

COURSE DESCRIPTION

Course Title	Educational Multimedia				
Course Code	MGA491				
Course Type	Free Elective				
Level	Undergraduate				
Year / Semester	Year 4, 1 st semester				
Teacher's Name	Andri Ioannou				
ECTS	6	Lectures / week	3 hours per week	Laboratories / week	Included in the 3 hours per week
Course Purpose and Objectives	<p>The course analyzes the educational capabilities of multimedia and examines the prospects for their use in formal and informal education. The course briefly reviews contemporary theories of learning, in relation to the design and development of learning environments with multimedia technologies. In the main part of the course, the students will participate in the study of scientific articles along with recent multimedia applications (e.g., educational robotics, interactive touch surfaces or tangible interaction, virtual, augmented and mixed reality applications, serious games, IOT technologies) and will examine their use and prospects in education. During the course, students will prepare and present a course unit (lesson plans) and/or classroom intervention on the application of educational multimedia for learning.</p>				
Learning Outcomes	<p>Upon completion of the course students are expected to be able to:</p> <ul style="list-style-type: none"> - use current multimedia technologies for the design of environments that activate and enhance the learning process. - critically evaluate the use of educational multimedia within learning environments. - critically reflect on research studies from the field of educational multimedia. 				
Prerequisites			Required		
Course Content	<p>Week 1 Introduction to educational multimedia, a glance at the history of educational media/multimedia</p> <p>Week 2 Learning theories and design of technology-enhanced learning environments</p> <p>Week 3 Educational robotics for the promotion of STEM</p>				

	<p>Week 4 Educational robotics for the promotion of STEM (continued)</p> <p>Week 5 Multimodal learning on interactive surfaces and spaces</p> <p>Week 6 Serious computer games for STEAM</p> <p>Week 7 Serious computer games for Social Sciences</p> <p>Week 8 Augmented Reality in teaching and learning</p> <p>Week 9 Virtual Reality in teaching and learning</p> <p>Week 10 Mixed reality in teaching and learning</p> <p>Week 11 IoT technologies (micro:bit, Arduino) in teaching and learning</p> <p>Week 12 IoT (micro:bit, Arduino) technologies in teaching and learning (continued)</p> <p>Week 13 Presentation of course projects. Group discussion and critic.</p>
<p>Teaching Methodology</p>	<p>Students are invited to participate actively in the lesson, taking advantage of the time and benefits of the hands-on, in-class activities. The main part of the course consists of: practicing various multimedia technologies and applications, studying and presenting scientific articles, teamwork, personal guidance and lectures. Reading mandatory articles should be done before the class meeting for better understanding and participation in the lesson. Discussion and participation in the lesson is an important part of the course. Bring your own device (laptops, tablets and smartphones - preferably Android)!</p>
<p>Bibliography</p>	<p>Selected research articles from:</p> <ol style="list-style-type: none"> 1. Spector, J. M., Merrill, M. D., Elen, J., & Bishop, M. J. (Eds.). (2014). <i>Handbook of research on educational communications and technology</i> (pp. 413-424). New York, NY: Springer. 2. Díaz, P., & Ioannou, A. (2019). Learning in a digital world: An introduction. In Paloma Díaz, Andri Ioannou, Kaushal Kumar Bhagat, Mike Spector (eds), <i>Learning in a digital world: A multidisciplinary perspective</i>

	<p>on interactive technologies for formal and informal education. Springer series: Smart Computing and Intelligence. Springer (forthcoming).</p> <p>3. Άλλα ερευνητικά άρθρα από επιστημονικά συνέδρια και περιοδικά σχετικά με το θέμα.</p> <p>Further bibliography depends on the project chosen by each group and will be developed in collaboration with the supervisor.</p>
<p>Assessment</p>	<ol style="list-style-type: none"> 1. Classroom hands-on exercises (20%) 2. Interim project (bibliography review and topic presentation) (30%) 3. Course project and presentation (unit/lesson design and/or classroom intervention) (50%) <p>Evaluation criteria</p> <p>According to the learning objectives of the course project, the evaluation will be based on the following criteria:</p> <p>Grade 9 - 10/10 - Work is a well-developed understanding of the processes required. The work is based on extensive and intensive research and innovation. The student shows how the student chose and handled methodologies and sources that are best suited for completing his/her work. The job shows skills and excellent ability.</p> <p>Grade 8 - 8.5 / 10 - Work has a well-developed understanding of processes and is based on a better than average performance for exploration and innovation. The student shows a good idea of how to choose and handle methodologies and resources that are appropriate for completing his/her work. Work shows basic skills.</p> <p>Grade 7 - 7.5 / 10 - The work shows some understanding of the processes required, and is based on some integrated effort for exploration and innovation. The student shows some idea of how to choose and handle methodologies and resources that are appropriate for completing his/her work. The job shows some skills and abilities.</p> <p>Grade 6 - 6.5 / 10 - Work has a limited understanding of the processes required and is based on a limited effort for exploration and innovation. The student shows a little how he chose and handled methodologies and sources that are appropriate for completing his work. Work shows skills and abilities that are less than satisfactory.</p> <p>Grade 0 - 6/10 - The work does not understand the processes required, and/or is based on a lack of effort for exploration and innovation. The student handled the wrong methodologies and sources to complete his work. The job shows skills and abilities that are unsatisfactory.</p>
<p>Language</p>	<p>Greek</p>



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