

DEMOCRITUS UNIVERSITY OF THRACE
DEPARTMENT OF PHYSICAL EDUCATION & SPORT SCIENCE

UNDERGRADUATE PROGRAM OF STUDY

COURSE TITLE:

THEORY OF EXERCISE SCIENCE & TRAINING

COURSE CODE:

N147

ECTS CREDITS

4

RESPONSIBLE FOR THE COURSE:

NAME	ANTONIS KAMBAS		
POSITION	ASSISTANT PROFESSOR		
SECTOR	SPORTS TRAINING THEORY AND APPLICATION		
OFFICE	B-3-11		
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CO-INSTRUCTORS	THANASIS CHATZINIKOLAOU		

SEMESTER:

1ST 2ND 3RD 4TH
5TH 6TH 7TH 8TH

COURSE TYPE:

OBLIGATORY
DIRECTION
SPECIALIZATION
PREREQUIZITE FOR SPECIALIZATION
ELECTIVE (*OPEN*)

HOURS (per week):

2

DIRECTION

(Only for 3rd & 4th year courses)

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

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LANGUAGE OF TEACHING:

GREEK

ENGLISH

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

This course focuses in establishing the theoretical background of the basic issues of sport performance development. Students will be given the basic knowledge of human body function in regards to strength and conditioning training, the mechanisms of motor control related to technique and coordination abilities as well as the related training methods.

COURSE CONTENTS (*outline – titles of lectures*)

1. Introduction to Exercise Science and Training
2. Training methods and training variables
3. Endurance training I
4. Endurance training II
5. Strength training I
6. Strength training II
7. Speed and agility training
8. Flexibility training
9. Overtraining
10. Training of coordination, technique and tactics
11. Periodization
12. Training planning, and coaching
13. Training in childhood and adolescent

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

This course includes 13 two-hour theoretical lectures and e-learning via e-class. Additionally nine practical seminars were support the theory on following topics: *management of intensity in endurance training, duration method, interval methods, plyometric training, speed training, flexibility training I and II, coordination training, functional training.*

ASSESSMENT METHOD(-S)

Five (5) brief written quizzes within the semester: 50%
Final written exam: 50%

LEARNING OUTCOMES

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

1. know and understand the tissues adaptations by applying different training stimulus in humans.
2. manage training loads and design training units for the improvement of physical abilities
3. know, understand and use the fundamentals in exercise designed to develop coordination and teaching techniques and tactical skills.
4. design and planning exercise programs for children and adults and for both amateur and elite athletes.

LEARNING OUTCOMES - CONTINUED

<i>Learning Outcomes</i>	<i>Educational Activities</i>	<i>Assessment</i>	<i>Students Work Load (hours)</i>
1) knowledge and understanding the basic adaptations by applying different training stimulus.	Lectures, presentation and discussion of digital materials, homework	Interim written exams	20
2) Knowledge, understanding and use effectively all training variables about strength and conditioning training	Lectures, practical applications, homework and workshops	Interim written exams and participation in exemplary training sessions	36
3) Knowledge, understanding and use the fundamentals in exercise designed to develop coordination and teaching techniques and tactical skills	Lectures, practical applications, homework and workshops	Interim written exams and participation in exemplary training sessions	36
4) Design and planning exercise programs for children and adults and for both amateur and elite athletes	Lectures, practical applications, homework and workshops	Interim written exams	28
		TOTAL	120

OBLIGATORY & SUGGESTED BIBLIOGRAPHY:

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| 1. Martin, D. Carl, K., Lehnertz K. (1993). <i>Textbook of athletic training</i> . Translation. Komotini: Alfavito. |
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