



OPIS PREDMETA / SUBJECT SPECIFICATION

Predmet: Subject Title:	Sodobna biologija Modern Biology
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Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Izobraževalna fizika, 1. stopnja Educational Physics		1 ali 2 ali 3 1 or 2 or 3	2 ali 4 ali 5 ali 6 2 or 4 or 5 or 6

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	30				120	6

Nosilec predmeta / Lecturer:

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

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

Vsebina:

- Od gena do ekosistema: novi pogledi na evolucijo in sistematsko razdelitev organizmov
- Biotehnologija ter njeni vplivi na okolje in človeško družbo
- Gensko spremenjeni organizmi: osnove, pregled, perspektive
- Celična biologija v medicini
- Vrste in ekosistemi v spreminjajočem se okolju: uničenje in spremembe habitatov, klimatske spremembe, učinek tople grede na organizme
- Biodiverzitetna kriza in njeno reševanje

Contents (Syllabus outline):

- From gene to ecosystem: new prospects on evolution and systematics of organisms
- Biotechnology and its influences of on environment and human society
- Genetically modified organisms: principles, overview, prospectives
- Cell biology in medicine
- Species and ecosystems in changing environments: deterioratin and habitat change, the greenhouse effect on organisms
- Biodiversity crisis and coping with this problem

Temeljni študijski viri / Textbooks:

Greenwood T. et al. (2008): Biologija za gimnazije. Delovni zvezek. Modrijan, Ljubljana.
Alberts, B., Johnson, A., Lewis, J., Raff, M., Roberts, K., Walter, P., 2004: Molecular Biology of the Cell (5th Ed.). Garland Science, Taylor & Francis Group, New York.
Kreft S., Krapež S. (2006): Genetika in evolucija. Modrijan, Ljubljana.
Thieman W. J. in Palladino M. A., 2004: Introduction to Biotechnology, Pearson Education, Inc,

Publishing as Benjamin Cummings, San Francisco.

Cilji:

Dobiti vpogled v sodobna dognanja biološke znanosti od genov do ekosistemov

Objectives:

To get insights in recent findings of life sciences from genes to ecosystems

Predvideni študijski rezultati:

Znanje in razumevanje:

Razumeti vpliv novih dognanj v bioloških znanostih na preživetje in način življenja človeka na Zemlji

Prenesljive/ključne spretnosti in drugi atributi:

- sposobnost razumeti osnovne vidike življenja na genetskem, vrstnem in ekosistemskem nivoju v luči novih dognanj
- sposobnost razumeti vpliv okoljskih sprememb na živa bitja

Intended learning outcomes:

Knowledge and Understanding:

To understand the influence of new findings in life sciences on human survival and way of life on the Earth

Transferable/Key Skills and other attributes:

- Ability to evaluate proceses at the cellular level.
- ability to understand the basic postulates of life on genetic, species and ecosystem level in the light of new scientific findings
- the ability of understanding the impact of environmental changes on biota

Metode poučevanja in učenja:

- Predavanja
- Seminar
- Individualno delo

Learning and teaching methods:

- Lectures
- Seminar essay
- Individual work

Načini ocenjevanja:

Delež (v %) /
Weight (in %)

Assessment:

- Seminaraska naloga
- Pisni izpit

50
50

- Seminar essay
- Written exam

Materialni pogoji za izvedbo predmeta :

- Predavalnica

Material conditions for subject realization

- Lecture hall

Obveznosti študentov:

(pisni, ustni izpit, naloge, projekti)

- Seminaraska naloga
- Pisni ustni izpit

Students' commitments:

(written, oral examination, coursework, projects):

- Seminar essay
- Written exam