

<b>ID</b>	1925
<b>Curricular Unit</b>	Methodology of Scientific Research
<b>Regent</b>	Duarte Fernando da Rosa Belo Patronilho de Araújo
<b>Learning Outcomes</b>	<p>To develop theoretical competences to the practice of scientific research, through the systematic study of the fundamental processes and specific strategies of planning, realization, analysis, discussion and presentation of results.</p> <p>To afford the theoretical and methodological discussion of the research questions and the problems in the Human movement domain.</p>
<b>Syllabus</b>	<p>I. Introduction</p> <ol style="list-style-type: none"> <li>1. Research in human movement science</li> <li>2. What is science and scientific research.</li> <li>3. Ethics in scientific research</li> </ol> <p>II. Starting research</p> <ol style="list-style-type: none"> <li>4. To choose a topic or a problem to research: the questions, the research aims and the means to answer to these questions.</li> <li>5. How to use theories and models, and how to conduct a literature review.</li> </ol> <p>III. How to study the selected topic</p> <ol style="list-style-type: none"> <li>6. To chose a method</li> <li>7. The nature of the research: variables and its measurement, validity, reliability and sensibility.</li> <li>8. Representative design: Sampling participants and sampling contexts</li> <li>9. Data collection</li> </ol> <p>IV. Obtained results</p> <ol style="list-style-type: none"> <li>1. Describe, present and explore data</li> <li>2. Interpret and discuss results</li> </ol> <p>V. To communicate the research process</p> <ol style="list-style-type: none"> <li>3. To write a research project</li> <li>4. Publish the work on scientific journals</li> </ol>

The teaching is both theoretical and practical. The contents are presented applied to concrete cases of research in the domain of human movement, which in turn are implemented in a research project about a topic selected by the student.

#### Assessment

Students need to realize a research project, according with their own interests. The written report should have a maximum of 10 pages including introduction,

The project should be organized as follows:

1.- Introduction: Theoretical rationale under the domain of the Master (post-graduation), description of the aims of the study, and hypothesis formulation;

2.- Method:

2.1.- Sample;

2.2.- Material: description of the documents, tools, equipment etc. used for assessment;

2.3.- Procedures;

3.- References in APA format (6th Edition);

The reports should be delivered in a digital format digital (or optionally in paper).

### Evaluation

### Bibliography

- Almeida, L., & Freire, T. (2008). Metodologia da Investigação em Psicologia e Educação (5th Ed). Braga: Psiquilibrios.
- Carmo, H., & Ferreira, M. (2008). Metodologia da investigação: Guia para auto-aprendizagem (2nd Ed). Lisboa: Universidade Aberta.
- Nestor, P., & Schutt, R. (2012). Research Methods in Psychology: Investigating Human Behavior. London: Sage.
- Thomas, J., Nelson, J. & Silverman, D. (2005). Research methods in physical activity (5th Ed). Champaign, Il: Human Kinetics.