

Updated On	2021/09/28																															
Curricular Year / Period	2021/22 / S1																															
Course	Agronomia																															
Curricular Unit	Metodologias de Investigação																															
Language(s) of Instruction	Português English (ERASMUS+ students)																															
ECTS/tempo de trabalho (horas)	<table border="1"> <thead> <tr> <th rowspan="2">ECTS</th> <th rowspan="2">Total</th> <th colspan="9">Horas de contacto semestral</th> </tr> <tr> <th>T</th> <th>TP</th> <th>PL</th> <th>S</th> <th>TC</th> <th>E</th> <th>O</th> <th>OT</th> <th>EC</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>80</td> <td>0</td> <td>32</td> <td>16</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>T - Theoretical; TP - Theoretical and practical; LP - Laboratory Practice; S - Seminar; TG - Tutorial guidance; FW - Fieldwork; T - Training; ; EC - Clinical teaching; O* - Other hours typified as Clinical Training under the Directive 77/453/EEC of June 27, adapted by Directive 2005/36/EC.</p>	ECTS	Total	Horas de contacto semestral									T	TP	PL	S	TC	E	O	OT	EC	3	80	0	32	16	0	0	0	0	0	0
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		T	TP	PL	S	TC	E	O	OT	EC																						
3	80	0	32	16	0	0	0	0	0	0																						
Teacher in charge (GDPR consent) <small>[complete name, email]</small>	Rute Isabel Duarte Guedes Dos Santos / rutesantos@ippportalegre.pt																															
Other teachers (GDPR consent) <small>[complete name, email]</small>	José Manuel Rato Nunes / ratonunes@ippportalegre.pt																															
Prerequisites <small>[Curricular Units that must precede and specific entry competences]</small>	Not applicable																															
Learning outcomes <small>[Description of the overall and specific objectives] [Knowledge, skills and competences to be developed by students]</small>	This course aims to develop students' basic skills in scientific and experimental work. It is intended that students internalize the importance of scientific development and research work in their areas of knowledge, know the forms of financing available to the research teams. It is also intended to know the fundamentals of the scientific method, know to plan an experience, able to do research and characterization of the state of the art using different resources currently available to the scientific community can identify and monitor the critical control points of an experimental protocol in order to obtain reliable results. The student must acquire skills in the experimental design, collection, compilation and analysis of data, discussion of results obtained in the light of defined objectives and joint conclusions from these results.																															
Syllabus	<ol style="list-style-type: none"> 1. Introduction: Importance of scientific work; development of scientific literature in Portugal; financing of research work. 2. Experimental design: The scientific method; setting objectives; experimental design; sampling, randomization and restrictions on randomization; robustness and reliability of scientific results: statistical significance. 3. Bibliographic search: the importance of the state of the art and implications for the experimental protocol; search engines and online scientific databases; critical analysis of scientific articles. 4. Data processing: The MS Excel based tool in data analysis (using Analysis Tool Pack supplement). SPSS data analysis tool - practical application. 5. Publication of results: advertising media; Indexing and peer review; Examples of literature referencing and copyright rules. Basic structure of a scientific paper. 																															
Teaching methodologies (including assessment) <small>[Specify the types of assessment and the weights and evaluation criteria]</small>	<p>1 - Teaching methodologies</p> <p>Lectures considering concept explanation and discussion. Theoretic-practical classes, considering both, the resolution of exercises and the presentation and analysis of case studies. Development of a general application procedure, considering a hypothetic source of funding; experimental design and scientific paper analysis. Lab practical classes consisting on the use of search engines and scientific databases (b-On, other resources); data processing using SPSS.</p> <p>2 - Period assessment</p> <p>Writing and presenting a scientific paper</p>																															

	<p>3 - Examination assesment Writing and presenting a scientific paper</p>
<p>Bibliography</p>	<p>1 - Main Bibliography Carvalho, M. (1988). A estatística aplicada à experimentação agrícola. Edições Afrontamento. 295 pp.; Gouveia de Oliveira, A. (2006). Bioestatística, Epidemiologia e Investigação. LIDEL -Edições Técnicas, Lda. ISBN. 978-972-757-558-9; Morris, T. (2002). Experimental design and analysis in animal sciences. CABI Publishing, UK, 208 pp; Vieira, S. Hoffmann, 1989. R. Estatística experimental. Editora Atlas S.A. - S. Paulo. 179pp. Recursos disponíveis na Biblioteca do Conhecimento On-line (b-On);</p> <p>2 - Complementary Bibliography</p>
<p>Special Situations [Students with special status]</p>	<p>1 - Period assessment - Students with special status Writing and presenting a scientific paper</p> <p>2 - Examination assesment - Students with special status Writing and presenting a scientific paper</p>