

	UČNI NAČRT PREDMETA/COURSE SYLLABUS
Predmet	Ekologija in biotska raznovrstnost
Course title	Ecology and Biotic Diversity

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Upravljanje z okoljem/ 2. stopnja	Ni smeri študija	1. letnik	1.
Environmental Management/ 2 nd Cycle	No study field	1 st year	1 st

Vrsta predmeta/Course type

obvezni/obligatory

Univerzitetna koda predmeta/University course code

2_UO_1_UN2

Predavanja	Seminar	Sem. vaje	Lab. vaje	Teren. vaje	Samost. delo	ECTS
Lectures	Seminar	Tutorial	Laboratory work	Field work	Individ. work	
45		15		15	125	8

Nosilec predmeta/Lecturer:

doc. dr. Nevenka Kregar Velikonja

Jeziki/ Predavanja/Lectures:
Languages:

slovenski/Slovenian

Vaje/Tutorial:

slovenski/Slovenian

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

Prerequisites:

<ul style="list-style-type: none"> • Vpis v prvi letnik študijskega programa. • Študent mora pred izpitom pripraviti in predstaviti ter zagovarjati projektno/raziskovalno nalogo. 	<ul style="list-style-type: none"> • A prerequisite for inclusion is enrolment in the first year of study. • Student has to prepare, present and defend a project/research paper before the examination.
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Vsebina:

Content (Syllabus outline):

<ul style="list-style-type: none"> • <i>Ekosistemi:</i> pomen soodvisnosti elementov ekosistema, kroženje snovi, kroženje energije, biosfera in njene lastnosti. Problem tople grede. • <i>Biodiverziteta.</i> • <i>Determinante naravnega okolja:</i> klima, zrak, voda, tla, živila, bivalno in delovno okolje. • <i>Vplivi dejavnikov naravnega okolja na zdravje ljudi:</i> kemični, fizikalni, biološki in biomehanski dejavniki, degradacija habitata in javno zdravje. 	<ul style="list-style-type: none"> • <i>Ecosystems:</i> importance of interdependence of elements of the ecosystem, the circulation of substances, the circulation of energy, the biosphere and its characteristics. The problem of the greenhouse effect. • <i>Biodiversity.</i> • <i>Determinants of the natural environment:</i> climate, air, water, soil, food, living and working environment. • <i>The effects of the natural environment on human health:</i> chemical, physical,
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<ul style="list-style-type: none"> • <i>Vplivi okoljskih sprememb na zdravje ljudi</i>: pomen varstva okolja za zdravje ljudi, rast prebivalstva in okoljsko ravnotežje. • <i>Ekologija bolezni</i>: evolucija gostiteljev in patogenov: virulenca, rezistenca in ko-evolucija, vpliv bolezni na populacije in ekosisteme. • <i>Kakovost življenja in sonaravni razvoj</i>: urbanizacija in preskrba z energijo, vodnimi viri, potrošništvo in obvladovanje odpadkov, okoljska etika. 	<p>biological and biomechanical factors, habitat degradation and public health.</p> <ul style="list-style-type: none"> • <i>Effects of environmental change on human health</i>: population growth and environmental balance, the importance of protecting the environment for human health. • <i>Disease Ecology</i>: host-pathogen evolution: virulence, resistance and coevolution, impact of diseases on populations and ecosystems. • <i>Quality of life and sustainable development</i>: urban issues related to energy and water supply, consumerism and waste products.
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Temeljna literatura in viri/Readings:

Temeljna literatura/Basic literature

- Eržen, I., Gajšek, P., Hlastan Ribič, C., Kukec, A., Poljšak, B. in Zaletel Kragelj, L. (2010). Zdravje in okolje: izbrana poglavja. Maribor: Medicinska fakulteta. (poglavji Dejavniki tveganja v naravnem okolju str. 93-156 in Elementi okolja pomembni za življenje str. 157 – 214).
- United Nations Environment. 2019. Annual Report 2018: Putting the environment at the heart of people's lives. Dostopno na: https://wedocs.unep.org/bitstream/handle/20.500.11822/27734/PPR_2018_FINAL.pdf?sequence=1&isAllowed=y. (str. 1-61).
- Encyclopedia of biodiversity. Second edition. (2013). Elsevier. Dostopno na: <https://www.pdfdrive.com/encyclopedia-of-biodiversity-encyclopedia-of-biodiversity-7-volume-set-d175608721.html> (Poglavja: Ecosystems, concept of, vol. 3, str. 59 – 63; Ecosystem Function, principles of, vol.3, str. 90 – 95; Biodiversity and human health, vol.1, str. 357 – 371; Biodiversity, definition of, vol. 1, str. 399-410; Complexity versus diversity, vol 2, strani 201-212; Environmental Ethics, vol. 3, str. 267-277; Environmental impact, concept and measurement of, vol. 3, str. 278-296).

