

COURSE OUTLINE INFORMATION AND COMMUNICATION TECHNOLOGIES IN HEALTH

1. GENERAL

SCHOOL	School of Physical Education, Sports and Occupational Therapy		
DEPARTMENT	Department of Occupational Therapy		
LEVEL OF STUDIES	UPS - LEVEL 6		
COURSE CODE		SEMESTER	7 ^o
COURSE TITLE	Information and Communication Technologies in Health		
TEACHING ACTIVITIES <i>If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.</i>		TEACHING HOURS PER WEEK	ECTS CREDITS
		3	6
<i>Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.</i>			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skill Development</i>	General Knowledge		
PREREQUISITES:	NO		
TEACHING & EXAMINATION LANGUAGE:	Greek		
COURSE OFFERED TO ERASMUS STUDENTS:	NO		
COURSE URL:	-		

2. LEARNING OUTCOMES

Learning Outcomes	
<i>Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.</i>	
<p>Upon completing the course, students will acquire essential knowledge and skills in the application of Information and Communication Technologies in healthcare, with a focus on Artificial Intelligence, Big Data, the Internet of Things, and Cloud Computing. They will also be trained in using office software, such as word processors, spreadsheets, and presentations, integrating Artificial Intelligence tools (e.g., ChatGPT) to automate and enhance their processes. Additionally, they will understand the significance of interactive video games and database systems in healthcare, developing the ability to utilize digital tools in their professional careers.</p>	
General Skills	
<i>Name the desirable general skills upon successful completion of the module</i>	
Search, analysis and synthesis of data and information, ICT Use Adaptation to new situations Decision making Autonomous work Teamwork Working in an international environment Working in an interdisciplinary environment Production of new research ideas	Project design and management Equity and Inclusion Respect for the natural environment Sustainability Demonstration of social, professional and moral responsibility and sensitivity to gender issues Critical thinking Promoting free, creative and inductive reasoning
<ul style="list-style-type: none"> • Search, analysis and synthesis of data and information, ICT Use 	

- *Adaptation to new situations*
- *Decision making*
- *Autonomous work*
- *Working in an international environment*
- *Working in an interdisciplinary environment*
- *Production of new research ideas*
- *Project design and management*
- *Promoting free, creative and inductive reasoning*

3. COURSE CONTENT

1. Educational Technology - Digital Services of DUTH: Understanding the digital services of the university and how educational technology supports academic processes.
2. Introduction to ICT in Health - Artificial Intelligence, Big Data, IoT, Cloud Computing: Gaining knowledge of emerging technologies like AI, Big Data, and Cloud Computing and their applications in healthcare.
3. Use of Office Software in Health - Word Processor I: Learning basic word processing skills relevant to health documentation.
4. Use of Office Software and AI (ChatGPT) in Health - Word Processor II: Enhancing word processing tasks with AI tools like ChatGPT for healthcare applications.
5. Use of Office Software in Health - Spreadsheets I: Acquiring skills in using spreadsheets for data management and analysis in health.
6. Use of Office Software and AI (ChatGPT) in Health - Spreadsheets II: Using AI to optimize spreadsheet functionalities for health-related data analysis.
7. Use of Office Software in Health - Presentations I: Developing presentation skills tailored for healthcare communication.
8. Use of Office Software and AI (ChatGPT) in Health - Presentations II: Improving presentation creation with AI tools for more effective health information dissemination.
9. Information in Healthcare: Understanding the role of information management and systems in healthcare settings.
10. Database Management Systems and AI (ChatGPT) in Health - Databases I: Learning basic database management with AI integration for healthcare data.
11. Database Management Systems in Health - Databases II: Advanced database management techniques and their applications in health.
12. Integration of Interactive Video Games in Health: Exploring how interactive video games can be used for health-related interventions and therapies.
13. Utilization of Interactive Video Games in Health: Understanding the therapeutic applications and benefits of interactive video games in healthcare settings.

