COURSE OUTLINE CLINICAL EXERCISE PHYSIOLOGY

1. GENERAL

SCHOOL	PHYSICAL EDUCATION, SPORT SCIENCE AND OCCUPATIONAL THERAPY		
DEPARTMENT	PHYSICAL EDUCATION AND SPORT SCIENCE		
LEVEL OF STUDIES	ISCED level 6 – Bachelor's or equivalent level		
COURSE CODE	C651	**SEMESTER**	**5th**
COURSE TITLE	CLINICAL EXERCISE PHYSIOLOGY		

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	6
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:	NAI
TEACHING & EXAMINATION LANGUAGE:	Greek English (Erasmus students)
COURSE OFFERED TO ERASMUS STUDENTS:	Yes
COURSE URL:	https://eclass.duth.gr/courses

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 completion of the course, students will be able to:

- *design specialized exercise programs according to the patients' condition and to evaluate their progress and improvement*
- *to understand the acute and chronic exercise alterations that occurs in patients with various chronic diseases*
- *to recognize possible adverse reactions during exercise and to accordingly adjust the therapeutic intervention*
- *This course is designed to provide students to the acquisition of knowledge, skills and abilities for the rehabilitative management of patients with chronic disease. The aim of this course is to train students to:*
- *to understand the basic pathophysiological aspects of the main chronic diseases*
- *to plan and implement specific exercise programs according to the patient's diagnosis, clinical status and exercise tolerance*

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,	*Project design and management*
ICT Use	*Equity and Inclusion*
Adaptation to new situations	*Respect for the natural environment*
Decision making	*Sustainability*

Autonomous work *Teamwork* *Working in an international environment* *Working in an interdisciplinary environment* *Production of new research ideas*	*Demonstration of social, professional and moral responsibility and sensitivity to gender issues* *Critical thinking* *Promoting free, creative and inductive reasoning*

- *Search, analysis and synthesis of data and information, ICT Use*
- *Adaptation to new situations*
- *Decision making*
- *Autonomous work*
- *Working in an interdisciplinary environment*
- *Project design and management*
- *Equity and Inclusion*
- *Critical thinking*
- *Promoting free, creative and inductive reasoning*

3. COURSE CONTENT

1. *Body composition indexes and chronic disease*
2. *Risk factors and sedentary lifestyle*
3. *Acute cardiovascular alterations in patients with chronic disease*
4. *Hemodynamic alterations during resistance exercise in patients with chronic disease*
5. *Acute metabolic changes during exercise in patients with chronic disease*
6. *Glucose tolerance test / lab*
7. *Measurement of arterial pressure / lab*
8. *ECG monitoring during exercise / lab*
9. *Assesment of the frailty syndrome / lab*
10. *Exercise prescription and training protocols / lab*
11. *Basic metabolic rate / lab*
12. *Exercise and immunological reactions and adaptations*
13. *Exercise and bone metabolism*

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	Lectures face to face (with the possibility of using distance learning tools) Practical application of exercise programs. Note: In the case of distance learning, for the practical application modules it is possible to record and send through e-class specialized exercise programs by the students in case or non-case reports of trainees and dynamic interaction through annotation and group sessions on how to plan, guide and of the exercise program in simulation conditions.
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	Use of ICT in Teaching
TEACHING ORGANIZATION *The ways and methods of teaching are described in detail.*	

Activity	***Workload/semester***
Lectures	39

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.*	Mid-term evaluation: 14 Individual work and literature search: 62 Scientific work: 32 Final examination: 3 **Total: 150**
STUDENT EVALUATION *Description of the evaluation process* *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* *Please indicate all relevant information about the course assessment and how students are informed*	Written final examination (60%) Mid – term evaluation (20%) Presentation of two scientific papers (20%)

5. SUGGESTED BIBLIOGRAPHY

1. *Ehrman JK, Gordon PM, Visich PS. & Keteyian P.S. (2023). Clinical Exercise Physiology. University Studio Press, Thessaloniki.*

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Konstantinos Volaklis, Associate Professor
Contact details:	kvolakli@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 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 0.2 to 2.0 points depending on the question category.