Priporočljiva literatura/Recommended literature

- The World Commission on Environment and Development, UNO. 1987. Our common future. Dostopno na: <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>
- Slootweg, R., Rajvanshi, A., Mathur, V.B. in Kolhoff, A. (2010). Editor: S. Levin. Biodiversity in Environmental Assessment. Cambridge University Press. Dostopno na: <https://www.pdfdrive.com/biodiversity-in-environmental-assessment-enhancing-ecosystem-services-for-human-well-being-ecology-biodiversity-and-conservation-d161022478.html> (poglavje Interpretation of biodiversity, str. 14 – 58)
- Medved, S., Novak, P. (2009). Varstvo okolja in obnovljivi viri energije. Ljubljana: FS.
- Kilpatrick, A. M. and Altizer, S., Disease Ecology. Nature Education Knowledge 1 (11), 13 (2010).
- Plowright, R. K., Sokolow, S. H., Gorman, M. E., Daszak, P., and Foley, J. E., Causal inference in disease ecology: investigating ecological drivers of disease emergence *Frontiers in Ecology and the Environment* 6 (8), 420 (2008).

- Coggon D, Rose G, Barker DJP. Epidemiology for the uninitiated. (IV. edition). Pridobljeno 27.1.2020 s <https://www.bmj.com/about-bmj/resources-readers/publications/epidemiology-uninitiated>.
- Roger Detels, Martin Gulliford, Quarraisha Abdool Karim, Chorh Chuan Tan. Oxford Textbook of Global Public Health. Oxford University Press, 26 Feb .

Cilji in kompetence:

Učna enota prispeva predvsem k razvoju naslednjih splošnih in specifičnih kompetenc:

- celovito kritično mišljenje, sposobnost analize, sinteze in predvidevanje rešitev s področja naravoslovnih, tehničnih, ekoloških, upravnih, inovacijskih in ekonomskih problemih v okolju in drugih družbenih ved (interdisciplinarnost),
- poznavanje in uporaba raziskovalnih metod, postopkov, procesov in tehnologije za reševanje okoljskih problemov,
- poznavanje in razumevanje ekoloških, vidikov varstva okolja in trajnostnega razvoja,
- poznavanje in razumevanje pomena biodiverzitete,
- poznavanje in razumevanje vpliva determinant naravnega okolja na zdravje in kakovost življenja,
- obvladovanje izbranih orodij metodologije okoljskih raziskav za reševanje okoljskih problemov, njihova uporaba ob interdisciplinarnem povezovanju.

Objectives and competences:

The learning unit mainly contributes to the development of the following general and specific competences:

- comprehensive critical thinking, ability to analyse, synthesize and predict solutions in the field of natural, technical, ecological, administrative, innovative and economic problems in the environment and other social sciences (interdisciplinarity),
- knowledge and application of research methods, procedures, processes and technology to solve environmental problems,
- knowledge and understanding of ecological, environmental protection and sustainable development issues,
- knowledge and understanding of the importance of biodiversity,
- knowledge and understanding of the impact of determinants of the natural environment on health and quality of life,
- ability to use selected tools of environmental research methodology to solve environmental problems, their use in interdisciplinary integration.

Predvideni študijski rezultati:

Študent/študentka:

- opiše pomen soodvisnosti elementov ekosistema, kroženje snovi, kroženje energije, biosfera in njene lastnosti,
- našteje in opiše dejavnike, ki vplivajo na biodiverziteteto,
- razume pomen biotske raznovrstnosti,
- razume vpliv determinant naravnega okolja na zdravje ljudi,
- razvije etični odnos do ekoloških problemov,
- se usposobi za kritično presojo vplivov na okolje, analizo in predvidevanje

Intended learning outcomes:

Student:

- describes the importance of the elements of the ecosystem, the circulation of substances, the circulation of energy, the biosphere and its characteristics,
- lists and describes the factors that influence biodiversity,
- understands the importance of biodiversity,
- understands the influence of factors of the natural environment on human health,

posledic posegov v okolje na ekosisteme.	<ul style="list-style-type: none"> • develops an ethical attitude towards ecological problems, • develops skills in critical appraisal of environmental impacts, analyses and predicts the effects of environmental interventions on ecosystems.
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Metode poučevanja in učenja:

Learning and teaching methods:

<ul style="list-style-type: none"> • <i>predavanja</i> z aktivno udeležbo študentov (razlaga, diskusija, vprašanja, primeri, reševanje problemov), • <i>seminarske vaje</i>: priprava, predstavitev in uspešen zagovor projektne/raziskovalne naloge, portfolio (reševanje problemov, študije primera, kritično presojanje, diskusija, refleksija izkušenj, vrednotenje, projektno delo, timsko delo), • <i>terenske vaje</i>. 	<ul style="list-style-type: none"> • <i>lectures</i> with active student participation (explanation, discussion, questions, examples, problem solving), • <i>seminar tutorial</i>: preparation, presentation and successful defence of a project/research paper, portfolio (problem solving, case studies, methods of critical thinking, discussion, reflection of experience, evaluation, project work, team work), • <i>fieldwork</i>.
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Načini ocenjevanja:

Delež (v %)

Weight (in %)

Assessment:

<p>Načini:</p> <ul style="list-style-type: none"> • izpit • izdelava, predstavitev in zagovor projektne/raziskovalne naloge <p>Ocenjevalna lestvica: ECTS.</p>	<p>60 %</p> <p>40 %</p>	<p>Types:</p> <ul style="list-style-type: none"> • examination • preparation, presentation and defence of the project/research paper <p>Grading scheme: ECTS.</p>
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