4. LEARNING & TEACHING METHODS - EVALUATION

<p style="text-align: center;">TEACHING METHOD <i>Face to face, Distance learning, etc.</i></p>	<p>The course will be taught using a combination of two teaching methods:</p> <ul style="list-style-type: none"> • Lectures, where basic concepts and theories related to the course content will be introduced. • Laboratory sessions, where students will work independently or in groups, under guidance, performing tasks using general and specialized
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	<p>software packages.</p> <p>Additionally, a blended learning model will be developed, incorporating distance learning through a learning management platform. This approach provides flexibility and reinforces both theoretical and practical skills.</p>																
<p>USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT)</p> <p><i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i></p>	<p>Use of ICT in Teaching and Communication with Students will include:</p> <ul style="list-style-type: none"> • Digital slides for presenting course material • Videos to enhance understanding of complex topics • MsTeams/e-class, webmail for online communication and course management • Cloud computing for collaborative work and file sharing • Artificial intelligence to support learning and provide personalized assistance <p>This integration of ICT tools will enhance the learning experience and streamline communication between instructors and students.</p>																
<p>TEACHING ORGANIZATION</p> <p><i>The ways and methods of teaching are described in detail.</i></p> <p><i>Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.</i></p> <p><i>The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</i></p>	<table border="1"> <thead> <tr> <th data-bbox="639 913 979 949">Activity</th> <th data-bbox="979 913 1305 949">Workload/semester</th> </tr> </thead> <tbody> <tr> <td data-bbox="639 949 979 985">Lectures</td> <td data-bbox="979 949 1305 985">39</td> </tr> <tr> <td data-bbox="639 985 979 1021">Laboratory Exercise</td> <td data-bbox="979 985 1305 1021">60</td> </tr> <tr> <td data-bbox="639 1021 979 1097">Bibliographic research & analysis</td> <td data-bbox="979 1021 1305 1097">78</td> </tr> <tr> <td data-bbox="639 1097 979 1133">Exams</td> <td data-bbox="979 1097 1305 1133">3</td> </tr> <tr> <td data-bbox="639 1133 979 1169"></td> <td data-bbox="979 1133 1305 1169"></td> </tr> <tr> <td data-bbox="639 1169 979 1205"></td> <td data-bbox="979 1169 1305 1205"></td> </tr> <tr> <td data-bbox="639 1205 979 1240">Total Course</td> <td data-bbox="979 1205 1305 1240">180</td> </tr> </tbody> </table>	Activity	Workload/semester	Lectures	39	Laboratory Exercise	60	Bibliographic research & analysis	78	Exams	3					Total Course	180
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<p>STUDENT EVALUATION</p> <p><i>Description of the evaluation process</i></p> <p><i>Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others</i></p> <p><i>Please indicate all relevant information about the course assessment and how students are informed</i></p>	<p>The assessment for the course will be structured as follows:</p> <ol style="list-style-type: none"> 1. Mid-term evaluation (Problem Solving): 35% 2. Final written exam (Multiple Choice Test, Short Answer Questions): 65% 																

5. SUGGESTED BIBLIOGRAPHY

1. Botsis, T., & Chalkiotis, S. (2005). *Health Informatics*. Athens: Diavlos.
2. Koutsouris, D. D., Petropoulou, O., Anastasiou, A., & Matsopoulos, G. (2022). *Modern Technologies & Applications of Digital Health*. Kallipos: Open Academic Editions.
3. Gkortsis, E. (2007). *Medical Informatics and Telemedicine Services*. Athens: Giourdas.
4. Papastergiou, M., & Thireos, E. (2010). *Information and Communication Technologies in Health Education: Theoretical Framework, Empirical Findings, and Research Prospects*. *Archives of Hellenic Medicine*, 27(2): 239-258.
5. Marinakis, D., Papadopoulos, E., Tsambalakis, I., Vernadakis, N., Syropoulou, A., &

