

COURSE OUTLINE

1. GENERAL

SCHOOL	PHYSICAL EDUCATION & SPORT SCIENCES		
DEPARTMENT	PHYSICAL EDUCATION & SPORT SCIENCES		
LEVEL OF STUDIES	PGP – Level 7		
COURSE CODE	K104	SEMESTER	A'
COURSE TITLE	Exercise Prescription for Clinical Populations		
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	7,5
Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skill Development</i>	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 <i>Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.</i>	
Upon successful completion of the course, postgraduate students will be able to: - analyze the basic principles of prescribing exercise prescription for clinical populations - interpret and synthesize data regarding the physiological responses to exercise in cardiometabolic, oncology, and other chronic disease patients. - interpret and synthesize data regarding the metabolic responses to exercise in cardiometabolic, oncology, and other chronic disease patients. - design and implement personalized and safe exercise programs for cardiometabolic and oncology patients, ideally applying the characteristics of intensity, duration, and frequency. - apply personalized and safe exercise programs for people with chronic conditions, taking into account age, gender, and medical history, and adjusting the type and means of exercise. - design and implement special muscle strengthening programs taking into account the individual characteristics of the patients and their condition - recognize any unwanted reactions of the body during exercise, taking the appropriate preventive and responsive measures and readjusting the exercise characteristics.	
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	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

Production of new research ideas

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:** Guidelines and principles for exercise prescription in clinical populations
Lecture 2: Water-based exercise in chronic disease patients: theoretical background
Lecture 3: Water-based exercise in chronic disease patients: practical implementation
Lecture 4: Resistance exercise programs for chronic disease
Lecture 5: Interval exercise programs for patients with chronic diseases
Lecture 6: Designing exercise programs for patients with coronary artery disease
Lecture 7: Exercise prescription for patients with hypertension
Lecture 8: Exercise prescription for patients with cancer
Lecture 9: Exercise and mental health
Lecture 10: Exercise prescription for patients with obesity
Lecture 11: Exercise during pregnancy and postpartum: guidelines and practical implications
Lecture 12: The role of exercise in managing the peri- and menopause symptoms
Lecture 13: Exercise prescription during menopause: effects on bones and bone metabolism

4. LEARNING & TEACHING METHOD - EVALUATION

TEACHING METHOD <i>Face to face, Distance learning, etc.</i>	- Face to face Lectures - Laboratory practical applications - Distance learning	
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) <i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i>	- Use of ICT in Teaching and Laboratory Education - Workshops via e-class - MsTeams/ e-class, webmail	
TEACHING ORGANIZATION <i>The ways and methods of teaching are described in detail.</i> <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> <i>The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</i>	Activity	Workload/semester
	Lectures	39
	Bibliographic research & analysis	80
	Individual work	60
	Essay Presentation	5.5
	Final Exams	3
STUDENT EVALUATION <i>Description of the evaluation process</i> <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,</i>	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 bibliography of the last 5 years (~ 1200 words with a minimum limit of 8 research articles and an indicative Review Table): 25%	
		187,5

Clinical examination of a patient, Artistic interpretation, Other/Others

Please indicate all relevant information about the course assessment and how students are informed

- GROUP WORK: Presentation of a research article with contemporary bibliography: 15%
- Final exams: 60%

5. SUGGESTED BIBLIOGRAPHY

1. Batrakoulis A. (2025). Obesity and Weight Management: The Exercise Professional's Guide to Fitness Programming, Human Kinetics, Champaign IL 61820, USA.
2. Ehrman JK, Gordon PM, Visich PS. & Keteyian P.S. (2023). *Clinical Exercise Physiology*. University Studio Press, Thessaloniki.
3. Raven PB, Wasserman DH, Squires WG. & T.D. Murray (2016). *Exercise Physiology: A Holistic Approach*. Medical publications Lagos Dimitrios, Athens.
4. Powers S.K. & Howley E.T. (2018). *Exercise Physiology: Theory and Applications of Endurance and Performance*. Broken Hill Publisher Ltd, Nicosia, Cyprus.
5. ACSM (2013). *ACSM's Guidelines for Exercise Testing and Prescription*, Lippincott Williams & Wilkins, ISBN/ISSN: 9781609139551.
- 6.

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Apostolos Spassis
Contact details:	aspassis@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.