

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

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

**Vrsta predmeta/Course type** obvezni/obligatory

**Univerzitetna koda predmeta/University course code** 2\_UO\_1\_UN2

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

**Nosilec predmeta/Lecturer:** doc. dr. Aleksandar Šobot  
(Učni načrt pripravila izr. prof. dr. Nevenka Kregar Velikonja)

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

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

<b>Vsebina:</b>	<b>Content (Syllabus outline):</b>
<ul style="list-style-type: none"> <li>• <i>Ekosistemi:</i> pomen soodvisnosti elementov ekosistema, kroženje snovi, kroženje energije, biosfera in njene lastnosti. Problem tople grede.</li> <li>• <i>Biodiverziteta.</i></li> <li>• <i>Determinante naravnega okolja:</i> klima, zrak, voda, tla, živila, bivalno in delovno okolje.</li> <li>• <i>Vplivi dejavnikov naravnega okolja na zdravje ljudi:</i> kemični, fizikalni,</li> </ul>	<ul style="list-style-type: none"> <li>• <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.</li> <li>• <i>Biodiversity.</i></li> <li>• <i>Determinants of the natural environment:</i> climate, air, water, soil, food, living and working environment.</li> </ul>

<p>biološki in biomehanski dejavniki, degradacija habitata in javno zdravje.</p> <ul style="list-style-type: none"> <li>• <i>Vplivi okoljskih sprememb na zdravje ljudi</i>: pomen varstva okolja za zdravje ljudi, rast prebivalstva in okoljsko ravnotežje.</li> <li>• <i>Ekologija bolezni</i>: evolucija gostiteljev in patogenov: virulenca, rezistenca in ko-evolucija, vpliv bolezni na populacije in ekosisteme.</li> <li>• <i>Kakovost življenja in sonaravni razvoj</i>: urbanizacija in preskrba z energijo, vodnimi viri, potrošništvo in obvladovanje odpadkov, okoljska etika.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>The effects of the natural environment on human health</i>: chemical, physical, biological and biomechanical factors, habitat degradation and public health.</li> <li>• <i>Effects of environmental change on human health</i>: population growth and environmental balance, the importance of protecting the environment for human health.</li> <li>• <i>Disease Ecology</i>: host-pathogen evolution: virulence, resistance and coevolution, impact of diseases on populations and ecosystems.</li> <li>• <i>Quality of life and sustainable development</i>: urban issues related to energy and water supply, consumerism and waste products.</li> </ul>
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### **Temeljna literatura in viri/Readings:**

#### **Temeljna literatura/Basic literature**

- 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](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).
- Kotze, L., Marauhn, T. (2014): Transboundary Governance of Biodiversity. Brill Nijhoff, Boston.

#### **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 biodiverzitetu,
- 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"> <li>• develops an ethical attitude towards ecological problems,</li> <li>• develops skills in critical appraisal of environmental impacts, analyses and predicts the effects of environmental interventions on ecosystems.</li> </ul>
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**Metode poučevanja in učenja:**

**Learning and teaching methods:**

<ul style="list-style-type: none"> <li>• <i>predavanja</i> z aktivno udeležbo študentov (razlaga, diskusija, vprašanja, primeri, reševanje problemov),</li> <li>• <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),</li> <li>• <i>terenske vaje</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>lectures</i> with active student participation (explanation, discussion, questions, examples, problem solving),</li> <li>• <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),</li> <li>• <i>fieldwork</i>.</li> </ul>
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**Načini ocenjevanja:**

Delež (v %)

Weight (in %)

**Assessment:**

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