Mednarodna fakulteta
za družbene in poslovne študije
International School
for Social and Business Studies
Celje · Slovenia · Europe

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# UČNI NAČRT / COURSE SYLLABUS

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|---|---|
| **Predmet / Course** | Umetna inteligenca v izobraževanju |
| **Šifra predmeta / Course Code** | B22UII6-VKI |
| **Nosilec predmeta / Course Coordinator** | Izr. prof. dr. Andrej Flogie |
| **Vrsta predmeta / Type of the course** | Izbirni / elective |
| **Jezik / Language**<br>- **Vaje / Tutorials**<br>- **Predavanja / Lecture** | <br>Slovenski / Slovene, Angleški / English<br>Slovenski / Slovene, Angleški / English |
| **Študijski program / Programme** | Vodenje in kakovost v izobraževanju (2. stopnje) / Management and Quality in Education (2nd cycle) |
| **Letnik / Year** | 1. |
| **Pogoji za vključitev / Requirements** | / |

| **Predavanja**<br>**Lectures** | **Vaje**<br>**Tutorials** | **Druge oblike študija**<br>**Other Type of Study** | **Samostojno delo**<br>**Individual work** | **Ure dela**<br>**Work hours** | **ECTS** |
|---|---|---|---|---|---|
| 24 | 0 | 0 | 126 | 150 | 6 |

**Vsebina / Content:**

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|---|---|
| 1. Teoretični vidiki razvoja umetne inteligence<br>2. Vpliv umnetne inteligence na izobraževanje<br>3. Strateški pogled na umeščanje umetne inteligence v izobraževalni prostor<br>4. Področja uporabe umetne inteligence v izobraževanju s poudarkom na generativni umetni inteligenci<br>5. Pedagoški vidiki uporabe umetne inteligence v izobraževanju<br>6. Etični vidiki uporabe umetne inteligence v izobraževanju | 1. Theoretical aspects of the development of artificial intelligence<br>2. The impact of artificial intelligence on education<br>3. A strategic look at the use of artificial intelligence in education<br>4. Areas of application of artificial intelligence in education with a focus on generative artificial intelligence<br>5. Pedagogical aspects of the use of artificial intelligence in education<br>6. Ethical aspects of the use of artificial intelligence in education |

**Splošne kompetence / General Competencies:**

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| Študent bo pridobil znanje in spretnosti na naslednjih splošnih vsebinskih področjih:<br>**SPL1**: Delo s podatki in informacijami;<br>**SPL2**: Osnovne računalniške spretnosti;<br>**SPL4**: Sodelovalno, timsko delo, delo v skupini;<br>**SPL6**: Etičnost;<br>**SPL8**: Spretnosti kritičnega mišljenja; | Student will acquire knowledge and skills in the following general areas:<br>**SPL1**: Work with data and information;<br>**SPL2**: Basic computer skills;<br>**SPL4**: Cooperation, team work, group work;<br>**SPL6**: Ethics;<br>**SPL8**: Critical thinking; |

**Predmetno specifične kompetence / Course Specific Competencies:**

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| Študent bo pridobil znanje in spretnosti na naslednjih specifičnih vsebinskih področjih:<br>**PSP7**: Upravljanje s spremembami;<br>**PSP12**: Informacijski sistemi in programska oprema na vsebinskem področju predmeta;<br>**PSP18:** Splošna razgledanost na vsebinskem področju predmeta. | Student will acquire knowledge and skills in the following specific areas:<br>**PSP7**: Change management;<br>**PSP12**: Information systems and software in the fields of the course;<br>**PSP18:** General overview of the course content area. |

**Predvideni študijski rezultati / Intended Learning Outcomes:**

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|---|---|
| Študent doseže naslednje študijske rezultate:<br>1. Pozna spremembe in trende v izobraževanju zaradi uvajanja UI, | Student achieves the following learning outcomes:<br>1. Is familiar with changes and trends in education due to the introduction of AI. |

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|---|---|
| 2. Zna kritično razmisliti o potrebah uporabe UI v družbah znanja,<br>3. Razume modele UI in njihove značilnosti.<br>4. Razume modele generativne UI in njihove značilnosti.<br>5. Pozna različne pedagoške pristope uporabe generativne UI v izobraževanju.<br>6. Se zaveda etičnih in pravnih vidikov uporabe generativne UI v izobraževanju. | 2. Is capable of critically reflecting on the needs of AI in knowledge societies.<br>3. Understands AI models and their characteristics.<br>4. Understands generative AI models and their characteristics<br>5. Is knowledgeable about different pedagogical approaches use of generative AI.<br>6. Is aware of the ethical and legal aspects of using generative AI in education. |

**Oblike in metode poučevanja in učenja / Types and Methods of Teaching and Learning**

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|---|---|
| ***Oblike dela***<br><br>***Types of Teaching and Learning*** | Frontalna oblika poučevanja; Delo v manjših skupinah; Samostojno delo študenta, e-učenje<br>Frontal teaching; Work in smaller groups or pairs; independent student work, e-learning |
| ***Metode dela***<br><br>***Teaching and Learning Methods*** | Razlaga; Razgovor/diskusija/debata; Javni nastop; Gost iz prakse;<br><br>Explanation; Conversation/discussion/debate; Public presentation; Guest from practice; |

**Načini ocenjevanja v % / Types of Student Assessment**

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|---|---|
| Sprotno ustno ocenjevanje / Oral Assessment | / |
| Sprotno pisno ocenjevanje / Written Assessment | 50 % |
| Daljši pisni izdelek /Longer written casework[1] | 30 % |
| Javni nastop s predstavitvijo rezultatov / Presentations[2]/ | 20 % |
| Končni pisni izpit / Final oral examination | / |
| Končni ustni izpit / Final oral examination | / |
| Udeležba in sodelovanje / Participation and cooperation | / |
| **Lestvica ocenjevanja / Grading scale** | Številska / numeric |

