki / Predavanja / Lecture:
Languages: Vaje / Tutorial:

Pogoji za vključitev v delo oz. za opravljanje
študijskih obveznosti:

Prerequisites:

Vsebina:

- Tipi onesnaževalcev okolja (anorganski, organski, težke kovine itd.)
- Načini vnosa v ekosisteme
- Razporejanje onesnaževalcev v ekosistemi
- Učinki onesnaževanja na nivoju celice, organizma, populacije in ekosistema
- Biomarkerji in biosenzorji
- Biološko testiranje v ekotoksikologiji
- Ocena tveganja

Contents (Syllabus outline):

- Different pollutants (anorganic, organic, heavy metals etc.)
- Entry of pollutants in ecosystems
- Distribution of pollutants in ecosystems
- Effects of pollution at different levels (cell, organism, population, ecosystem)
- Biomarkers and biosensors
- Biological testing in ecotoxicology
- Risk assessment

Temeljni študijski viri / Textbooks:

- Newman, M. C., M. A. Unger, 2003: Fundamentals of Ecotoxicology. Lewis Publishers 2nd edition.
- Walker, C.H., S. P. Hopkin, R. M. Sibly, D. B. Peakall, 2001: Principles of Ecotoxicology. Taylor&Francis 2nd edition.

Cilji:

Študent spozna: - osnovne definicije v ekotoksikologiji - načine testiranja strupenosti - možne učinke onesnaževanja na populacije in ekosisteme

Objectives:

Student learns: - Basic definitions in ecotoxicology - Testing methods in ecotoxicology - Possible effects of pollution on populations and ecosystems
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Predvideni študijski rezultati:

Študent: - razume mehanizme v ekotoksikologiji - pozna načine testiranja v ekotoksikologiji Prenesljive/ključne spretnosti in drugi atributi: - Vključevanje pridobljenega znanja v razumevanje drugih ekoloških in naravovarstvenih predmetov - Vključevanje pridobljenega znanja pri presoji vplivov na okolje
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Intended learning outcomes:

Student: - Understands mechanisms in ecotoxicology - Knows the principles of testing methods in ecotoxicology Transferable/Key Skills and other attributes: - Use of knowledge of ecotoxicology into other ecological and nature conservation subjects - Use of knowledge of ecotoxicology in risk assessment

Metode poučevanja in učenja:

- Predavanja - Seminar

Learning and teaching methods:

- Lectures - Seminar work
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Načini ocenjevanja:

- Pisni izpit - Projektno naravnana seminarska naloga
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Delež (v %) /
Weight (in %)

50
50

Assessment:

- Written exam - Problem oriented seminar essay
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Materialni pogoji za izvedbo predmeta :

Multimedijska predavalnica
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Material conditions for subject realization

Lecture hall for multimedia presentations

Obveznosti študentov:

(pisni, ustni izpit, naloge, projekti)
- Pisni izpit - Projektno naravnana seminarska naloga

Students' commitments:

(written, oral examination, coursework, projects):
- Written exam - Problem oriented seminar essay