



## IDENTIFYING DATA

### Physiology: Exercise physiology II

Subject	Physiology: Exercise physiology II			
Code	P02G050V01401			
Study programme	(*)Grao en Ciencias da Actividade Física e do Deporte			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Basic education	2nd	1st
Teaching language	Spanish Galician English			
Department				
Coordinator	García Soidan, José Luís			
Lecturers	García Soidan, José Luís Silva Alonso, Telmo			
E-mail	jlsoidan@uvigo.es			
Web				
General description				

## Competencies

Code	
C1	Aptitude to design, to develop and evaluate the processes of education - learning relative to the physical activity and the sport with attention to the individual and contextual characteristics of the persons.
C2	Aptitude to promote and evaluate the formation of lasting and autonomous habits of practice of physical activity and sport between the school population
C3	Aptitude to apply the physiological and biomechanical skills, comportamentales and social, in the offer of tasks in the processes of education - learning across the physical activity and sport.
C4	Aptitude to identify the risks that stem for the health of the students due to the practice of inadequate physical activities .
C6	Aptitude to select and to be able to use the material and sports equipment adapted for every type of activity in the processes of education learning across the physical activity and sport.
C9	Aptitude to promote and evaluate the formation of lasting and autonomous habits of practical physical and sports activity in the population who realizes sports training
C13	Aptitude to evaluate the physical condition and to prescribe physical exercise orientated towards the health
C14	Aptitude to promote and evaluate the formation of lasting and autonomous habits of practice of physical activity and sport between the adult population, older and disabled people.
C15	Aptitude to identify the risks that stem for the health of the development of the physical inadequate activities between the population who realizes physical practice orientated to the health
C16	Aptitude to apply the physiological, biomechanical, comportamental and social principles to the field of the physical activity and the health
C17	Aptitude to plan, to develop and control the accomplishment of programs of physical - sports activities orientated to the health
C27	Aptitude to promote and evaluate the formation of lasting and autonomous habits of practice of the physical - sports recreative activities for the whole population
C29	Aptitude to identify the risks that stem for the health, of the practice of physical inadequate activities in the medical instructors of physical - sports recreative activity

## Learning outcomes

Expected results from this subject	Training and Learning Results
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Conceptualization and identification of the object of study of the Physical Activity and Sport Sciences .	C1
To Knowledge and understanding the physiological and biomechanical factors that condition the practice of the physical activity and the sport.	C3
To Knowledge and understanding the effects of the practice of the physical exercise envelope to structure and function of the human body.	C4
Knowledge and understanding of the scientific literature of the field of the physical activity and the sport.	C2
Capacity to promote and evaluate the continuous training and the autonomous physical activity-sportive practice in the population that realizes sports training .	C2 C6 C9 C13 C14 C17 C27
Capacity to apply the physiological , biomechanical, comportamental and social principles to the field of the physical activity and the health.	C16
Capacity to identify the risks that derive stop the health, of the practice of inappropriate physical activities in the practitioners of physical activity-sportive and leisure.	C15 C29

### Contents

Topic	
BLOCK I. PHYSIOLOGY OF The EXERCISE And PROOFS OF EFFORT.	Subject 1. Modifications and cardio-vascular adaptations produced by effort and the physical exercise. Subject 2.-Blood modifications and adaptations induced by effort and the physical exercise. Subject 3. Ventilation, transport of oxygen (VO <sub>2</sub> ) and CO <sub>2</sub> produced by in effort.
BLOCK II. CINEANTROPOMETRY and SPORT NUTRITION.	SUBJECT 4. Studio of the weight and of the corporal composition. Subject 5.Physiological bases and principles of the sportive Nutrition.
BLOCK III. PHYSIOLOGY of the Endurance	Subject 6. Sour balance-base and Renal Function. Subject 7. Fatigue and Syndrome of overtraining
BLOCK IV. FISIOLGY OF The EXERCISE And EXTERNAL AGENTS. PREVENTION And HEALTH.	Subject 8. Physiological answers in front of distinct environmental situations. Subject 9.- Relations go in the physical exercise, health and prevention of illnesses.

### Planning

	Class hours	Hours outside the classroom	Total hours
Master Session	22.5	0	22.5
Tutored works	2.5	2.5	5
Laboratory practises	60	45	105

\*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

### Methodologies

	Description
Master Session	Exhibition of the classroom problems
Tutored works	To each group the teacher will assign a work related with the contained of the program.
Laboratory practises	Application to practical level of the theory of a field of knowledge in a context determined. Practical exercises through the diverse laboratories.

