



Univerza v Mariboru

FAKULTETA ZA NARAVOSLOVJE
IN MATEMATIKO
Koroška cesta 160
2000 Maribor, Slovenija
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UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Ekotoksikologija
Course title:	Ecotoxicology

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Biologija in ekologija z naravovarstvom, 2. stopnja		1/2	Poletni
Biology and ecology with nature conservation, 2nd level		1/2	Winter

Vrsta predmeta / Course type

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30			15		135	6

Nosilec predmeta / Lecturer:

Jeziki / Languages:	Predavanja / Lectures:	slovenski/Slovenian
	Vaje / Tutorial:	slovenski/Slovenian

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

Prerequisites:

Vsebina: Osnovni pojmi v ekotoksikologiji Tipi onesnaževanja okolja: <ul style="list-style-type: none">• Kovine• Nekovine• Pesticidi• Kemikalije (REACH)• Zdravila, detergenti	Content (Syllabus outline): Basic definitions in ecotoxicology Different pollutants: <ul style="list-style-type: none">• Metals• Non-metals• Pesticides• Chemicals (REACH)• Pharmaceutical compounds, detergents
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Načini vnosa v ekosisteme
Razporejanje onesnaževal v ekosistemih
Učinki onesnaževanja na nivoju celice,
organizma, populacije in ekosistema
Študij osnovnih mehanizmov delovanja
strupov
Ekotoksikološki testi
Ocena tveganja

Entry of pollutants in ecosystems
Distribution of pollutants on cell, organisms,
population and ecosystem levels
Basic mechanisms of pollutants activities
Testing in ecotoxicology
Risk assessment

Temeljna literatura in viri / Readings:

Newman, M.C., Unger, M.A., 2003, Fundamentals of Ecotoxicology, Lewis Publishers, 2nd edition
Čehić, S., 2007, Kemikalije v okolju, Statistični urad republike Slovenije
Visser, J.E., Ecotoxicology Around the Globe, 2010, Nova Science Publishers, Incorporated

Cilji in kompetence:

Študent spozna:

- Osnovne definicije v ekotoksikologiji
- Različne tipe onesnaževal
- Načine testiranja v ekotoksikologiji
- Učinke onesnaževanja na populacije in ekosisteme

Objectives and competences:

Student learns:

- Basic definitions in ecotoxicology
- Various types of pollutants
- Testing methods in ecotoxicology
- Effects of pollution on populations and ecosystems

Predvideni študijski rezultati:

Znanje in razumevanje:

Študent pridobi znanja in razume:

Možne učinke onesnaževal na populacije in ekosisteme

Načine testiranja v ekotoksikologiji

Nekatere (izbrane) mehanizme v ekotoksikologiji

Študent si pridobi sledeče spretnosti:

- Spretnosti komuniciranja
- Reševanja problemov
- Delo v skupini
- Sprotno delo
- Spretnosti priprave seminarskih nalog in javnega nastopanja
- Kreativno delo v laboratoriju

Intended learning outcomes:

Knowledge and understanding:

Student understand:

Possible influences of pollutants on population and ecosystem

Knows basic principles of testing's in ecotoxicology

Understand some selected mechanisms in ecotoxicology

Transferable/Key skills and other attributes:

- Communication skills
- Problems solving ability
- Work in team
- Collaboration during lectures
- Ability to prepare a seminar work and public presentations
- Creative work in lab

Metode poučevanja in učenja:

Learning and teaching methods:

- Predavanja
- Seminar
- Laboratorijske vaje

- Lectures
- Seminar work
- Lab work

Delež (v %) /

Weight (in %)

Načini ocenjevanja:

Assessment:

Način (pisni izpit, ustno izpraševanje, naloge, projekt)	Delež (v %) / Weight (in %)	Type (examination, oral, coursework, project):
<ul style="list-style-type: none"> • Pisni izpit 	70	<ul style="list-style-type: none"> • Written exam
<ul style="list-style-type: none"> • Laboratorijsko delo 	20	<ul style="list-style-type: none"> • Lab work
<ul style="list-style-type: none"> • Projektno naravnana seminarska naloga 	10	<ul style="list-style-type: none"> • Project oriented seminar essay

Reference nosilca / Lecturer's references:

VONČINA, Bojana, PINTAR, Marija. Na odlagališčih že preveč tekstilnih materialov. *Embalaža, okolje, logistika*, feb. 2011, 56, str. 28-29

MATAIČ, Maja, VONČINA, Bojana. Recikliranje tekstilnih materialov. *Tekstilec*, 2010, letn. 53, št. 1/3, str. 50-58

VONČINA, Bojana, VIVOD, Vera. Cyclodextrins in textile finishing. V: GÜNAY, Melih (ur.). *Eco-friendly textile dyeing and finishing*. Rijeka: InTech, 2013, str. 53-75,

MEDRONHO, Bruno, ANDRADE, Rita, VIVOD, Vera, ÖSTLUND, A., MIGUEL, Maria de Graça Martins, LINDMAN, Bjorn, VONČINA, Bojana, VALENTE, Artur J. M. Cyclodextrin-grafted cellulose : physico-chemical characterization. *Carbohydr. polym.* [Print ed.], str. 324-330

VONCINA, B., et. al., Eco-friendly durable press finishing of textile interlinings, *FIBRES & TEXTILES IN EASTERN EUROPE*, 2002, Volume: 10 Issue: 3 Pages: 68-71