## **Theory and Methods of Physical Training**

## Prof. Ferdinando Cereda

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course provides the knowledge, skills and competence to plan and develop a programme of physical exercise and training to achieve, keep and improve the conditional and coordination skills useful for performing everyday physical activities, physical education and sports.

At the end of the course, students will be able to:

– use their acquired knowledge and analysis tools learned to observe physical-sports contexts from a biomechanical and physiological point of view, and to interpret the movement needs of the individual participants in order to improve their health and performance status;

– devise physical or sports activity proposals, pathways and protocols for concrete situations, for specific individual or group recipients, and for specific physical, educational and re-educational goals;

– develop independent judgments by drawing information from reference texts and the reference scientific community.

***COURSE CONTENT***

– The principles of training.

– The functional model of training.

– Joint mobility training.

– Balance and coordination training.

– Muscular strength and power training.

– Aerobic and anaerobic training.

– Agility and speed training.

– Concurrent training of muscular strength and aerobic endurance (Concurrent Training).

– Training periodisation: from the physiological profile to physical exercise planning.

– Technology applied to training.

– Case studies.

***READING LIST***

*Essential for taking the exam session*

J. Weineck, *L’allenamento ottimale,* Calzetti & Mariucci Editori, Torgiano (Pg), 2007.

F. Cereda-A. Gambaretto Et Al., *Dispensa di TeMA,* a.a. 2022-2023.

*Suggested*

F. Cereda, *Teoria, tecnica e didattica del Fitness*, Vita e Pensiero, Milan, 2013.

J. Hoffman, *Physiological Aspects of Sports Training and Performance,* Human Kintetics, 2014, 2nd Edition.

R.S. Rocha-T. Rieger-A. Jiménez (eds), *Essentials for fitness instructors,* Human Kinetics, 2015.

T.R. Baechle-R.W. Earle (edited by), *NSCA,* *Manuale di condizionamento fisico e di allenamento della forza,* Calzetti & Mariucci Editori, Torgiano (Pg), 2010.

W.J. Kraemer-S.J. Fleck-M.R. Deschenes, *Exercise Physiology: Integrating Theory and Application,* Wolters Kluver-Lippincott, Williams & Wilkins, 2011.

***TEACHING METHOD***

The course includes a theoretical analysis of the topics and their practical application in specifically equipped areas.

*“In addition to theoretical hours the course* *includes practice learning activities* *(Distinct courses and workshops) with mandatory attendance for at least 70% of hours”.*

***ASSESSMENT METHOD AND CRITERIA***

The schedule of the exam sessions is available on lecturers’ webpage. The final exam is a written test with multiple-choice questions aimed at verify the knowledge of the main subject contents. Assessment will be based on the score obtained in the test processed according to appropriate docimological criteria. The written exam consists of 35 multiple-choice questions (only one correct answer). Correct answer given: 2 (two) marks. Wrong answer given: -1 (minus one) mark. Answer not given: 0 (zero) marks. The final mark will permit an assessment out of thirty. The exam is passed with a mark between 38 and 70 (38 marks = 18/30, 55 marks = 25/30, 70 marks = 30 cum laude).

***NOTES AND PREREQUISITES***

Students are requested to have basic knowledge of general and sport physiology.

In case the current Covid-19 health emergency does not allow frontal teaching, remote teaching will be carried out following procedures that will be promptly notified to students.

Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG, or on the Faculty notice board.