COURSE OUTLINE

1. GENERAL

SCHOOL	**PHYSICAL EDUCATION & SPORT SCIENCES**			
DEPARTMENT	**PHYSICAL EDUCATION & SPORT SCIENCES**			
LEVEL OF STUDIES	PGP – Level 7			
COURSE CODE	**K103**	**SEMESTER**	**A'**	
COURSE TITLE	Cardiovascular /Metabolic Diseases and Exercise			
TEACHING ACTIVITIES *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.*			**TEACHING HOURS PER WEEK**	**ECTS CREDITS**
			3	7,5
Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.				
COURSE TYPE *Background, General Knowledge, Scientific Area, Skill Development*	Scientific Area			
PREREQUISITES:	NO			
TEACHING & EXAMINATION LANGUAGE:	GREEK			
COURSE OFFERED TO ERASMUS STUDENTS:	NO			
COURSE URL:	https://eclass.duth.gr/courses/PHYED4102/			

2. LEARNING OUTCOMES

Learning Outcomes

Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

Upon successful completion of the course, postgraduate students will be able to:

- know and understand the timeless relationship of lifelong fitness with health as a factor of health and well-being at every age.
- participate, through laboratory exercises, in the application and assessment of parameters related to the health and functional capacity of people with chronic diseases.
- know and understand the effects of obesity on health and the role of exercise in weight management.
- design and implement exercise programs for obese people.
- know and understand the role of exercise in reducing risk factors for the prevalence of Metabolic Syndrome.
- know and understand the beneficial role of exercise in Diabetes Mellitus, Hypertension, Osteoporosis and Endothelial function.
- plan and understand the basic principles of applying appropriate muscle strengthening exercises in aging.

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,
ICT Use
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
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

Working in an interdisciplinary environment *Production of new research ideas*	*Promoting free, creative and inductive reasoning*

The general abilities of the students that are strengthened are:

- Search, analysis and synthesis of data and information, ICT Use
- Adaptation to new situations
- Decision making
- Autonomous work
- Teamwork
- Work in an interdisciplinary environment
- Generating new research ideas
- Project design and management
- Critical thinking
- Promoting free, creative and inductive reasoning Project planning and management

3. COURSE CONTENT

Lecture 1: Lifelong Exercise for prevention, treatment, and health promotion - How much physical activity is enough?
Lecture 2: Dyslipidemias and Coronary Heart Disease
Lecture 3: LABORATORY I – Tests to evaluate health indicators in people with cardiometabolic diseases
Lecture 4: WORKSHOP II: Interval exercise protocols in people with chronic diseases
Lecture 5: Clinical and pathophysiological consequences of intra-abdominal fat deposition
Lecture 6: Safety of designing exercise programs for overweight/obese people
Lecture 7: Exercise and Aging
Lecture 8: Exercise prescription for health promotion
Lecture 9: Diagnosis and treatment of Hypertension: Guidelines for exercise programs
Lecture 10: Adaptations of exercise on bones & bone metabolism
Lecture 11: Exercise in people with Diabetes Mellitus
Lecture 12: WORKSHOP III – Body composition assessments
Lecture 13: Work presentations

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	- Face to face Lectures - Laboratory practical applications - Distance learning
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	- Use of ICT in Teaching and Laboratory Education - Workshops via e-class - MsTeams/ e-class, webmail
TEACHING ORGANIZATION *The ways and methods of teaching are described in detail.* *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.* *The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.*	

Activity	*Workload/semester*
Lectures	39
Bibliographic research & analysis	60
Individual work	45
Teamwork	25,5
Essay Presentation	15
Final Exams	3
	187,5

STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test,*	The evaluation of the students includes: • INDIVIDUAL WORK: Written review on a topic of free choice, related to the subject of the course, with recent

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 *Please indicate all relevant information about the course assessment and how students are informed*	bibliography of the last 5 years (~ 1200 words with a minimum limit of 8 research articles and an indicative Review Table): 25% • GROUP WORK: Presentation of a research article with contemporary bibliography: 15% • Final exams: 60%

5. SUGGESTED BIBLIOGRAPHY

1. Ehrman JK, Gordon PM, Visich PS. & Keteyian P.S. (2023). *Clinical Exercise Physiology*. University Studio Press, Thessaloniki.
2. Raven PB, Wasserman DH, Squires WG. & T.D. Murray (2016). *Exercise Physiology: A Holistic Approach.* Medical publications Lagos Dimitrios, Athens.
3. Powers S.K. & Howley E.T. (2018). *Exercise Physiology: Theory and Applications of Endurance and Performance.* Broken Hill Publisher Ltd, Nicosia, Cyprus.
4. ACSM (2013). *ACSM's Guidelines for Exercise Testing and Prescription*, Lippincott Williams & Wilkins, ISBN/ISSN: 9781609139551.

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Helen Douda, Professor
Contact details:	edouda@phyed.duth.gr
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 MS-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 accepted 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 will be on 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 will have to answer laboratory exercises, multiple choice, free text, short answer, and critical questions. Each of the questions is scored from 0.5 to 10.0 points depending on the category of the question (100 points maximum).

(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.