### Personalized attention

#### Methodologies Description

Tutored works	Attention in small groups to verify the knowledges purchased. Orientation about the works they have assigned.
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### Assessment

Description	Qualification	Training and Learning Results

Master Session	The evaluation of the sessions will be realized by test questions. The total punctuation of this section will be of 5.5 points.	55	C1 C2 C3 C4
Tutored works	Works presented (3): 1.5 points in total: -Work 1...0,5 points -Work 2...0,5 points -Work 3...0,5 points	15	C3 C14 C15 C16 C17 C27 C29
Laboratory practises	Assistance to 80% or more of the practical.... 3 points	30	C3 C6 C9 C13 C14

### Other comments on the Evaluation

To surpass the subject, the students will owe to obtain 5 points or more, summing the theoretical part, the practice and the works. For power realize the theoretical examination, and need that the student assisted 80% of the practical.

Each of the three works will value with the following criteria: a) correct presentation; b) suitable Content; c) Adequated figures and tables; d) bibliographic references with indexed articles (minimum of 4).

The superation of the practices of Laboratory saves until it third announcement.

### Sources of information

#### BIBLIOGRAFIA BASICA:

- .- López Chicharro. FISILOGÍA DEL ENTRENAMIENTO AERÓBICO. 2013
- .- Calderón Montero. Fisiología Humana aplicada a la actividad física. Ed. Panamericana. 2012.
- .- Powers Scott. Exercise Physiology: Theory and Application to Fitness and Performance. 2012.
- .- McArdle, William D. Essentials of exercise physiology. Lippincott Williams & Wilkins, Baltimore, MD, 2006.
- .- Lopez Chicharro J, Hernández Vaquero M. Fisiología del Ejercicio. Ed. Panamericana, 3ª edición, Madrid 2006.
- .- Wilmore JH, Costill DL. Fisiología del Esfuerzo y del Deporte. Ed. Paidotribo, 5ª Edición, Barcelona, 2004.
- .- Astrand PO, Rodahl K. Fisiología del trabajo físico. Ed. Panamericana, 3ª Edición. Buenos Aires, 1992.

#### BIBLIOGRAFIA COMPLEMENTARIA:

- 1.- Mora Rodríguez, Ricardo. Fisiología del deporte y el ejercicio: prácticas de campo y laboratorio. Ed. Médica Panamericana, Madrid, 2009.
- 2.- Villa JG., Córdova A., González J. Nutrición del Deportista. Ed. Gymnos. Madrid, 2000.
- 3.- Legido Arce JC., Segovía Martínez JC., L-Silvarrey Varela FJ. Manual de Valoración Funcional. Ediciones Eurobook, Madrid, 1996.
- 4.- George JD., Garth Fisher A., Vehrs PR. Test y Pruebas Físicas. Ed. Paidotribo. Barcelona, 1996.
- 5.- López-Chicharro J, Legido JC. Umbral Anaeróbico. Ed. Interamericana, Madrid 1991.
- 6.- López-Chicharro J. Transición Aeróbica-Anaeróbica. Ed. Master Line & Prodigio SL, Madrid, 2004.
- 7.- Terreros JL., Navas F. Valoración Funcional, Aplicaciones al entrenamiento deportivo. Ed. Gymnos. Madrid, 2003.
- 8.- Córdova Martínez A. La Fatiga muscular en el rendimiento deportivo. Ed. Síntesis, Madrid 1997.
- 9.- Barbany JR. Fisiología del Ejercicio Físico y del Entrenamiento. Ed. Paidotribo, Barcelona 2002.

- 10.-Fernández-García B., Terrados N. La Fatigadel Deportista. Ed. Gymnos. Madrid, 2004.
- 11.-Córdova A, Álvarez de Mon M. Inmunidad en el Deporte. Ed.Gymnos, Madrid, 2001.
- 12.- Bernadot D. Nutición deportiva avanzada. Ed. Tutor: Madrid. 2007.
- 13.- Clark N. La guía de la nutrición deportiva. Ed. Paidotribo: Badalona. 2006.
- 14.- Burke L. Nutrición en el Deporte. Ed. Panamericana: Madrid. 2010.
- 15.-Cabañas MD, Esparza F. (Coords.) Compendio de Cineantropometría. CTO D.L.: Madrid. 2009.

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## **Recommendations**

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### **Subjects that it is recommended to have taken before**

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Physiology: Exercise physiology I/P02G050V01104

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