Univerza v Mariboru

Fakulteta za naravoslovje in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	Okoljske študije
Course title:	Environmental science

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/Zimski
Biology and Ecology with Nature Conservation, 2nd cycle	/	1/2	Summer/Winter

Vrsta predmeta / Course type	Izbirni /Elective
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	180/6

Nosilec predmeta / Lecturer:	Nataša Pipenbaher

Jeziki / Languages:	**Predavanja / Lectures:**	**Slovenski /Slovenian**
	Vaje / Tutorial:	

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
/	/

Vsebina:

Teme, kjer je razlaga v naravoslovnih znanostih odločitve pa se sprejemajo na individualnem ali družbenem nivoju imenujemo družbeno-znanstvene teme. Številnih globalnih (npr. globalne klimatske spremembe, upad biodiverzitete, sproščanje gensko spremenjenih organizmov v okolje,izraba virov) in lokalnih (npr. ravnanje z odpadki, kmetijska praksa, onesnaževanje, gospodarjenje v zaščitenih območjih) okoljskih problemov pa ni mogoče razrešiti brez razumevanja soodvisnosti osebnih, družbenih, tehnoloških, naravnih in znanstvenih dejavnikov.

Temeljni cilji predmeta so:

- predstaviti večplastnost okoljskih problemov;
- predstaviti metode za identifikacijo naravne, osebne in družbene dimenzije družbeno.znanstvenih tem;
- naučiti študente smiselne uporabe instrumentov, ki merijo različne nivoje okoljskih problemov;
- Naučiti študente evalvacije rešitev, ki so jih predlagali drugi.

Content (Syllabus outline):

Socio-scientific issues are recognized as themes (problems) where underlying knowledge is rooted in scientific disciplines, while their solution is at individual or societal level. Many global (e.g. climate changes, loss of biodiversity, release of genetically modified organisms into nature, depletion of sources) and local (e. g. vaste management, farming practices, polution, management in protected areas) environmental problems can not be solved without understanding of combination of personal, societal, technological, and natural, scientific factors.

Main goal of the subject is:

- to present multi-facet nature of any environmental problem;
- to present methods for identification of natural, personal, and societal dimensions of socio-scientific issues;
- to teach students sound usage of instruments measuring different levels of environmental problems;
- to teach students how to evaluate proposed solutions by others.

Temeljni literatura in viri / Readings:

Temeljna literatura / Basic literature: Joseph Thatheyus. Textbook of environmental studies. Oxford (UK): Alpha Science International, 2011

Priporočena literatura / Recommended literature: Daniel B. Botkin, Edward A. Keller,,Environmental Science, International Student Version, Willey; 2011, ©2012 International Handbook of Research on Environmental Education. Eds. Robert B. Stevenson, Michael Brody, Justin Dillon, Arjen E.J. Wals; 2012. Routledge

Cilji in kompetence:

Znanje in razumevanje
- večplastnosti okoljskih problemov;
- metod za identifikacijo naravne, osebne in družbene dimenzije družbeno-znanstvenih tem;
- smiselne uporabe instrumentov, ki merijo različne nivoje okoljskih problemov; - postopkov za evalvacijo rešitev, ki so jih predlagali drugi.

Objectives and competences:

Knowledge and understanding: - of multi-facet nature of environmental problems;
- of methods for identification of natural, personal, and societal dimensions of socio scientific issues; - of sound usage of instruments measuring different levels of environmental problems; - of procedures how to evaluate

Predvideni študijski rezultati:	**Intended learning outcomes:**
Po uspešno opravljeni učni enoti naj bi bili študenti zmožni: - ovrednotiti okoljski problem kot družbeno znanstveno temo; - izbrati kazalnike za presojo novega problema; - presoditi in ovrednotiti tujo rešitev okoljskega problema.	By the end of this course students should be able to: - evaluate environmental problem as a socio scientific issue; - choose benchmarks for evaluation of a novel problem; - assess proposed solutions to a problem

Metode poučevanja in učenja:	**Learning and teaching methods:**
Predavanja, seminarji	Lectures, seminnaire

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
Seminarska naloga Pisni izpit	**Opravil/ni opravil** **100%**	Seminair work Written exam:

Reference nosilca / Lecturer's references:

1. DENGLER, Jürgen, PIPENBAHER, Nataša, ŠKORNIK, Sonja, et al. GrassPlot - a database of multi-scale plant diversity in Palaearctic grasslands. *Phytocoenologia*. 2018, vol. 48, iss. 3, str. 331-347, ilustr. ISSN 0340-269X. DOI: 10.1127/phyto/2018/0267. [COBISS.SI-ID 24005128]
2. PIPENBAHER, Nataša, IVAJNŠIČ, Danijel, ŽIBERNA, Igor, DONŠA, Daša, KALIGARIČ, Mitja, ŠKORNIK, Sonja, KAJFEŽ-BOGATAJ, Lučka, ČREPINŠEK, Zalika, GRUJIĆ, Jaša Veno. Letna dinamika pojava mestnega toplotnega otoka v malem urbanem sistemu. *Revija za geografijo*. [Tiskana izd.]. 2020, 15, [št.] 2, str. 91-104, ilustr. ISSN 1854-665X. https://ff.um.si/wp-content/uploads/RG-30-15-2-06.pdf. [COBISS.SI-ID 53075715]
3. BIURRUN, Idoia, PIELECH, Remigiusz, DEMBICZ, Iwona, GILLET, François, KOZUB, Łukasz, MARCENÒ, Corrado, REITALU, Triin, VAN MEERBEEK, Koenraad, GUARINO, Riccardo, CHYTRÝ, Milan, PIPENBAHER, Nataša, ŠKORNIK, Sonja, et al. Benchmarking plant diversity of Palaearctic grasslands and other open habitats. *Journal of vegetation science*. [Online ed.]. Jul./Aug. 2021, vol. 32, iss. 4, 21 str., ilustr. ISSN 1654-1103. https://onlinelibrary.wiley.com/doi/pdf/10.1111/jvs.13050, DOI: 10.1111/jvs.13050. [COBISS.SI-ID 78991619]
4. PAUŠIČ, Igor, IVAJNŠIČ, Danijel, KALIGARIČ, Mitja, PIPENBAHER, Nataša. Relation between plant species diversity and landscape variables in Central-European dry grassland fragments and their successional derivates. *Acta botanica Croatica : an international joural of botany*. 2017, vol. 76, iss. 2, str. 111-119, ilustr. ISSN 0365-0588. https://www.degruyter.com/view/j/botcro.ahead-of-print/botcro-2017-0001/botcro-2017-0001.xml?format=INT, DOI: 10.1515/botcro-2017-0001. [COBISS.SI-ID 23132168]
5. ŽIBERNA, Igor, PIPENBAHER, Nataša, DONŠA, Daša, ŠKORNIK, Sonja, KALIGARIČ, Mitja, KAJFEŽ-

BOGATAJ, Lučka, ČREPINŠEK, Zalika, GRUJIĆ, Jaša Veno, IVAJNŠIČ, Danijel. The impact of climate change on urban thermal environment dynamics. *Atmosphere*. 2021, vol. 12, iss. 9, str. 1-15, ilustr. ISSN 2073-4433. https://www.mdpi.com/journal/atmosphere/special_issues/hazards_urbanization_climate, https://repozitorij.uni-lj.si/IzpisGradiva.php?id=136109, https://dk.um.si/IzpisGradiva.php?id=81564, DOI: 10.3390/atmos12091159. [COBISS.SI-ID 75887619]