

DEMOCRITUS UNIVERSITY OF THRACE
DEPARTMENT OF PHYSICAL EDUCATION & SPORT SCIENCE

UNDERGRADUATE PROGRAM OF STUDY

COURSE TITLE:

Therapeutic exercise and rehabilitation

COURSE CODE:

N045

E.C.T.S. CREDITS

3

RESPONSIBLE FOR THE COURSE:

NAME	Vivian Malliou	
POSITION	Associate Professor	
SECTOR	Health & Exercise	
OFFICE	Health Exercise & Rehabilitation	
TEL. / E-MAIL	25310 - 39662	pmalliou@phyed.duth.gr
CO-INSTRUCTORS	Asimena Gioftsidou, Lecturer Anastasia Beneka, Associate Professor Stella Rokka, Lecturer Katerina Papadimitriou, Assistant Professor	

SEMESTER:

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

COURSE TYPE:

Obligatory
Direction
Specialization
Prerequisite for specialization
Elective (*open*)

HOURS (*per week*):

2

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

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

LANGUAGE OF TEACHING:

Greek

English

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

The aim of this course is to provide students the acquisition of theoretical knowledge on the basic principles of the therapeutic exercise and the training principles (intensity, quantity, duration, frequency) that determine the planning of a therapeutic program in patients. Abilities which are necessary for composing and organizing complete therapeutic exercise programs, with or without the use of equipment.

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

1. Basic concepts of exercising with weights - Programs for the development of different types of power.
2. Power programs - Movement terminology and repetition of basic muscular system - Kinds of power programs - Design of daily, weekly and long-term programs of muscular reinforcement.
3. Design and application of exercise programs with the body weight - Isometric exercises - Concentric and eccentric muscle activation.
4. Design and application of exercise programs with free weights - Isometric exercises - Concentric and eccentric muscle activation.
5. Physical condition programs for persons abstaining from activities or sports due to injury or illness.
6. Agility and flexibility programs - How to evaluate movement in joints (goniometric) - Limitations factors - Cases where extensions are applied - Kinds of extensions and design of extension programs.
7. Therapeutic exercise in aquatic environment- Basic principles of the physiology of movements in water environment - Water qualities - Terminology - Technical analysis of steps - Advantages and gains from therapeutic exercise in aquatic environment (application indications, hydrotherapy gains-clinical application).
8. Facilities and equipment for exercising in water (security equipment, therapeutic and resistance equipment) - Introduction to therapeutic exercise in aquatic environment.
9. Shallow swimming pool (practical) - Design and application of exercise programs in a shallow swimming pool.
10. Exercise in deep swimming pool (practical) - Design and application of exercise programs in a deep swimming pool.
11. Aqua aerobic - Design and application of cardiovascular exercise programs in water environment.
12. Theoretical and practical approach of basic exercise programs due to Pilate's methods.
13. Theoretical and practical approach of basic exercise programs in Swiss ball (Fit balls-Bosu).

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

1. Lectures.
2. Methodology of basic abilities.
3. Practical approach of simple and combined movements of therapeutic exercise programs (technical analysis – methods - practical teaching).

ASSESSMENT METHOD (S):

Presence and active participation in class (10%)	
Written mid term exam 1 (30%)	
Written mid term exam 2 (30%)	
Final exam (individual program and teaching practice) (30%)	

LEARNING OUTCOMES:

Upon the completion of this course the student will be able to:
1. Know and understand the basic principles and skills required for therapeutic exercise.
2. Perform at satisfactory level basic skills in therapeutic exercise programs.
3. Know the basic principles of designing and teaching therapeutic programs and alternative forms.
4. Design integrated programs / courses for therapeutic exercises concerning persons abstaining from activities or sports due to injury or illness.

LEARNING OUTCOMES – CONTINUED:

<i>Learning Outcomes</i>	<i>Educational Activities</i>	<i>Assessment</i>	<i>Students Work Load (hours)</i>
Knowledge and understanding of the basic principles and skills required for therapeutic exercise.	Lectures, demonstrations and commentary of digital material, home study.	Intermediate checks with theoretical (written or oral) cognitive evaluation progress.	30
Ability to perform at satisfactory level basic skills in therapeutic exercise programs.	Practical exercises, practice, tutorials, home study.	Intermediate checks with proper practices (individual & group) progress evaluation.	20
Knowledge of the basic principles of designing and teaching therapeutic programs and alternative forms.	Lectures, teamwork, home study.	Intermediate checks by evaluating: a) intermediate practical teachings, b) a written plan of instruction.	20
Ability to design integrated programs / courses for therapeutic exercises concerning persons abstaining from activities or sports due to injury or illness.	Lectures, practical exercises, drawing projects, 1 individual and 1 group work, home study.	Interim projects, final exams.	20
		TOTAL	90

OBLIGATORY & SUGGESTED BIBLIOGRAPHY:

1. Prentice, E.W. (2007). Rehabilitation techniques for sports medicine and athletic training. Translation: Athanasopoulos, S. & Katsoulakis, K., Athens: Parisianos.
2. Bates, A. & Hanson, N. (1996). Aquatic exercise therapy. Athens: Parisianos.
3. Malliou, V. & Rokka, S. Exercise therapy. Lecture notes, e-class.
4. Malliou, V., Rokka, S. & Papadimitriou, A. Lectures notes, e-class.