

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	OKOLJSKO IZOBRAŽEVANJE
Course title:	Environmental Education

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Second cycle study programme Education	Subject Teacher Education	1	summer

Vrsta predmeta / Course type Common optional

Univerzitetna koda predmeta / University course code: /

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
15	30	0	15	0	120	6

Nosilec predmeta / Lecturer:

izr. prof. dr. Iztok Devetak
doc. dr. Gregor Torkar

Jeziki / Languages:	Predavanja / Lectures:	Slovene
	Vaje / Tutorial:	Slovene

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

Vpis v letnik.

Prerequisites:

Enrolment into Year 1.

Vsebina:

1. Uvod v predmet Okoljsko izobraževanje
 2. Osnove znanosti o okolju
 2.1. Človek in okolje
 2.2. Ekologija in trajnost
 2.3. Ohranjanje naravnih virov in stanje okolja 2.4. Trajnostna družba
 3. Okoljsko (okoljevarstveno) izobraževanje
 3.1. Zgodovina okoljskega izobraževanja
 3.2. Okoljske vsebine v kurikulumih
 3.3. Didaktični pristopi in interdisciplinarnost okoljskih vsebin
 3.4. Raziskave na področju okoljskega izobraževanja

Content (Syllabus outline):

1. Introduction into Environmental Education
 2. Fundamentals of environmental science
 2.1. Humans and environment
 2.2. Ecology and sustainability
 2.3. Natural sources conservation and the environment state
 2.4. Sustainable society
 3. Environmental education
 3.1. The history of environmental education
 3.2. Environmental content in curricula
 3.3. Didactic approaches and interdisciplinary approach of environmental content
 3.4. Research in environmental education

Temeljni literatura in viri / Readings:

1. Liversidge, T., Cochrane, M., Kerfoot, B., Thomas, J. Teaching science. Sage, Los Angeles, London, Singapore, Washington DC, 2009. selected chapters, 5-45.
 2. Miller, T.G., Spoolman, S.E. Environmental Science. 13th edition. Brooks/Cole, Belmont, 2010. selected chapters, pp. 5-58.

3. The Handbook of Sustainability Literacy. Skills for a changing world. A. Stibbe (ur.). Green Books, Foxhole, Dartington, 2009. selected chapters, pp. 156-185.
4. Druga novejša znanstvena literatura. (Additional contemporary professional literature)

Cilji in kompetence:

Splošne:

- usposobljenost za samostojno pedagoško delo
- poznavanje in uporaba ustreznih metod raziskovanja in prenašanja spoznanj v prakso
- vzpostavljanje partnerskega odnosa z uporabniki in drugimi skupinami
- razvijanje novega znanja in razumevanja področja
- zmožnost sodelovanja v interdisciplinarnem timu in komuniciranje z vsemi vključenimi subjekti v vzgojno-izobraževalnem procesu (otroki, mladostniki, starši in strokovnimi delavci)
- razvijanje višjih kognitivnih veščin, povezanih z ustvarjanjem novega znanja

Predmetno-specifične kompetence - predmetno področje biologija:

- zmožnost sodelovalnega reševanja problemov izobraževanja različnih bioloških vsebin
- zmožnost razpravljanja in posredovanja znanja o problemih, ki so povezani z različnimi naravnimi sistemi - organizmi in ekosistemi ter etiko narave
- zmožnost uporabe bioloških raziskovalnih metod v procesu izobraževanja
- zmožnost poučevanja bioloških vsebin

Predmetno-specifične kompetence - predmetno področje fizika:

- zmožnost razvijanja in uporabe novih metod poučevanja fizikalnih vsebin in novih eksperimentalnih metod,
- zmožnost poljudne razlage kompleksnih pojavov

Predmetno-specifične kompetence - predmetno področje kemija:

- zmožnost razvijanja in uporabe novih metod poučevanja kemijskih vsebin in novih eksperimentalnih metod,
- zmožnost poljudne razlage kompleksnih pojavov

Predmetno-specifične kompetence - predmetno področje gospodinjstvo:

- poznavanje, razumevanje in apliciranje zahtevnejših vsebin modulov gospodinjstva
- uveljavljanje pomena gospodinjstva v kulturi v interdisciplinarnem pedagoškem delovanju
- zmožnost poljudne razlage kompleksnih pojavov

Predmetno-specifične kompetence:

- poznavanje smernic in pomena okoljskega izobraževanja
- pomen trajnostnega razvoja družbe
- didaktični pristopi implementacije okoljskega izobraževanja v redne in izbirne predmete osnovne

Objectives and competences:

General:

- ability to work independently in teaching
- knowing and using appropriate research methods and putting new findings into practice
- maintaining partnership with users and other groups
- developing new knowledge and understanding of the field
- the ability to cooperate in interdisciplinary team and to communicate with everyone involved in teaching (children, youngsters, parents and teachers)
- developing higher cognitive skills linked with creating new knowledge

Subject-specific competences (subject area biology):

- the ability to cooperatively solve problems in teaching various biological content
- the ability to discuss and share knowledge on problems, connected to various natural systems - organisms and ecosystems as well as nature ethics
- the ability to use biology research methods in the educational process
- the ability to teach biology content

Subject-specific competences (subject area physics):

- the ability to develop and use new teaching methods in teaching physics and new experimental methods
- the ability to explain complex terms in layman language

Subject-specific competences (subject area chemistry):

- the ability to develop and use new teaching methods in teaching chemistry and new experimental methods
- the ability to explain complex terms in layman language

Subject-specific competences (subject area home economics):

- knowing, understanding and application of complex home economics content in teaching
- asserting the meaning of home economics in the culture of interdisciplinary teaching
- the ability to explain complex terms in layman language

in srednje šole

Subject specific competences:

-knowing the guidelines and the meaning of environmental education
-the importance of sustainable society development
-didactic approaches of implementing environmental education in obligatory and optional subjects of primary and secondary schools.

