

<i>Course</i>	Master in Sports Science			<i>Academic year</i>	2021-2022		
<i>Subject</i>	Seminars			ECTS	5		
<i>Type of course</i>	Compulsory						
<i>Year</i>	2º	<i>Semester</i>	1st semester	<i>Student Workload:</i>			
<i>Professor(s)</i>	Carolina Júlia Vila-Chã Nuno Miguel Cameira Serra			<i>Total</i>	135	<i>Contact</i>	30
<i>Area Coordinator</i>	Carolina Júlia Vila-Chã						

Planned SD

1. LEARNING OBJECTIVES

At the end of this Curricular Unit (UC), the student is expected to acquire a set of skills and knowledge based on the seminars given, whose themes will be defined annually according to the specialization areas selected by the enrolled students. Thus, this UC intends to:

- a) Deepen scientific and technical knowledge in specific areas underlying professional intervention in the field of gym sports and/or sports training;
- b) Encourage critical thinking through participation in scientific events and critical analysis of studies relevant to the area of professional intervention;
- c) Deepen fundamental skills for the development and implementation of research projects and community intervention;
- d) Develop and encourage the ability to interpret and translate scientific knowledge into professional practice, contributing to the development of high quality service provision;
- e) Expand the ability to understand and reflect on the ethical and social implications underlying a qualified and specialized intervention in different areas of sport;
- f) Update skills based on the most recent scientific knowledge in the area of planning, evaluation and control of training, both in terms of sports performance and in terms of physical exercise and health.

2. PROGRAMME

The following general contents will be objectively defined according to the specific areas of intervention selected:

- Biological, biomechanical, psychological and social determinants of behavior, motor performance and health;
- Evaluation and control of the training process [part(s) of sports performance and/or physical exercise and health];
- Training planning and prescription [part(s) of sports performance and/or physical exercise and health];

Organization and management of sports activity and fitness centers.

The syllabus will be developed through:

- (A) Participation in scientific events and seminars;
- (B) Analysis of scientific articles;
- (C) Development of research projects and community intervention;
- (D) Organization of technical-scientific events, taught by experts.

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

This UC aims to provide students with a more in-depth, critical and reflected view on topics they consider important for a high quality intervention in their areas of specialization. In this way, the specific themes to be developed in this UC will be initially discussed and selected according to the interests of the students, maintaining the framing of the themes in the fundamental areas of Sports Science. The UC syllabus was selected and structured according to the learning objectives (Table 1).

Table 1 – Demonstration of coherence of the syllabus with the objectives of the UC.

Programme	⇒	Learning Objectives
A		a), b), e) e f)
B		a), b) e f)
C		c), d) e e)
D		a), b), d) e f)

4. MAIN BIBLIOGRAPHY

Brown, D. J., & Fletcher, D. (2017). Effects of Psychological and Psychosocial Interventions on Sport Performance: A Meta-Analysis. *Sports medicine* (Auckland, N.Z.), 47(1), 77–99. <https://doi.org/10.1007/s40279-016-0552-7>

Cambon, L., Terral, P., & Alla, F. (2019). From intervention to interventional system: towards greater theorization in population health intervention research. *BMC public health*, 19(1), 339. <https://doi.org/10.1186/s12889-019-6663-y>

Ehrman J., Kerrigan D., Keteyian S. (2017). *Advanced Exercise Physiology: Essential Concepts and Applications*. Human Kinetics

Enoka, R. (2015): *Neuromechanics of Human Movement*. 5th edition. Human Kinetics.

Farina D, Negro F, Muceli S, Enoka RM. (2016): Principles of Motor Unit Physiology Evolve With Advances in Technology. *Physiology*. Mar;31(2):83-94. doi: 10.1152/physiol.00040.2015

Gardiner (2011): *Advanced Neuromuscular Exercise Physiology (Advanced Exercise Physiology)*. Human Kinetics.

Gibbs, P. & Beavis, a (2020): *Contemporary Thinking on Transdisciplinary Knowledge*. Springer International Publishing.

Horn, T & Smith, A. (2018): *Advances in Sport Psychology*. 4th edition. Human Kinetics.

Knudson D. (2020). Top cited research over fifteen years in Sports Biomechanics. *Sports biomechanics*, 19(6), 808–816. <https://doi.org/10.1080/14763141.2018.1518478>

MacInnis, M. J., & Gibala, M. J. (2017). Physiological adaptations to interval training and the role of exercise intensity. *The Journal of physiology*, 595(9), 2915–2930. <https://doi.org/10.1113/JP273196>.

Stecker, R. A., Harty, P. S., Jagim, A. R., Candow, D. G., & Kerksick, C. M. (2019). Timing of ergogenic aids and micronutrients on muscle and exercise performance. *Journal of the International Society of Sports Nutrition*, 16(1), 37. <https://doi.org/10.1186/s12970-019-0304-9>.

Taiar, R. (2020): *Recent Advances in Biomechanics*. IntechOpen.

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

Teaching methodologies

Learning will be carried out, fundamentally, through an investigative methodology, fostering the development of personal and professional skills and favoring the achievement of autonomy in the course of the learning process. In this sense, the students will have access to theoretical and practical information sources. In small groups, they will carry out small investigative works with subsequent presentation, analysis and discussion. All these small investigations will be supervised by the teacher. There will be expository sessions (seminars, congresses and conferences). The management of the theoretical and practical dimensions

of learning will be done in an integrated manner. The tutorial sessions will provide the necessary follow-up/orientation to the work developed in small groups.

Evaluation Rules

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

- Analysis of scientific articles – 40%;
- Preparation of reports on participation in scientific events - 20%
- Preparation of investment or intervention project - 40%

The final classification will correspond to the average of the classifications obtained in each of the seminars.

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The methodologies indicated were selected in order to monetize and maximize the acquisition of content associated with the themes that will be selected.

7. ATTENDANCE

It is according to the regime in place at ESECD.

ESECD, 28th of June of 2021