


Course: Emerging Technologies in Education	
Type and level of studies: MAS	
Study program: Class Teacher Education, Kindergarten Teacher Education	
Teacher(s): Verica Milutinović	
Language of instruction: English	
ECTS: 5	
Prerequisites: /	
Semester: Summer semester	

Course unit objective

This course equips students with the basic principles and skills for designing and developing subject-based teaching materials by adopting traditional and digital approaches. Emphasis is placed on the application of modern technologies, including Artificial Intelligence (AI) tools, in primary school teaching. Students will learn to select, edit, and produce suitable learning materials, understand and use multimedia and Web tools, and integrate AI-assisted content creation and personalization techniques to improve teaching quality.

Learning outcomes

Upon successful completion of the course, the student is able to create, evaluate, and use multimedia educational software, Web tools, and AI applications in the classroom. The student knows when, how, and which contemporary media and AI tools to apply in different classroom situations and can design adaptive learning materials that respond to students' needs using AI-based recommendations. Additionally, the student is able to critically evaluate the pedagogical impact of AI-generated content and integrate such tools responsibly into the teaching process.

Course unit contents

Theoretical classes

Educational software in elementary school (design and analysis), software for creating presentations, internet and communication technologies, hypermedia in education and their role in the individualization of instruction, Web technologies in education, AI-assisted instructional design and personalization, and the combination of traditional methods and forms of work with distance education.

Practical classes

Processing of video materials and the design of educational video content, the use of Web technologies and AI tools in education, the creation of lesson materials and assessments with AI support, and the analysis of student progress using AI-based classroom analytics.

Literature

Newby, T. J., Stepich, D., Lehman, J., Russell, J. D., Ottenbreit-Leftwich, A. (2011). *Educational Technology for Teaching and Learning*. Pearson Education.

Niemi, H., Pea, R. D. & Lu, Y. (2023). *AI in Learning: Designing the Future*. Springer.

Urmeneta, A., & Romero, M. (2024). *Creative applications of artificial intelligence in education*. Springer Nature.

Chiu, T. K. (2024). *Empowering K-12 education with AI: Preparing for the future of education and work*. Taylor & Francis.

Number of active teaching hours:			Other classes
Lectures: 30	Seminar: 15	Independent work:	
Teaching methods: Lectures, practice			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures	10	oral examination	30
practical classes/tests	20	written examination	
Seminars/homework	10	tests	
Project	30		

Other			
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Grading system		
Grade	Number of points	Description
10	91 – 100	Excellent
9	81 – 90	Exceptionally good
8	71 – 80	Very good
7	61 – 70	Good
6	51 – 60	Passing
5	≤ 50	Failing