Course	Sports			*Academic year*	2021/22		
Subject	Research Methodology in Sports			ECTS	6		
Type of course	Compulsory						
Year	1º	*Semester*	S1	*Student Workload:*			
Professor(s)	Natalina Roque Casanova			*Total*	162	*Contact*	60
Area Coordinator	Carolina Júlia Félix Vila-Chã						

Planned SD

1. LEARNING OBJECTIVES

The UC "Research Methodology in Sport and Exercise" aims to provide students with knowledge and skills that allow them to:

a) know the processes underlying the different stages of research in the context of sport and physical exercise;
b) understand the main statistical procedures suitable for data analysis in each research design;
c) knowing how to formulate hypotheses in statistical terms, test them and properly interpret the results;
d) handle and apply data analysis programs (SPSS and Excel);
e) structuring an investigation report, defining the objectives and respective hypotheses.

2. PROGRAMME

A. Introduction to Research Methodology in the context of Sport and Physical Exercise Sciences:

(I) Scientific method and research paradigms;
(II) Structure and analysis of different scientific documents;
Structure of the research project;
Thesis/monograph/research report structure;
Structure of the scientific article
(III) Stages of the research process in the context of Sport and Exercise;
Definition and contextualization of the research problem;
Research objectives;
Formulation of hypotheses and definition of study variables;
Sampling methods and procedures;
Selection of materials and research instruments;
Statistical treatment of data.
The writing of scientific documents;
(V) Ethical issues in the investigation process;
Relationship with the subject;
Relationship with the investigator;

Relationship with the plan.

B. Data analysis using statistical software:

I. Introduction to the problem of hypothesis testing;
II. Descriptive statistics (position, order, dispersion, asymmetry and kurtosis measures);
III. Statistical inference for two populations (T-Student for independent and paired samples);
IV. Statistical inference for more than two populations - Analysis of variance (Single ANOVA, ANOVA for repeated measures; a posteriori tests);
V. Association between variables (Pearson and Spearman correlation coefficients);
VI. Introduction to non-parametric hypothesis tests (frequency tables and Chi-square test; Mann-Whitney and Wilcoxon tests);
VII. Application, reading, interpretation of the outputs of Excel and SPSS programs and their integration in a scientific text.

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

The contents are consistent with the goals of the UC because they allow students to develop autonomously-supervised the ability of scientific – theoretical and practical approach of the object this Curricular unit: (1) use the theoretical knowledge, built on research, in practical exercises in simulated environments; (2) demonstrate the ability to work in groups on research, treatment and practical exposure. In summary, this UC was structured in such a way as to contribute to the understanding of the importance, relevance and benefits of the systematization of the process of research.

4. MAIN BIBLIOGRAPHY

Arnold, B.L. (2016). Evidence- Based Practice in Sport and Exercise: Aguide to using Research. 1st edition F.A. Davis Company.

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Bordens, K.; Abbott, B. (2017). Research Design and Methods: A Process Approach. New York: Mcgraw-Hill Edition.

Fortin, M. F. (1999). O Processo de investigação: da conceção à realização. Loures: Lusociência.

Marôco, J. (2003). Analise Estatística com utilização do SPSS. Edições Sílabo.

McNamee, M. (2004). Philosophy and the Science of Exercise, Health and Sport: Critical Perspectives on Research Methods. 1s edition. Routledge.

Mukherjee, S.P. (2018). Statistical Methods in Social Science Research. Singapore: Springer.

Perreira, A. (2008). Guia de utilização do SPSS. Edições Sílabo. 7ª Edição.

Sampieri, R. H; Collado, C.F. & Lucio, P.B. (2006). Metodologia de Pesquisa. Mcgraw-hill. 3ª Edição.

Thomas, J. R., Nelson, J. K. & Silverman S. J. (2015). *Research Methods in Physical Activity*. 7th edition. Human Kinetics.

Tod, D. (2019) Conducting Systematic Reviews in Sport, Exercise and Physical Activity. 1st Edition Palgrave Macmillan.

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

The course will be structured in a learning management system for topics of study, planned according to a pedagogic model active, student-centered, on accessibility and social construction of knowledge. As way to complement the face sessions, will develop a documentary, supervised research component (support and scientific-pedagogical accompaniment) by the teacher, which will associate the theoretical contents to practical content-creation of the programs tailored to specific needs and adjusted the issues listed.

The evaluation is divided in:

• Development, elaboration and Presentation of a scientific work - 45%

• Test – 45%

. Participation – 10%

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The achievement of learning goals goes though lection theoretical- practical content to consolidate though consultation, interpretation, analysis and implementation specific bibliographic practice (Marshall). The emphasis on the practical component, is consistent with the objectives of the curricular unit designed to develop skills to support their practices to be and do, in an integrated manner, articulated and systematically. The proposed review is consistent with the objectives set.

Date: June, 2021