



OPIS PREDMETA / SUBJECT SPECIFICATION

Predmet:	Izbrana poglavja iz ekologije morja
Subject Title:	Selected Topics in Marine Ecology

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Doktorski študij Ekološke znanosti / Doctoral Study Ecological Sciences		Izbirni 1 ali 2 ali 3	2 ali 3 ali 4 ali 5

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
5				5	140	5

Nosilec predmeta / Lecturer:

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

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

Poznavanje organizmov in ekologije na ravni univerzitetnega programa

Vsebina:

Obravnavana so izbrana poglavja iz naslednjih sklopov.

V okviru predmeta se bodo slušatelji seznanili z izbranimi poglavji iz morske ekologije. Spoznali bodo biotske in abiotske dejavnike, ki vplivajo na razporeditev živih organizmov v morskem ekosistemu in na njihovo številčnost ter vrstno pestrost. Posebna pozornost bo posvečena prostorski strukturiranosti okolja in s tem povezani vrstni pestrosti. V okviru tega sklopa bodo spoznali biokonstrukcijo in bioerozijo v morskem ekosistemu in pomen koralnih grebenov za biodiverzitetu.

Slušatelji se bodo seznanili z bentoško bionomijo Jadranskega in Sredozemskega morja.

Prerequisites:

Knowledge of organisms and ecology at graduate level

Contents (Syllabus outline):

Selected topics in the following chapters are discussed.

In the framework of this syllabus, students will have the opportunity to achieve the basic knowledge of selected topics of marine ecology. Special emphasis will be given to biotic and abiotic factors, involved in the distribution, abundance and species diversity of living organisms, inhabiting the marine realm. They will get basic information on the role of spatial heterogeneity and species diversity. They will have the opportunity to understand the processes of bioconstruction and bioerosion in the marine ecosystem and the role of coral reefs for biotic diversity. Special emphasis will be given to the benthic bionomy of the Adriatic nad Mediterranean.

Temeljni študijski viri / Textbooks:

- Nybakken, J. W., 1997: Marine Biology: An Ecological Approach. 4th Edition. Addison-Wesley Educational Publ. Inc.
- Pérès, J-M., H. Gamulin Brida, 1973 : Biološka oceanografija. Bentos. Bentoska bionomija Jadranskega mora. Školska knjiga, Zagreb.
- Tarman, K. 1992: Osnove ekologije in ekologija živali. DZS, Ljubljana.
- Thurman, H. V., H. H. Webber, 1984: Marine Biology. Scott, Foresman and Co., Glenview, London.

Cilji:

- Podati podrobno razdelitev morskega ekosistema po pasovih (zonacija)
- Podrobno razložiti abiotske in biotske dejavnike, ki vplivajo na razporeditev, abundanco in diverzitetu živega sveta
- Podrobno pojasniti ekološke procese biokonstrukcije in bioerozije
- Podrobno pojasniti osnove morske biogeografije s posebnim ozirom na bentoško bionomijo Sredozemskega in Jadranskega morja
- Podrobno pojasniti ekološke odnose v morju (zlasti simbiozo, s posebnim poudarkom na mutualizmu in komenzalizmu)
- Podrobno razložiti recentna in historična dogajanja v morju z vidika njihovega pomena za biodiverzitetu (mesinska kriza, masovna izumiranje, epizodični dogodki, tropikalizacija, lesepska selitev)
- Podrobno predstaviti pristope in tehnike pri vzorčevanju morskih organizmov

Predvideni študijski rezultati:

Znanje in razumevanje:

- Podrobno poznavanje zonacije morskega ekosistema
- Podrobno poznavanje dejavnikov, ki vplivajo na razporeditev, abundanco in diverzitetu
- Podrobno poznavanje ekoloških procesov in interakcije v morju
- Podrobno poznavanje principov morske biogeografije in bentoške bionomije
- Podrobno poznavanje globalnih klimatskih in oceanografskih sprememb

Prenesljive/ključne spretnosti in drugi atributi:

- Podrobno prepoznavanje obalnih pasov
- Podrobno razumevanje vpliva ekoloških dejavnikov na procese v morju
- Podrobno razumevanje globalnih oceanografskih in klimatskih sprememb in njihov vpliv na živi svet
- Podrobno poznavanje vzorčevalnih pristopov in tehnik

Metode poučevanja in učenja:

- Predavanja
- Laboratorijske vaje
- Terenske vaje

Načini ocenjevanja:

- Seminarska naloga
- Pisni izpit

Objectives:

- To give advanced overview of the zonation of the littoral in different stages
- To explain in detail the biotic and abiotic factors, which affect the distribution, abundance and diversity of the living organisms
- To explain in detail ecological processes of bioconstruction and bioerosion in the sea
- To explain in detail the principles of marine biogeography and especially benthic bionomy of the Adriatic and Mediterranean Seas
- To explain in detail ecological relationship (especially symbiosis, with special regards to mutualism and commensalism)
- To explain in detail the historical and recent events in marine realm from the view of biodiversity (Messinian crisis, global extinctions, episodic events, tropicalisation, Lessepsian migration)
- To present in detail the modern approaches and techniques for the study of marine organisms

Intended learning outcomes:

Knowledge and Understanding:

- Advanced knowledge of zonation of the marine ecosystem
- Advanced knowledge of biotic and abiotic factors affecting the distribution, abundance and diversity of the living organisms
- Advanced knowledge of ecological processes and interactions
- Advanced knowledge of about the principles of marine biogeography and benthic bionomy
- Advanced knowledge of global climate and oceanographic change

Transferable/Key Skills and other attributes:

- Advanced recognition of littoral stages
- Capability of advanced understanding the impact of ecological factors on the processes in marine realm
- Capability of advanced recognition of global and climate change and their effects on the living realm
- Advanced knowledge on sampling approaches and techniques

Learning and teaching methods:

- Lectures
- Laboratory excersises
- Field excersises

Delež (v %) /
Weight (in %)**Assessment:**

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> • Seminarska naloga • Pisni izpit | <ul style="list-style-type: none"> • 20 % • 80 % | <ul style="list-style-type: none"> • Seminar essay • Written exam |
|--|--|---|

Materialni pogoji za izvedbo predmeta :

- *Multimedijska predavalnica*
- *Ekскурzije na teren*

Material conditions for subject realization

- *Lecture hall for multimedia presentations*
- *Field excursions*

Obveznosti študentov:

(pisni, ustni izpit, naloge, projekti)

- *Seminarska naloga*
- *Pisni izpit*

Students' commitments:

(written, oral examination, coursework, projects):

- *Seminar essay*
- *Written exam*