	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/ 2nd Cycle	No study field	1st year	1st

Vrsta predmeta/Course type	obvezni/obligatory

Univerzitetna koda predmeta/University course code	2_UO_1_UN2

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

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

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisites:**
• Vpis v prvi letnik študijskega programa. • Študent mora pred izpitom pripraviti in predstaviti ter zagovarjati projektno/raziskovalno nalogo.	• 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.

Vsebina:	**Content (Syllabus outline):**
• *Ekosistemi:* pomen soodvisnosti elementov ekosistema, kroženje snovi, kroženje energije, biosfera in njene lastnosti. Problem tople grede. • *Biodiverziteta.* • *Determinante naravnega okolja:* klima, zrak, voda, tla, živila, bivalno in delovno okolje. • *Vplivi dejavnikov naravnega okolja na zdravje ljudi:* kemični, fizikalni,	• *Ecosystems:* 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. • *Biodiversity.* • *Determinants of the natural environment:* climate, air, water, soil, food, living and working environment.

biološki in biomehanski dejavniki, degradacija habitata in javno zdravje. • *Vplivi okoljskih sprememb na zdravje ljudi:* pomen varstva okolja za zdravje ljudi, rast prebivalstva in okoljsko ravnotežje. • *Ekologija bolezni:* evolucija gostiteljev in patogenov: virulenca, rezistenca in ko-evolucija, vpliv bolezni na populacije in ekosisteme. • *Kakovost življenja in sonaravni razvoj:* urbanizacija in preskrba z energijo, vodnimi viri, potrošništvo in obvladovanje odpadkov, okoljska etika.	• *The effects of the natural environment on human health:* chemical, physical, biological and biomechanical factors, habitat degradation and public health. • *Effects of environmental change on human health:* population growth and environmental balance, the importance of protecting the environment for human health. • *Disease Ecology:* host-pathogen evolution: virulence, resistance and coevolution, impact of diseases on populations and ecosystems. • *Quality of life and sustainable development:* urban issues related to energy and water supply, consumerism and waste products.

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:	Objectives and competences:
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.	*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:	Intended learning outcomes:
Študent/študentka: • opiše pomen soodvisnosti elementov ekosistema, kroženje snovi, kroženje energije, biosfera in njene lastnosti, • našteje in opiše dejavnike, ki vplivajo na biodiverziteto, • razume pomen biotske raznovrstnosti, • razume vpliv determinant naravnega okolja na zdravje ljudi, • razvije etični odnos do ekoloških problemov,	*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,

• se usposobi za kritično presojo vplivov na okolje, analizo in predvidevanje posledic posegov v okolje na ekosisteme.	• understands the influence of factors of the natural environment on human health, • develops an ethical attitude towards ecological problems, • develops skills in critical appraisal of environmental impacts, analyses and predictss the effects of environmental interventions on ecosystems.

Metode poučevanja in učenja:	Learning and teaching methods:
• *predavanja* z aktivno udeležbo študentov (razlaga, diskusija, vprašanja, primeri, reševanje problemov), • *seminarske vaje:* priprava, predstavitev in uspešen zagovor projektne/raziskovalne naloge, portfolio (reševanje problemov, študije primera, kritično presojanje, diskusija, refleksija izkušenj, vrednotenje, projektno delo, timsko delo), • *terenske vaje.*	• *lectures* with active student participation (explanation, discussion, questions, examples, problem solving), • *seminar tutorial:* 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), • *fieldwork.*

Načini ocenjevanja:	Delež (v %) Weight (in %)	Assessment:
Načini: • izpit • izdelava, predstavitev in zagovor projektne/raziskovalne naloge Ocenjevalna lestvica: ECTS.	 60 % 40 %	Types: • examination • preparation, presentation and defence of the project/research paper Grading scheme: ECTS.