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| <b>ID</b>                | 3803                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Curricular Unit</b>   | Understanding Probability and Statistics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Regent</b>            | Ana Maria Fité Alves Diniz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Learning Outcomes</b> | <p>(i) To provide students with fundamental concepts of statistics, which enable the handling of data related to scientific research on an experimental basis;</p> <p>(ii) To develop the ability to analyze real data, using statistical software (e.g., SPSS) to illustrate the application of the presented methods.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Syllabus</b>          | <ol style="list-style-type: none"> <li>1. Exploratory data analysis</li> <li>2. Parametric statistical inference</li> <li>3. Nonparametric statistical inference</li> <li>4. Linear regression models</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Evaluation</b>        | Final exam with a practical component (50%) and a theoretical-practical component (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Bibliography</b>      | <p>Essential:</p> <p>Field, A. (2010). <i>Discovering Statistics Using SPSS</i> (3rd ed.), London: Sage.</p> <p>Marôco, J. (2010). <i>Análise Estatística com o PASW Statistics (ex-SPSS)</i>, Lisboa: Report Number.</p> <p>Complementary:</p> <p>Chatfield, C. (1995). <i>Problem Solving - a Statistician's Guide</i> (2nd ed.), Boca Raton, Florida: Chapman and Hall/CRC.</p> <p>Pestana, D., Velosa, S. (2006). <i>Introdução à Probabilidade e à Estatística</i> (Vol. I, 2ª ed.), Lisboa: Fundação Calouste Gulbenkian.</p> <p>Sheskin, D.J. (2007). <i>Handbook of Parametric and Nonparametric Statistical Procedures</i> (4th ed.), Boca Raton, Florida: Chapman and Hall/CRC.</p> <p>Zar, J.H. (2010). <i>Biostatistical Analysis</i> (5th ed.), Upper Saddle River, New Jersey: Prentice Hall.</p> |