Predvideni študijski rezultati:

Znanje in razumevanje:

Študent se bo spoznal z osnovami znanosti o okolju in okoljskim izobraževanjem. Poznal bo različne didaktične pristope pri poučevanju okoljevarstvenih vsebin v šoli in izven nje ter spoznal novejša znanstvena spoznanja na področju okoljskega izobraževanja.

Uporaba znanja:

Študent bo sposoben načrtovati poučevanje okoljskih vsebin. Pridobljena znanja bo znal uporabiti pri različnih šolskih predmetih (fizika, kemija, biologija, naravoslovje, gospodinjstvo) in pri delu z drugimi interesnimi skupinami.

Refleksija:

Študent se zaveda pomena interdisciplinarne obravnave okoljskih vsebin ter pomena področja za razvoj trajnostne družbe.

Prenosljive spretnosti:

Seznanjen bo z medpredmetnimi povezavami in bo sposoben spoznane didaktične in raziskovalne metode prenesti na različna predmetna področja.

Intended learning outcomes:

Knowing and understanding:

Student will get to know the basic principles of environmental science and environmental education. They will know various didactic approaches at teaching environmental content at school and out-of-school as well as contemporary scientific findings in environmental education.

Usage:

Student will be able to plan the teaching of environmental content. They will be able to use the acquired knowledge in different school subjects (physics, chemistry, biology, natural science, home economics) and in teaching cross-curricular subjects.

Reflection:

Student is aware of the importance of interdisciplinary linking of environmental contents and the importance of this field for the development of sustainable society.

Transferable knowledge:

Student will get to know cross-curricular links and will be able to transfer the new didactic and research methods into various subject areas.

Metode poučevanja in učenja:

Predavanja in seminarji z uporabo IKT.
Nastopi in delo na terenu
Individualno in skupinsko delo.

Learning and teaching methods:

Lectures and seminars with ICT use.
Presentations and field work.
Individual and group work.

Načini ocenjevanja:

(1) seminar 30%
(2) nastop 20%
(3) pisni izpit 50%

Za pozitivno oceno pri predmetu mora biti študent/-ka pozitivno ocenjen/-a pri vsakem posameznem deležu, ki sestavlja končno oceno.

Ocenjevalna lestvica (skladno s Statutom UL in fakultetnimi pravili): 1-5 nezadostno, zadostno 6, dobro 7, prav dobro 8, prav dobro 9 in odlično 10.

Assessment:

(1) seminar 30%
(2) presentation 20%
(3) written exam 50%

To attain the pass grade, the student must get a positive grade in each part that constitutes the final grade.

The grading scale (according to the University of Ljubljana Statute and the faculty regulations): 1-5 fail, 6 satisfactory, 7 good, 8 very good, 9 very good and 10 excellent.

Reference nosilca / Lecturer's references:

REBOLJ, Neva, DEVETAK, Iztok. 15 and 16 years-old students? understanding of factors that influence water pollution. *Energy and environment research*, ISSN 1927-0569, 2013, vol. 3, no. 1, str. 106-114, tabele.

FERK SAVEC, Vesna, DEVETAK, Iztok. Evaluating the effectiveness of students? active learning in chemistry. V: ISMAN, Aytakin (ur.). 4th International conference on New horizons in education, (Procedia - Social and behavioral sciences, ISSN 1877-0428, vol. 106). Amsterdam: Elsevier, 2013, vol. 106, str. 1113-1121, ilustr.

ZEYER, Albert, ÇETIN-DINDAR, Ayla, NURULAZAM MD ZAIN, Ahmad, JURIŠEVIČ, Mojca, DEVETAK, Iztok, ODERMATT, Freia. Systemizing : a cross-cultural constant for motivation to learn science. *Journal of research in science teaching*, ISSN 0022-4308, 2013, vol. 50, no. 9, str. 1047-1067.

TORKAR, Gregor. Learning experiences that produce environmentally active and informed minds. *NJAS Wageningen journal of life sciences*, ISSN 1573-5214. [Tiskana izd.], 2014, vol 69, no. 6, str. 49-55.

TORKAR, Gregor, KUBIATKO, Milan, BAJD, Barbara. Assessing pre-service teachers (dis) liking of some animal species. *J. Balt. sci. educ.*, 2012, vol 11, no. 4, str. 393-402.

TORKAR, Gregor, MOHAR, Petra, GREGORC, Tatjana, NEKREP, Igor, HÖNIGSFELD ADAMIČ, Marjana. The conservation knowledge and attitudes of teenagers in Slovenia toward the Eurasian Otter. *International journal of environmental and science education*, Jul. 2010, vol. 5, no. 3, str. 341-352.