

DEMOCRITUS UNIVERSITY OF THRACE
DEPARTMENT OF PHYSICAL EDUCATION & SPORT SCIENCE

UNDERGRADUATE PROGRAM OF STUDY

COURSE TITLE:

Musculoskeletal problems in people with chronic diseases
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COURSE CODE:

N545

E.C.T.S. CREDITS

8

RESPONSIBLE FOR THE COURSE:

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

SEMESTER:

1 st	<input type="checkbox"/>	2 nd	<input type="checkbox"/>	3 rd	<input type="checkbox"/>	4 th	<input type="checkbox"/>
5 th	<input type="checkbox"/>	6 th	<input type="checkbox"/>	7 th	<input type="checkbox"/>	8 th	<input checked="" type="checkbox"/>

COURSE TYPE:

Obligatory	<input type="checkbox"/>
Direction	<input type="checkbox"/>
Specialization	<input checked="" type="checkbox"/>
Prerequisite for specialization	<input type="checkbox"/>
Elective (<i>open</i>)	<input type="checkbox"/>

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

English

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

<p>The aim of this course is to familiarize students with: 1) the most frequent musculoskeletal problems presented in patients with chronic diseases (i.e., osteoporosis, obesity, cancer, Parkinson's etc.), 2) the application of exercise programs adapted to the musculoskeletal problems that are usually presented in these special populations and 3) the design, organization and implementation of exercise programs for patients with spinal disorders (i.e., round shoulder syndrome, scoliosis, kyphosis, lordosis, etc.).</p>
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COURSE CONTENTS (*outline – titles of lectures*):

1. Therapeutic exercise programs for people with kyphosis.
2. Therapeutic exercise programs for people with kyphosis and osteoporosis.
3. Therapeutic exercise programs for people with scoliosis.
4. Therapeutic exercise programs for people with scoliosis and leg length.
5. Therapeutic exercise programs for people with lordosis.
6. Therapeutic exercise programs for people with lordosis and chronic injuries in the hip.
7. Round shoulder syndrome (therapy, exercise programs).
8. Therapeutic exercise programs for people with kyphosis and round shoulder syndrome.
9. Flat back syndrome (therapy, exercise programs).
10. Water exercise programs for patients with osteoarthritis.
11. Application of exercise programs in patients with total knee arthroplasty.
12. Application of exercise programs in patients with total hip arthroplasty.
13. Cervical syndrome (causes, pathophysiology, symptoms, treatment methods).
14. Exercise programs for people with cervical syndrome.
15. Low back pain (exercise programs).
16. Obesity and musculoskeletal problems - Therapeutic exercise programs for obese people with chronic low back pain.
17. TAI CHI (basic principles and its physiological effects in healthy people).
18. Adapted TAI CHI exercise programs for elderly people and for chronic neurological patients.
19. Parkinson disease (pathophysiology, patients' assessment).
20. Exercise programs for patients suffering from Parkinson's disease.
21. Multiple sclerosis (pathophysiology, treatment methods).
22. Exercise programs for patients with multiple sclerosis.
23. Osteoporosis (different types, pathophysiology, treatment methods).
24. Exercise programs for patients with osteoporosis.
25. Yoga & Power Yoga (movement technical analysis from the art of the eastern meditation).
26. Yoga therapeutic exercises.

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

1. Lectures.
2. Practical application.

ASSESSMENT METHOD(S):

1. Mid term exams
2. Final exams (theory)
3. Presentation and application of an exercise protocol for a groups

LEARNING OUTCOMES:

Upon the completion of this course the students will be able to: 1) know and understand the musculoskeletal problems usually presented in patients with chronic diseases (i.e., obesity, osteoarthritis, etc.) and their treatment methods, 2) interpret the assessment of the patients and design the appropriate exercise programs adapted to their needs, 3) detect and describe the problems usually presented with spinal disorders and apply exercise programs and assessment tools adapted to these

populations, 4) distinguish the musculoskeletal problems usually presented with chronic diseases (i.e., multiple sclerosis, osteoporosis, neurological diseases, etc.), and 5) design and apply exercise programs adapted to these populations for improving their quality of life.

LEARNING OUTCOMES – CONTINUED:

<i>Learning Outcomes</i>	<i>Educational Activities</i>	<i>Assessment</i>	<i>Student Work Load (hours)</i>
Knowledge and understanding of the musculoskeletal problems usually presented in patients with chronic diseases (i.e., obesity, osteoarthritis, etc.) and their treatment methods.	Lectures, slides / video show, discussion, home study.	Intermediate control tests with written assessment of cognitive appraisal.	30
Ability to interpret the assessment of the patients and to design the appropriate exercise programs adapted to their needs.	Presentations, practical application by the students.	Intermediate control tests with application of exercise protocols.	50
Ability to detect and describe the problems usually presented with spinal disorders and to apply exercise programs and assessment tools adapted to these populations.	Practical exercise, practice in groups, home study.	Intermediate control test with assessment in practical teaching and in application of an exercise protocol.	50
Ability to distinguish the musculoskeletal problems usually presented with chronic diseases (i.e., multiple sclerosis, osteoporosis, neurological diseases, etc.).	Lectures, slides / videos show, discussion, home study.	Intermediate control tests with written assessment of cognitive appraisal.	50
Ability to design and apply exercise programs adapted to these special populations for improving their quality of life.	Presentation and practical application by the students.	Intermediate assignments, final exams.	60
		TOTAL	120

OBLIGATORY & SUGGESTED BIBLIOGRAPHY:

1. Kotzailias, D. (2011). Physical therapy in musculoskeletal system chronic diseases. Thessaloniki: University Studio Press.
2. American College of Sports Medicine. (2007). Guidelines for exercise testing and prescription. Translation in Greek Taxildaris, K., Tziamourtas, A. & Fatouros, I., Athens: Ioannou & Golemis.