MODULE TITLE:

Aquatic exercise for functional improvement

RESPONSIBLE FOR THE MODULE:

NAME	Asimenia Gioftsidou	
POSITION	Assistant Professor	
SECTOR	Exercise and Health	
OFFICE	Laboratory of Therapeutic Exercise and Rehabilitation	
TEL. / E-MAIL	+302531039662	agioftsi@phyed.duth.gr,
CO-INSTRUCTORS	Paraskevi Malliou, Professor	

HOURS *(per week)*:

LANGUAGE OF TEACHING: GREEK [ ] ENGLISH [V]

AIM OF THE MODULE *(content and acquired skills)*

The aim of this module is to analyze the particularities of the aquatic environment as a means of implementing exercise programs. The points of this section are the physical properties of the water and the aquatic training equipment which can be used for the exercise programs. The topics of this module are aquatic training programs on shalow and deep water, appropriate use of aquatic equipment in order to perform strength exercises, range of motion exercise, aerobic and functional exercises.
Finally, students will learn how to design and apply aquatic exercise programs for functional improvement.

MODULE CONTENTS *(outline – titles of lectures)*

1. Aquatic Environment
2. Physical properties of the water
3. Aquatic training equipment
4. Types of Aquatic Equipment and Muscle Actions
5. Buoyancy and flotation devices
6. Drag - Resistance Equipment
7. Pool depth and Exercise
8. Exercises to increase mobility
9. Stretching exercises
10. Exercises to improvw muscle strength and endurance
11. Aerobic exercises
12. Balance – coordination exercises

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

Lectures and practical application

LEARNING OUTCOMES

Upon the completion of this module the student will be able to:

1. To understand the particularities of the aquatic environment as a means of implementing exercise programs.
2. To know the physical properties of the water
3. To design and apply exercise programs with the use of the aquatic training equipment
4. To design and apply exercise programs on shalow and deep water
5. To design and apply exercise programs with the appropriate use of aquatic equipment in order to perform strength exercises, range of motion exercise, aerobic and functional exercises.

LEARNING OUTCOMES - CONTINUED

Learning Outcomes	***Educational Activities***	***Assessment***	***Students Work Load (hours)***
The students will be able to understand the physical properties of the water	Lectures, slides and videos show and discussion, study at home	Intermediate control tests and assigments	
The students will be able to design and apply exercise programs with the use of the aquatic training equipment	Practical exercise, practice in groups and study at home	Intermediate control tests and assigments	
The students will be able to distinguish the exercise programs on shalow water with the deep water	Presentation and practical application from the students	Intermediate control tests and assigments	
The students will be able to design and apply exercise programs with the appropriate use of aquatic equipment in order to perform strength exercises, range of motion exercise, aerobic and functional exercises.	Practical exercise, practice in groups and study at home	Intermediate control tests and assigments	
		TOTAL	

OBLIGATORY & SUGGESTED BIBLIOGRAPHY:

1. Ruoti R.G., Morris D.M., Cole A.J. (1997). Aquatic Rehabilitation. Lippincott, Philadelphia.

2. Aquatic fitness professional manual/Aquatic Exercise Association (AEA) (2010). 6th ed. Human Kinetics, Champaign, IL
3. Bates A., Hanson N. (1996). Aquatic Exercise Therapy. W.B. Saunders Company, Philadelphia, Pennsylvania 19106.
4. Campion M. (1997). Hydrotherapy: Principles and Management. Butterworth-Heinemann, London.
5. Costa R., Kanitz A., Reichert T., Prado A., Coconcelli L., Butteli A., Pereira L., Masiero M., Meinerz A., Conceicao M., Sbeghen I., Kruel L. (2018). Water-based aerobic training improves strength parameters and cardiorespiratory outcomes in elderly women. Exp Gerontol. 108, 231-239
6. Gioftsidou A., Malliou P., Sofokleous P., Beneka A., Tsapralis K. and Godolias G. (2013). Aquatic Training for Ankle Instability. Foot Ankle Spec 2013 6(8): 346-351.
7. Foley A., Halbert J., Hewitt T., Crotty M. (2003). Does hydrotherapy improve strength and physical function in patients with osteoarthritis—a randomised controlled trial comparing a gym based and a hydrotherapy based strengthening programme. Ann Rheum, 62, 1162-1167.