DEMOCRITUS UNIVERSITY OF THRACE
DEPARTMENT OF PHYSICAL EDUCATION & SPORT SCIENCE

UNDERGRADUATE PROGRAM OF STUDY

COURSE TITLE:

Musculoskeletal disorders and exercise

COURSE CODE:	**E.C.T.S. CREDITS**
N543	8

RESPONSIBLE FOR THE COURSE:

NAME	George Godolias	
POSITION	Professor	
SECTOR	Exercise and Health	
OFFICE	Therapeutic Exercise and Rehabilitation laboratory	
TEL. / E-MAIL	25310 - 39662	ggodolia@phyed.duth.gr
CO-INSTRUCTORS	Vivian Malliou, Associate Professor Anastasia Beneka, Associate Professor Asimenia Gioftsidou, Lecturer	

SEMESTER:

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

COURSE TYPE:

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

HOURS *(per week)***:** 4

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

Exercise for Special Populations	

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

Athletic Training and Rehabilitation

LANGUAGE OF TEACHING: Greek [X] English [ ]

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

The aim of the course is to familiarize students with: 1) basic musculoskeletal disorders (i.e., chronic low back pain, scoliosis, lordosis, kyphosis, condromalacia patella etc.) athletes and general population suffer from, 2) disorders' early symptoms, 3) their pathophysiology and causes, and 4) ways to rehabilitate them.

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

1. Chronic low back pain (pathophysiology, classification of cases, anatomy, clinical examination).
2. Chronic low back pain (patient evaluation).
3. Chronic low back pain and exercise (exercise results, prevention).
4. Chronic low back pain and exercise (proposal for exercise organization, functional exercise, special cases).
5. Neck disorders.
6. Design of rehabilitation programs for athletes with low back pain.
7. Spine disorders - Scoliosis (pathophysiology).
8. Scoliosis (evaluation, ability to exercise).
9. Spine disorders – Lordosis (pathophysiology).
10. Lordosis (evaluation, ability to exercise).
11. Spine disorders – Kyphosis (pathophysiology).
12. Kyphosis (evaluation, ability to exercise).
13. Spinal disorders – Flat back syndrome.
14. Design of rehabilitation programs for athletes with spine disorders.
15. Design of rehabilitation programs for aged people with spine disorders
16. Osteoarthritis (pathophysiology, symptoms, physical examination).
17. Osteoarthritis (clinical symptoms, weight control, prevention).
18. Osteoarthritis and exercise - Effects of disorder severity (total replacement) on exercise ability.
19. Osteoarthritis and exercise - Proposals for exercise evaluation and programming - Special cases.
20. Rheumatoid arthritis (pathophysiology, patients classification based on their general functional ability).
21. Rheumatoid arthritis (clinical effects, therapeutic possibilities, medical care, operation treatment).
22. Rheumatoid arthritis and exercise (results on exercise, ability / effects of medicine on ability to exercise).
23. Rheumatoid arthritis and exercise (proposals for exercise evaluation and programming)
24. Chondromalacia patella I (epidemiology, pathophysiology, symptoms, physical examination, patients' classification based on their general functional ability, factors of danger).
25. Chondromalacia patella II (causes, clinical effects, evaluation, operation treatment).
26. Chondromalacia patella II (design of a rehabilitation program).

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

1. Lectures.
2. Laboratory lessons – exercises.

ASSESSMENT METHOD (S):

Mid term exams	(….%)
Written project	(….%)
Final exams	(…%)

LEARNING OUTCOMES:

Upon the completion of this course the students will be able to: 1) recognize the early symptoms of musculoskeletal disorders athletes / general population suffer from and 2) design, organize and implement an intervention rehabilitation program for specific population groups.

LEARNING OUTCOMES – CONTINUED:

Learning Outcomes	***Educational Activities***	***Assessment***	***Student Work Load (hours)***
Recognition of the early symptoms of musculoskeletal disorders athletes / general population suffer from.	Lectures, demonstration / discussion of digital material, home study.	Mid term exams, problem solving project.	120
Ability to design, organize and implement an intervention rehabilitation program for specific population groups.	Lectures, demonstration / discussion of digital material, problem solving projects, home study.	Mid term exams, problem solving project.	120
		TOTAL	**240**

OBLIGATORY & SUGGESTED BIBLIOGRAPHY:

1. Roitman, J.L. (2001) ACSM's resource manual for guidelines for exercise testing and prescription. Baltimore: American College of Sports Medicine.
2. American College of Sports Medicine (2007). Guidelines for exercise testing and prescription. Baltimore, Translation in Greek Taxildaris, K., Tzamurtas, A. & Fatouros, I., Athens: Ioannou & Golemis.
3. Skinner, J.S. (1993). Exercise testing and exercise prescription for special cases. 2nd edition, Baltimore: Williams & Wilkins.
4. Graves, J.E. & Franklin, B.A. (2001). Resistance training for health and rehabilitation. Champaign, IL: Human Kinetics.
5. Wikgren, S. (1997). ACSM's exercise management for persons with chronic diseases and disabilities. American College of Sports Medicine, Champaign, IL: Human Kinetics.