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**
N548	8

RESPONSIBLE FOR THE COURSE:

NAME	Asimenia Gioftsidou	
POSITION	Lecturer	
SECTOR	Exercise and Health	
OFFICE	Therapeutic Exercise and Rehabilitation Laboratory	
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CO-INSTRUCTORS	Vivian Malliou, Associate Professor Anastasia Beneka, Associate Professor	

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 Population	

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

Rehabilitation Training on Musculoskeletal Injuries and Disorders

LANGUAGE OF TEACHING: Greek [X] English [ ]

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

The aim of the course is to introduce students to: 1) the basic musculoskeletal disorders (i.e., chronic low back pain, scoliosis, lordosis, kyphosis, condromalacia patella, etc.) happening to athletes and general population, 2) the pathophysiology, causes, and early symptoms of these disorders and 3) the possible ways of addressing 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 (exercise organization, functional exercise, special cases).
5. Neck disorders.
6. Design rehabilitation programs for athletes with low back pain.
7. Spine disorders - Scoliosis (pathophysiology).
8. Scoliosis (evaluation, exercise ability).
9. Spine disorders – Lordosis (pathophysiology).
10. Lordosis (evaluation, exercise ability).
11. Spine disorders – Kyphosis (pathophysiology).
12. Kyphosis, evaluation and exercise ability
13. Spinal disorders – Flat back syndrome (pathophysiology).
14. Design of rehabilitation programs for athletes with spine disorders.
15. Design of rehabilitation programs for aged people with spine disorders.
16. Osteoarthritis (pathophysiology, physical examination, symptoms).
17. Osteoarthritis (clinical symptoms, weight control, prevention).
18. Osteoarthritis and exercise (effects of disorder severity [total replacement] on exercise ability).
19. Osteoarthritis and exercise (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 therapy).
22. Rheumatoid arthritis and exercise (results on exercise ability, effects of medicine on exercise ability).
23. Rheumatoid arthritis and exercise (proposals for exercise evaluation and programming).
24. Chondromalacia patella I (epidemiology, pathophysiology, symptoms, physical examination, patient classification based on their general functional ability, factors of danger).
25. Chondromalacia patella II (causes, clinical effects, evaluation, operation therapy).
26. Chondromalacia patella III (essential considerations in designing a rehabilitation program).

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

1. Lectures.
2. Laboratory lessons – exercises.

ASSESSMENT METHOD(S):

1. Mid term exams
2. Paper presentation
3. Final exams

LEARNING OUTCOMES:

Upon the completion of this course the students will be able to: 1) recognize the early symptoms of musculoskeletal disorders, 2) design, organize and implement an intervention rehabilitation program for specific population groups and 3) supervise rehabilitation programs for specific population groups.

LEARNING OUTCOMES – CONTINUED:

Learning Outcomes	***Educational Activities***	***Assessment***	***Student Work Load (hours)***
Ability to recognize the early symptoms of musculoskeletal disorders.	Lectures, demonstration / discussion of digital material, home study.	Mid term exams, problem solving project.	80
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.	100
Ability to supervise rehabilitation programs for specific population groups.	Tutorials, development of critical thinking, home study.	Mid term exams, problem solving project.	60
		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. ACSM (2007). Guidelines for exercise testing and prescription. 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.