Giannousi, M. (2023). *The Effect of Gender on Self-Presence and the Enjoyment of Children with Intellectual Disabilities in Fully Immersive Virtual Reality Games*. *Sports and Society*, 1. Retrieved from <http://ojs.staff.duth.gr/ojs/index.php/ExSoc/article/view/469>

6. Sapountzi, A., Vernadakis, N., Thomopoulos, S., & Kyriazanos, D. (2023). *The Effect of Digital Interactive Sports Games on the Balance of Patients with Multiple Sclerosis*. *Sports and Society*, 2. Retrieved from <http://ojs.staff.duth.gr/ojs/index.php/ExSoc/article/view/446>

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

TEACHER (FULL NAME):

CONTACT DETAILS:

SUPERVISORS: (1) NO

EVALUATION METHODS: (2) WRITTEN EXAMINATION WITH DISTANCE LEARNING METHODS

IMPLEMENTATION INSTRUCTIONS: (3) THE EXAMINATION IN THE COURSE WILL BE CARRIED OUT IN SUBGROUPS OF USERS IN THE E-CLASS, DEPENDING ON THE NUMBER OF PARTICIPANTS IN THE COURSE, ON THE DAY ACCORDING TO THE EXAMINATION PROGRAM ANNOUNCED BY THE SECRETARIAT.

THE EXAM WILL BE CONDUCTED THROUGH TEAMS. THE LINK WILL BE SENT TO STUDENTS VIA E-CLASS EXCLUSIVELY TO THE INSTITUTIONAL ACCOUNTS OF THOSE WHO HAVE REGISTERED FOR THE COURSE AND HAVE LEARNED THE TERMS OF DISTANCE METHODS.

STUDENTS WILL HAVE TO LOG IN TO THE EXAMINATION ROOM THROUGH THEIR INSTITUTIONAL ACCOUNT, OTHERWISE THEY WILL NOT BE ABLE TO PARTICIPATE. THEY WILL ALSO TAKE PART IN THE EXAMINATION WITH A CAMERA, WHICH THEY WILL HAVE OPEN DURING THE EXAMINATION. BEFORE THE START OF THE EXAM, STUDENTS WILL SHOW THEIR IDENTITY TO THE CAMERA, SO THAT THEY CAN BE IDENTIFIED.

EACH STUDENT SHOULD ANSWER MULTIPLE CHOICE QUESTIONS, FREE TEXT DEVELOPMENT, CRITICAL THINKING. EACH OF THE QUESTIONS IS GRADED FROM 0.5 POINTS TO 2.0 POINTS DEPENDING ON QUESTION'S CATEGORY

(1) Please write YES or NO

(2) Note down the evaluation methods used by the teacher, e.g.

➤ *written assignment* or/and exercises

➤ written or oral examination with distance learning methods, provided that the integrity and reliability of the examination are ensured.

(3) In the **Implementation Instructions** section, the teacher notes down clear instructions to the students:

a) in case of **written assignment and / or exercises**: the deadline (e.g. the last week of the semester), the means of submission, the grading system, the grade percentage of the assignment in the final grade and **any other necessary information**.

b) in case of **oral examination with distance learning methods**: the instructions for conducting the examination (e.g. in groups of X people), the way of administration of the questions to be answered, the distance learning platforms to be used, the technical means for the implementation of the examination (microphone, camera, word processor, internet connection, communication platform), the hyperlinks for the examination, the duration of the exam, the grading system, the percentage of the oral exam in the final grade, the ways in which the inviolability and reliability of the exam are ensured and any other necessary information.

c) in case of **written examination with distance learning methods**: the way of administration of the questions to be answered, the way of submitting the answers, the duration of the exam, the grading system, the percentage of the written exam of the exam in the final grade, the ways in which the integrity and reliability of the exam are ensured and any other necessary information.

There should be an attached list with the Student Registration Numbers only of students eligible to participate in the examination.