



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	E-učenje
Course title:	E-learning by design

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Enovit magistrski študijski program druge stopnje Predmetni učitelj	/	5	Poletni
Five-year master's degree program Subject Teacher	/		Summer

Vrsta predmeta / Course type

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
15		30			45	3

Nosilec predmeta / Lecturer:

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

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

Vsebina:

- Zgodovinsko ozadje in trenutni trendi v e-učenju
- Koncepti in primeri dobrih praks uspešnega e-učenja
- Teorija in principi e-učenja
- sistemi učnega okolja
- e-gradiva
- druge najnovejše tehnologije s področja e-učenja

Content (Syllabus outline):

- Historical background and current trends in elearning.
- Concepts and foundations of best practices for successful teaching online.
- E-learning theory, principles,
- learning management systems, and web-based technology tools.

Temeljni literatura in viri / Readings:

- Gerlič. I, Sodobna informacijska tehnologija v izobraževanju. DZS, Ljubljana, 2000.
- Ruth C. Clark, Richard E. Mayer, E-learning and the science of instruction : proven guidelines for consumers and designers of multimedia learning, John Wiley & Sons, 2011
- William Kendall Horton, E-learning by design, John Wiley & Sons, 2006
- S. Carliner, P. Shank, The e-learning handbook : past promises, present challenges, John Wiley & Sons, 2008
- Revije: Computer education, Monitor, Moj mikro, Presek
- E-študijska gradiva

Cilji in kompetence:

- seznaniti se s teoretičnimi izhodišči, učnimi tehnikami in tehnologijami,
- raziskati uporabo e-učenja v različnih učnih situacijah
- Pridobiti osnovne izkušnje z uporabo in upravljanjem učnega okolja
- spoznati osnovne principe e-gradiv
- seznaniti se z orodji za izdelavo e-gradiv
- spoznati osnovne principe e-učbenikov
- seznaniti se z drugimi novejšimi tehnologijami s področja e-učenja

Objectives and competences:

- Basic introduction to online teaching and learning techniques and technologies.
- We will explore applications of e-learning in a variety of settings;
- Will gain practical, hands on experience with a wide variety of online communication tools.
- Get acquainted with basic principles of e-learning materials
- Mastering the authoring tool for preparation of e-learning materials
- Get acquainted with other advanced and new technologies and trends in e-learning

Predvideni študijski rezultati:

Znanje in razumevanje:

- Strokovno-teoretično ozadje s področja eučenja
- Prednosti in slabosti uporabe e-izobraževanja
- Organizacija distribucije in prenosa znanja

Prenosljive/ključne spretnosti in drugi atributi:

- Uporaba znanj pri izdelavi kakovostnih e-učnih gradiv
- Organiziranje in vodenje projektov za izdelavo učnih gradiv
- Priprava pouka v spletnih učilnicah

Metode poučevanja in učenja:

Predavanje, razgovor in diskusija, demonstracija, metoda pisnih in grafičnih del, uporaba IKT, reševanje problemskih nalog in

Intended learning outcomes:

Knowledge and Understanding:

- Theoretical background of e-materials.
- Advantages and disadvantages of using e-materials.
- Organization of knowledge distributions and knowledge transmission.

Transferable/Key Skills and other attributes:

- Knowledge for development of quality e-learning materials.
- Organizing and manage projects for produce e-learning materials.
- Preparation of classes in online classrooms

Learning and teaching methods:

Lecture, conversation and discussion, demonstration, method of written and graphic products, usage of ICT, problem solving and

