DEMOCRITUS UNIVERSITY OF THRACE
DEPARTMENT OF PHYSICAL EDUCATION & SPORT SCIENCE

UNDERGRADUATE PROGRAM OF STUDY

COURSE TITLE:

New technologies in health

COURSE CODE:	**E.C.T.S. CREDITS**
N334	7

RESPONSIBLE FOR THE COURSE:

NAME	Nikos Vernadakis	
POSITION	Lecturer	
SECTOR	Sports Management, School Physical Education & Recreation	
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CO-INSTRUCTORS	Nikos Aggelousis, Associate Professor	

SEMESTER:

1st	[ ]	2nd	[ ]	3rd	[ ]	4th	[ ]
5th	[ ]	6th	[X]	7th	[ ]	8th	[ ]

COURSE TYPE:

Obligatory	[ ]
Direction	[X]
Specialization	[ ]
Prerequisite for specialization	[ ]
Elective (*open*)	[ ]

HOURS *(per week)***:** 2

DIRECTION *(only for 3rd & 4th year courses):*

Exercise and Special Populations	

SPECIALIZATION *(only for 3rd & 4th year courses):*

LANGUAGE OF TEACHING: Greek [X] English [ ]

AIM OF THE COURSE *(content and acquired skills):*

The course is designed to help students take advantage of information and communication technology in health. The purpose of the course is to make students aware of the information and communication technology as a simulation instrument, a research medium, a medium of applying the scientific method, a medium to facilitate student interaction with the course subject matter and, finally, a medium of prevention, rehabilitation and maximizing performance in health.

COURSE CONTENTS *(outline – titles of lectures):*

1. The information & communication technology in health.
2. Database applications in health informatics I.
3. Database applications in health informatics II.
4. Building of web databases.
5. Health informatics and education I (introduction, simulation and education).
6. Health informatics and education II (virtual reality and education, distance learning).
7. Technology assessment of motor problems I.
8. Technology assessment of motor problems II.
9. Technology assessment of motor problems III.
10. Interpretation of data evaluation systems of motor problems.
11. Integration of interactive video games (exergames) to health.
12. Utilization of interactive video games (exergames) to health.
13. E-commerce and health services.

TEACHING METHOD(S) *(lectures – labs – practice etc.):*

1. Lectures in computer lab.
2. Applied practical exercises.
3. Problem solving projects.

ASSESSMENT METHOD(S):

1. Mid-term exams
2. Problem-solving projects
3. Final (written) exams

LEARNING OUTCOMES:

Upon the completion of this course the students will be able to:

1. Understand the basic concepts of information & communication technology application and their use in health.
2. Use educational technology applications in health.
3. Exploit the technological applications of information & communication technology and the new learning environments in educational programs that promote health.
4. Evaluate the use and the integration of information & communication technology in health.

LEARNING OUTCOMES – CONTINUED:

Learning Outcomes	***Educational Activities***	***Assessment***	***Students Work Load (hours)***
Understanding of the basic concepts of information & communication technology application and their use in health.	Lectures, understanding project, home study.	Mid-term exams, final written exams.	40
Ability to use of educational technology applications in health.	Lectures, understanding project, problem solving projects, home study.	Mid-term exams, problem solving project, final written exams.	60
Ability to exploit the technological applications of information & communication technology and the new learning environments in educational programs that promote health.	Lectures, understanding project, problem solving projects, home study.	Mid-term exams, problem solving project, final written exams.	60
Ability to evaluate the use and the integration of information & communication technology in health.	Lectures, understanding project, home study,	Mid-term exams, final written exams.	50
		TOTAL	**210**

OBLIGATORY & SUGGESTED BIBLIOGRAPHY:

1. Botsis, T., & Halkiotis, S. (2005). Health Informatics. Athens: Diavlos.
2. Gortzis, E. (2007). Medical informatics and telemedicine services. Athens: Giourdas.
3. Papastergiou, M., & Thireos, E. (2010). Information and communication technology in health education: theoretical framework, empirical findings and research perspectives. *Archives of Hellenic Medicine*, 27(2): 239-258.
4. Ioannidis, D., Vernadakis, N., Gioftsidou, A., Antoniou, P. & Giannousi, M. (2011). Evaluating the effectiveness of the Nintendo Wii Fit Plus as a mean of exercise to improve balance compared to a traditional exercise balance program. *I-teacher*, 3: 17–28.