

UČNI NAČRT PREDMETA / SUBJECT SPECIFICATION

Predmet: Ekologija in varstvo voda
Subject Title: Ecology and protection of water

Študijski program Study programme	Letnik Year	Semester Semester
Varstvo okolja in ekotehnologije	2	2 ali 3

Predavanja Lectures	Sem. vaje Tutorial	Lab. vaje Lab. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
20	15		15	130	6

Nosilec predmeta / Lecturer: doc. dr. Aleksandra Krivograd / Aleksandra Krivograd, Ph.D., Assist. Prof.

Jeziki / SL **Predavanja / Lectures:** 20
Languages: **Vaje / Tutorial:** 30

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

Osnovno znanje iz vsebin Ekosistemske biologije ter Uvoda v okoljske tehnologije.

Prerequisites:

Basic knowledge from Ecosystem biology and Introduction in the environmental technologies.

Vsebina:

- Zgradba in delovanje vodnih ekosistemov
- Abiotski dejavniki v vodnih ekosistemi
- Biotski dejavniki v vodnih ekosistemi
- Raznolikost habitatov v vodi
- Prilagoditve vodnih organizmov na vodno okolje
- Pritiski in obremenitve na vode
- Posledice onesnaževanja voda na vodne ekosisteme
- Tehnike revitalizacije vodnih ekosistemov
- Varovanje vodnih ekosistemov
- Upravljanje z vodami
- Metode raziskovanja v limnologiji

Content (Syllabus outline):

- Structure and function of aquatic ecosystems
- Abiotic parameters in aquatic ecosystems
- Biotic parameters in aquatic ecosystems
- Diversity of aquatic habitats
- Adaptation of aquatic organisms on aquatic environment
- Pressures and impacts on aquatic ecosystems
- Techniques of aquatic ecosystem restoration
- Protection of aquatic ecosystems
- Water management plan
- Research methods in limnology

Temeljni literatura in viri / Textbooks:

- Tome D. Ekologija organizmi v prostoru in času, Tehniška založba Slovenije, 2006
- Wetzel R.G. 2001. Limnology, Lake and River Ecosystem.
- Begon M./ Harper J.L./ Townsend, C.R., 2006: Ecology: from individuals to ecosystems, Blackwell Publishing
- Susan L. Woodward, 2003. Biomes of Earth: Terrestrial, Aquatic, and Human-Dominated
- Smith R.L./T.M. Smith, 2001. Ecology and field biology, Addison Wesley Longman: Benjamin Cummings

Cilji:

Cilj predmeta je študente seznaniti s posledicami antropogenega vpliva na ekološko ravnovesje v vodnem ekosistemu ter jih usposobiti za iskanje rešitev za izboljšanje stanja voda.

Objectives:

The aim of the subject is to acquaint the students with the impacts of anthropogenic pressures on ecological balance in the aquatic ecosystem and to qualify them for solving the problems for improvement of status of water.

Predvideni študijski rezultati:

Znanje in razumevanje:

Študent bo ob zaključku tega predmeta sposoben prepoznati, oceniti in ovrednotiti stanje različnih vodnih ekosistemov ter sestaviti program ukrepov za izboljšanje stanja.

Prenesljive/ključne spretnosti in drugi atributi:

- iskanje in poznavanje domače in tuje literature
- zbiranje in interpretacija podatkov o stanju vodnega ekosistema
- poznavanje ekološkega ravnovesja in ekoloških procesov kroženja in pretoka snovi v različnih vodnih ekosistemi
- identifikacija in reševanje problemov pri sanaciji degradiranih vodnih ekosistemov
- podajanje in ovrednotenje rezultatov bo omogočeno v okviru seminarskih nalog
- delo v skupinah

Intended learning outcomes:

Knowledge and Understanding:

At the completion of this course the student will be able to recognise, assess and evaluate status in different aquatic ecosystems and construct program of measures for their improvement.

Transferable/Key Skills and other attributes:

- searching and knowledge slovene and foreign literature
- collecting and interpretation data on aquatic ecosystem status
- knowing ecological balance and ecological processes of circulation and transport of substances in different aquatic ecosystems
- identification and solving the problems in the process of rehabilitation of degraded aquatic ecosystems
- passing and evaluation of results will be able at seminars and individual work
- work in a team

Metode poučevanja in učenja:

Predavanja
Seminarske vaje
Delo na terenu

Learning and teaching methods:

Lectures
Tutorial
Field work

Načini ocenjevanja:

Način (pisni izpit, ustno izpraševanje, naloge, projekt)

Kolokvij iz terenskih vaj: 20 %
Opravljen seminar: 30 %
Pisni izpit: 20 %
Ustni izpit: 30 %

Delež (v %) /
Weight (in %)

Assessment:

Type (examination, oral, coursework, project):

Colloquiums from field work: 20 %
Completed seminar: 30 %
Written examination: 20 %
Oral examination: 30 %

Materialni pogoji za izvedbo predmeta :

Računalniška učilnica
Terenska oprema

Material conditions for subject realization:

Computer classroom
Fieldwork equipment

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Obveznosti študentov:

(pisni, ustni izpit, naloge, projekti)
Obvezna prisotnost na terenskih vajah in seminarjih
Izdelana seminarska naloga

Student's commitments:

(written, oral examination, coursework, projects):
Obvious presence at field work and seminars
Completed seminars