preiskovanje, ustvarjanje avtenticnih učnih situacij (mikro pouk), oblike dela (individualno delo, skupinsko delo - kooperativno učenje, timsko delo, delo v dvojicah, frontalno delo), delo z viri.	investigation, creation of authentic learning situations (micro teaching), learning forms (individual work, teamwork, group learning (cooperative learning, work in pair, frontal instruction), work with sources.	
Načini ocenjevanja:	Assessment:	
<p>Način (pisni izpit, ustno izpraševanje, naloge, projekt)</p> <p>Portfolio s pisnimi izdelki (seminarska naloga, e-gradivo)</p> <p>Ustni izpit (pisni)</p> <p>Vaje</p> <p>Vsaka izmed naštetih obveznosti mora biti opravljena s pozitivno oceno.</p> <p>Pozitivni oceni pri portfolio in vajah sta pogoj za pristop k izpitu.</p>	<p>Delež (v %) / Weight (in %)</p> <p>30%</p> <p>50%</p> <p>20%</p>	<p>Type (examination, oral, coursework, project):</p> <p>Portfolio with student's works (seminar work, e-learning material);</p> <p>Oral Exam (written) – theory</p> <p>Coursework</p> <p>Each of the mentioned commitments must be assessed with a passing grade.</p> <p>Passing grades of the Portfolio and coursework are required for taking the exam.</p>
Reference nosilca / Lecturer's references:		
<p>1. DOLENC, Kosta, PESEK, Igor, ABERŠEK, Boris. Modular and branched structure of individualized intelligent e-learning materials for science and technology subject course. V: LAMANAUSKAS, Vincentas (ur.). <i>Science, technology, society and education issues - 2013</i>, (Problems of education in the 21st century, ISSN 1822-7864, vol. 57). Siauliai: Scientific Methodological Center Scientia Educologica, 2013, str. 16-24.</p> <p>2. GALTIER, Jerome, PESEK, Igor, PRNAVER, Katja, ŽEROVNIK, Janez. Oriented networks design problem. <i>Journal of information science and engineering</i>, ISSN 1016-2364, 2010, vol. 26, no. 4, str. 1231-1242.</p> <p>3. ZMAZEK, Blaž, PESEK, Igor, MILEKŠIČ, Vladimir, REPOLUSK, Samo, SENEKOVIČ, Jožef, LIPOVEC, Alenka. Vsebinsko-didaktična izhodišča in napotila pri izdelavi i-učbenikov = Contents and didactic guidelines in the i-textbooks production. V: PESEK, Igor (ur.), et al. <i>Slovenski i-učbeniki</i>. Ljubljana: Zavod Republike Slovenije za šolstvo, 2014, str. 29-51, ilustr. http://www.zrss.si/pdf/slovenski-i-ucbeniki.pdf. [COBISS.SI-ID 20590856]</p> <p>4. PESEK, Igor (urednik), ZMAZEK, Blaž (urednik), MILEKŠIČ, Vladimir (urednik). <i>Slovenski i-učbeniki</i>. Ljubljana: Zavod Republike Slovenije za šolstvo, 2014. ISBN 978-961-03-0248-3. http://www.zrss.si/pdf/slovenski-i-ucbeniki.pdf. [COBISS.SI-ID 274076928]</p> <p>5. PESEK, Igor, ŽEROVNIK, Janez. New spectral numerical characterization of DNA sequences. <i>WSEAS Transactions on Biology and Biomedicine</i>, ISSN 1109-9518, 2008, vol. 5, iss. 10, str. 261-270. http://www.wseas.us/e-library/transactions/biology/2008/29-209.pdf.</p> <p>6. PESEK, Igor, SCHAERF, Andrea, ŽEROVNIK, Janez. Hybrid local search techniques for the resource-constrained project scheduling problem. V: Hybrid metaheuristics, 4th international workshop, HM 2007, Dortmund, Germany, October 8-9, 2007, proceedings. BARTZ-BEIELSTEIN, Thomas (ur.). <i>Hybrid</i></p>		

metaheuristics : 4th international workshop, HM 2007, Dortmund, Germany, October 8-9, 2007 : proceedings, (Lecture notes in computer science, ISSN 0302-9743, 4771), (LNCS sublibrary, SL 1, Theoretical computer science and general issues). Berlin; Heidelberg; New York: Springer, cop. 2007, str. 57-68.

7. KELENC, Aleksander, KOS, Tim, KREN, Matej, PESEK, Igor. eXeCute - avtorsko orodje za izdelavo e-gradiv = eXeCute - authoring tool. V: Mednarodna konferenca Splet izobraževanja in raziskovanja z IKT - SIRIKT 2011, Kranjska Gora, 13.-16. april 2011, 13th-16th April 2011. BAČNIK, Andreja (ur.), et al. (Zbornik). Ljubljana: Miška, 2011, str. 1123-1125. [COBISS.SI-ID 18435080]