

### Caraterização da Unidade Curricular / Characterisation of the Curricular Unit

<b>Designação da Unidade Curricular / Curricular Unit:</b>	[3181200611] Fisiologia do Exercício [3181200611] Exercise Physiology		
<b>Plano / Plan:</b>	2007/2008		
<b>Curso / Course:</b>	Desporto e Atividade Física Sport and Physical Activity		
<b>Grau / Diploma:</b>	Licenciado		
<b>Departamento / Department:</b>	CDM - Ciências do Desporto e Motricidade		
<b>Unidade Orgânica / Organic Unit:</b>	Escola Superior de Educação de Viseu		
<b>Área Científica / Scientific Area:</b>	Ciências da Motricidade		
<b>Ano Curricular / Curricular Year:</b>	1		
<b>Período / Term:</b>	S2		
<b>ECTS:</b>	4		
<b>Horas de Trabalho / Work Hours:</b>	0108:00		
<b>Horas de Contacto/Contact Hours:</b>			
(T) Teóricas/Theoretical:	0030:00	(TC) Trabalho de Campo/Fieldwork:	0000:00
(TP) Teórico-Práticas/Theoretical-Practical:	0000:00	(OT) Orientação Tutorial/Tutorial Orientation:	0000:00
(P) Práticas/Practical:	0030:00	(E) Estágio/Internship:	0000:00
(PL) Práticas Laboratoriais/Practical Labs:	0000:00	(O) Outras/Others:	0000:00
(S) Seminário/Seminar:	0000:00		

### Docente Responsável / Responsible Teaching

[2047] João Luís Garcês Esteves

### Outros Docentes / Other Teaching

[2047] João Luís Garcês Esteves

### **Learning Outcomes of the Curricular Unit**

- ¿Knowledge's development of the main physiological mechanisms of adaptation to exercise and training.
- ¿Competence¿s development on tests to assess physiological adaptation to exercise and training

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### **Syllabus (Lim:1000)**

#### Theoretical lessons

1. Effort bioenergy's restrictions
2. Breath adaptations
3. Cardiovascular adaptations
4. Muscular adaptations
5. Renal adaptations
6. Muscular fatigue
7. The acid -base and the electrolytic balance
8. Thermoregulation
9. The "warm-up"

#### Practical lessons

1. Physical and physiological evaluation
2. Muscular strength evaluation
3. Flexibility evaluation
4. Aerobic performance evaluation
5. Anaerobic performance evaluation

### **Demonstration of the syllabus coherence with the curricular units' learning objectives**

The theoretical lesson's syllabus addresses the acute and the chronic changes in the main organic devices when subjected to stress, contents which are the basis for the curricular unit skills development. The practical contents addresses the assessment of relevant physiological parameters during exercise, intended to develop diagnostic skills, also proposed by this curricular unit, through familiarity with the most widely used battery of tests.

### **Teaching Methodologies (Including evaluation; Lim:1000)**

This Curricular Unit has two types of sessions: a) Theoretical sessions, that aims the presenting of the theoretical foundations of the discipline, b) Practice sessions for the application of knowledge to real situations. In this sense, the evaluation includes a written test to assess the level of integration of the theoretical foundations, and practical works in laboratory wishing to assess the competences to use physiological tests to assess the adaptation to exercise and training. Evaluation by Frequency: 1 written Test (75%) + Laboratorial works (25%) Evaluation by Final Examination: Written Test (75%) + Laboratorial Test (25%)

### **Demonstration of the coherence between the teaching methodologies and the learning outcomes**

The theoretical lessons, more expositive, aims to develop knowledge about the main physiological mechanisms of adaptation to exercise and training. The laboratory practical classes aims to enhance the skills to use some laboratory tests commonly used for parameterization the adaptation to exercise and training (anaerobic threshold, oxygen consumption, levels of force, levels of flexibility)

**Bibliografia / Bibliography (Lim:1000)**

American College of Sports Medicine (2008): Manual de consulta para el control y la prescripción del ejercicio. Ed. Paidotribo, Barcelona

Kenney, W.L., Willmore, J.H. & Costill, D.L. (2021). Physiology of Sport and Exercise. Paidotribo

Kraemer, W., Fleck, S. & Deschenes, M.. 2013. Fisiologia do Exercício - Teoria e Prática. Guanabara Koogan, Lda.

McArdle, W.D.; Katch, F.I.; Katch, V.L. (2016). Fisiologia do Exercício ? Nutrição, Energia e Desempenho Humano. 8ª ed. Guanabara Koogan

Rowland, T.. 2005. Children´s Exercise Physiology, 2ª ed.. Human Kinetics.

Wasserman, K. et al.. 2004. Principles of Exercise Testing and Interpretation, 4th ed. Ed. Lippincott Williams & Wilkins,