Course	**Sports, Fitness and Health**			*Academic year*		**2021-2022**	
Subject	**Fitness II**			ECTS		5	
Type of course	**Compulsory**						
Year	**1º**	*Semester*	**2st semester**	*Student Workload:*			
Professor(s)	**Carolina Júlia Félix Vila-Chã**			*Total*	135	*Contact*	60
Area Coordinator	**Carolina Júlia Félix Vila-Chã**						

Planned SD

1. LEARNING OBJECTIVES

At the end of the UC student should be able to:

A. Perform kinesiological analysis of strength exercises and physical activities of daily life most common in bodybuilding, functional training and cross-training;

B. Acquire and improve: (a) free-weight exercise techniques and machines commonly available in exercise rooms, (b) fundamental exercise techniques associated with cross-training and functional training.

C. Understand and apply the basic principles: (a) concepts of strength and their manifestations, (b) the planning and organization of muscle strength training and chap. (c) adequately the training methods and means commonly associated with cross-training;

D. Master and apply: (a) the most commonly used aerobic and strength assessment protocols in gyms; (b) the training methodologies addressed to the needs, objectives, level of physical condition and technical level of each client.

E. Discuss and apply the concepts of cross-training and functional training.

2. PROGRAMME

A- Strength training

a. Characterization of muscle strength training
b. Type of equipment used in strength training
c. Kinesiological analysis of exercises as a function of muscle groups and movement patterns
d. External load handling techniques
e. Introduction strength training planning
f. Muscle strength and muscle endurance assessment

B- CardioFitness

a. Aerobic effort characterization
b. Exercise modes
c. Type of equipment commonly used in fitness centers

d. Common protocols to assess cardiorespiratory function
e. Introduction to cardiorespiratory training

C- Functional training

a. Definition and Principles of Functional Training
b. Movement Patterns and Exercise Selection
c. Equipment
d. Introduction to functional training planning: function, stability vs instability; function, mobility and flexibility; function and strength training, power and agility
e. Assessment of customer needs and prescription of functional training

D- Cross-training

a. Cross-training principles
b. Cross-training modes
c. Introduction to cross-training planning: metabolic training, gymnastics training; weightlifting training (methods and means of training; exercises, methodological progressions).

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

The learning objectives defined for this UC aim to provide students with fundamental knowledge and skills for planning and structuring physical exercise through individual and small group exercise sessions held in gyms, studios and gym clubs. Thus, the syllabus is consistent with the objectives of the course, as:

- Point A of the contents intends to implement points A,B,C and D of the objectives;
- Point B of the contents intends to implement points C and D of the objectives;
- Point C of the contents intends to implement points A, B and E of the objectives;
- Point D of the contents intends to implement points A,B,C and E of the objectives.

4. MAIN BIBLIOGRAPHY

ACSM (2021): ACSM's Resources for the personal Trainer. 6th edition. Wolters Kluwe | Lippincott Williams & Wilkins.

Baechle, T; Earle, R (2015): Essential of strength training and conditioning. National Strength and Conditioning Association. 4th edition. Human kinetics.

Bompa,T; Cornacchia (2000): Treinamento de força consciente. Estratégias para Ganho de massa muscular. Phorte Eeditora. Brasil

Boyle, M. (2011): Advances in Functional Training: Training Techniques for Coaches, Personal Trainers and Athletes. Lotus Publishing.

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Collins, A. (2012): The complete guide to functional training. Bloomsbury Publishing Plc.
Cook, G. (2003): Athletic Body in Balance. Optimal movement skills and conditioning for performance. Human Kinetics.

Delavier, F. (2016). Guia de los movimientos de musculación. 6ª edição. Editorial Paidotribo. Badalona.
Glassman, G. (2020): CrossFit Level 1 Training Guide. CrossFit, Inc.

National Academy of Sports Medicine (2020): Essentials of Corrective Exercise Training. 2nd Edition. Jones & Bartlett Learning

National Strength and Conditioning Association (2011): Developing Agility and Quickness (Sport Performance). Human Kinetics

National Strength and Conditioning Association (2016): Exercise Technique Manual for Resistance Training (Book & DVD).3th ed. Human Kinetics.

NSCA e Dawes, J. (2011): Developing Agility and Quickness (Sport Performance Series). Human Kinetics.

NSCA e Willardson, J (2011): Developing the core (Sport Performance Series). Human Kinetics
Raposo, F. (2015). Treino funcional integrado. André Manz Produções Culturais e Desportivas.

Santana, J. (2016): Functional Training. Exercises and programming for training and performance. Human Kinetics.

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

Teaching methodologies

Classes consist of sessions with an essentially practical nature, being taught in the appropriate sports spaces, namely: group activities room, exercise room (weight training and cardio fitness) and open spaces. The more theoretical-practical sessions are held in the classroom or in the practice spaces with multimedia resources. Thus, the syllabus taught are transmitted and explored through:

- practical exercise of different techniques and movements associated with the main blocks of the syllabus;
- oral presentation and through interactive multimedia on program content;
- research work, analysis and interpretation of scientific texts/articles, and practical application with tutoring;

Evaluation rules

The assessment will be carried out according to a dynamic and continuous process, with a formative dimension. Continuous assessment follows the provisions of the school regulations in force at ESECD and is operationally defined through the following elements:

1. Continuous assessment
    - Written test - 25%

- Practical assessment (technical execution and safety rules in the exercise room) - 35%
- Practical assignments (reports and class sheets, reading sheets and presentation of or part of exercise sessions) - 40%

2. Assessment by exam - (Ordinary, Worker) (Resource, Special)
   - Final Written Exam - 35%
   - Practical assignments - 65% (The grade for this component corresponds to that obtained in the practical assessment of the continuous assessment).

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The methodologies indicated were selected in order to maximize the acquisition of content associated with each objective. Thus:

- practical exercise sessions are used to develop and consolidate the motor skills associated with different syllabuses, thus allowing to achieve the objectives determined in point A, B, C and D;
- exposure of contents orally and through audiovisual means. This methodology is used to present the fundamental contents associated with all objectives;
- research work, analysis and interpretation of text / scientific articles, study and resolution of case studies. This methodology is used to present the fundamental contents associated with all objectives;

7. ATTENDANCE

It is according to the regime in place at ESECD.

ESECD, 28th of June of 2021