**Temeljna literatura / Literature:**


1. Žerovnik, A., Zapušek, M. (2024). Uporaba generativne umetne inteligence v izobraževanju. Univerza v Ljubljani, Pedagoška fakulteta.
2. Aberšek, B., Flogie, A., Pesek, I. (2023). AI and Cognitive Modelling for Education. Springer, Switzerland.
3. Flogie, A., Aberšek, B. (2022). Artificial Intelligence in Education, Active čearning (Theory and Practice), InfotechOpen, United Kingdom.
4. Flogie, A., Aberšek, B. (2019). The Impact of Innovative ICT Educatrion and AI on the Pedagogical Paradigm. Cambridge Scholars Publishing, United Kingdom.


**Reference nosilca / Lecturer's references:**


1. Flogie, A., Aberšek, B. (2019). The Impact of Innovative ICT Educatrion and AI on the Pedagogical Paradigm. Cambridge Scholars Publishing, United Kingdom.
2. FLOGIE, Andrej, ABERŠEK, Boris. Artificial intelligence in education. V: LUTSENKO, Olena (ur.). Active learning - theory and practice. London: IntechOpen, 2022. Str. 97-117. ISBN 978-1-83968-473-9, ISBN 978-1-83968-477-7, ISBN 978-1-83968-478-4. DOI: 10.5772/intechopen.96498. [COBISS.SI-ID 53657091]
3. FLOGIE, Andrej, ABERŠEK, Boris, PESEK, Igor. The impact of innovative learning environments on social competences of youth. Research in learning technology. 2019, vol. 27, str. 1-14. ISSN 2156-7069. DOI: 10.25304/rlt.v27.2214. [COBISS.SI-ID 24743944], [SNIP, WoS do 10. 11. 2023: št. citatov (TC): 5, čistih citatov (CI): 5, čistih citatov na avtorja (CIAu): 1.67, Scopus do 19. 10. 2024: št. citatov (TC): 9, čistih citatov (CI): 9, čistih citatov na avtorja (CIAu): 3.00]
   projekt: Innovative Pedagogy 1:1 in the Light of the 21st Century under Grant Agreement Number C 3330-13-319003
4. Aberšek, B., Flogie, A., Pesek, I. (2023). AI and Cognitive Modelling for Education. Springer, Switzerland.
5. Flogie, A., Aberšek, B. (2022). Artificial Intelligence in Education, Active čearning (Theory and Practice), InfotechOpen, United Kingdom.


[1] Seminarska ali projektna naloga, raziskovalna naloga ipd.

[2] Plakat, naloga, prispevek

6. VIČIČ KRABONJA, Maja, KUSTEC, Simona, SKRBINJEK, Vesna, ABERŠEK, Boris, FLOGIE, Andrej. Innovative professional learning communities and sustainable education practices through digital transformation. Sustainability. 2024, vol. 16, iss. 14, [article no.] 16146250, str. 1-19, ilustr. ISSN 2071-1050. https://www.mdpi.com/2071-1050/16/14/6250, Digitalna knjižnica Univerze v Mariboru – DKUM.
7. FLOGIE, Andrej, ČAMPELJ, Borut. Umetna inteligenca v izobraževanju = Artificial intelligence in education. V: LUŠTREK, Mitja (ur.), RAJKOVIČ, Uroš (ur.). Informacijska družba - IS 2023 = Information Society - IS 2023 : zbornik 26. mednarodne multikonference = proceedings of the 26th International Multiconference : 9.–13. oktober 2023, 9–13 October 2023, Ljubljana, Slovenia. Ljubljana: Institut "Jožef Stefan", 2023. Str. 462-467. Informacijska družba. ISBN 978-961-264-285-3. ISSN 2630-371X. https://is.ijs.si/wp-content/uploads/2023/12/IS2023_Complete.pdf. [COBISS.SI-ID 187332099]
8. FLOGIE, Andrej, ZEMLJAK, Dejan. Integrating generative artificial intelligence into the didactics of engineering and technology : innovative approaches for teaching engineering and technology. V: GÓMEZ CHOVA, Louis (ur.), LÓPEZ MARTÍNEZ, Agustín (ur.), LEES, Joanna (ur.). ICERI 2024 : 17th international conference of education, research and innovation : Seville, Spain. 11-13 November, 2024 : conference proceedings. Seville: IATED Academy, cop. 2024. Str. 4974-4980. ICERI proceedings.
9. FLOGIE, Andrej, VIČIČ KRABONJA, Maja. Artificial intelligence in education : developing competencies and supporting teachers in implementing AI in school learning environments. V: 2023 12th Mediterranean Conference on Embedded Computing (MECO), 6-10 June 2023. 2023 12th Mediterranean Conference on Embedded Computing (MECO), 6-10 June 2023, Budva, Montenegro.
10. FLOGIE, Andrej. Vpliv umetne inteligence na inovativnost v vzgoji in izobraževanju = The influence of artificial intelligence on innovation in education. V: Ustvarjalnost in inovativnost v vzgoji in izobraževanju : zbornik : 2. strokovna konferenca SPIP : [16., 17. oktober 2020, Slovenj Gradec]. Elektronska izd. Slovenj Gradec: Društvo SPIP, 2020. Str. 18-20. ISBN 978-961-07-0341-9.http://spip.splet.arnes.si/spip-2020/. [COBISS.SI-ID 75272195]