Curricular Unit Form

Updated On	2021/10/29
Curricular Year / Period	2021/22 / S2
Course	Equinicultura
Curricular Unit	Biofísica
Language(s) of Instruction	Português Inglês

ECTS/tempo de trabalho (horas)

ECTS	Total	Horas de contacto semestral								
		T	TP	PL	S	TC	E	O	OT	EC
6	160	16	32	32						

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.

Teacher in charge (GDPR consent) [complete name, email]	Ana Isabel Rodrigues Cordeiro / ana_cordeiro@ipportalegre.pt
Other teachers (GDPR consent) [complete name, email]	Susana Barreto Saraiva Dias / sdias@ipportalegre.pt
Prerequisites [Curricular Units that must precede and specific entry competences]	It is not obligatory to have approved the curricular unit of Mathematics and Statistics as a precedent, but the student will have to know how to perform calculations with powers and solve first and second degree equations, as well as systems of equations.
Learning outcomes [Description of the overall and specific objectives] [Knowledge, skills and competences to be developed by students]	To confer and consolidate the basic training in the field of physics linked to the agricultural sciences, providing the basic theoretical knowledge and its forms of application to the various curricular units of the course study plan; Demonstrate the applicability and role of physics in the description and quantification of phenomena related to biological sciences and engineering and their use in solving concrete problems; To cement and broaden the general culture in the field of physics, with emphasis on energy quantification and on the relative importance of the various forms of energy production in the present day, which include biofuels.
Syllabus	1 - Quantities and physical units; 2 - Vector calculus applied to physics; 3 - Evenly accelerated movements; 4 - Newton's laws; 5 - Static 6 - Work, energy and power; 7 - Thermal energy and amounts related to heat; 8 - Heat transfer; 9 - Energy production (CO2 emissions); 10 - Hydrostatic; 11 - Hydrokinematic
Teaching methodologies (including assessment) [Specify the types of assessment and the weights and evaluation criteria]	**1 - Teaching methodologies** The approach to contents and calculation methodologies is based essentially on theoretical-practical classes with the exposition of the concepts, in the accomplishment or exposition of experiences. The practical classes will be essentially dedicated to the resolution of exercises by the students, with accompaniment of the teacher. The evaluation will consist of two frequencies, with equal weight. The first part covers chapters 1 to 5 and the second chapters 6 to 11. The practical component is optional (group work, mini test, etc.) and will weigh up to 20% on the final grade. Non-classroom teaching due to the restrictions on social contact resulting from the successive states of emergency enacted by the tutelage and the contingency plan established by the Polytechnic Institute of Portalegre. **2 - Period assessment**

	The following modes of evaluation are possible: Mode 1 - Continuous assessment (laboratory practices); Mode 2 - Continuous assessment followed by complementary assessment (2 written tests, protocols and practical exam. 37.5% mark of the 1st test + 37.5% mark of the 2nd test + 25% note of the work)- Knowledge will be evaluated in 2 online tests of the PAE platform, to be carried out on the dates initially foreseen. **3 - Examination assessement** Assessment by exam (Overall exam 75% written test score + 25% grade of protocols and practical exam). Prior enrollment in the evaluation exams (exam) in the System (Online Academics), with a minimum period. Knowledge will be evaluated in online test of the PAE platform.
Bibliography	**1 - Main Bibliography** Bueche,F.J.,&Hecht,E.(2001).Física(M.J.Almeida,Trad.).Lisboa:McGraw- Hill. Quintela,A.C. (1983).HidráulicaGeral.Lisboa:FundaçãoCalousteGulbenkian. Sears, F., ZEMANSKY, M., & Young, H. D. (1984). Física. Rio de Janeiro: Livros Técnicos e Científicos. Yague, J. L. F. (1986). La Fisica y sus Aplicaciones Agricolas. Madrid: Ministerio de Agricultura, Pesca y Alimentacion. Guilherme, A. (1997). Sistema Internacional de Unidades (SI). Lisboa: Plátano Índias, M. A. C. (1992). Curso de Física. Lisboa: McGraw-Hill **2 - Complementary Bibliography** Teacher's notes
Special Situations [Students with special status]	**1 - Period assessment - Students with special status** Complementary assessment (2 written tests) Students with special status (worker / student) may be exempted from classes, presenting a written paper). **2 - Examination assessement - Students with special status** Assessment by exam (Overall exam 75% written test score + 25% grade of protocols and practical exam). Prior enrollment in the evaluation exams (exam) in the System (Online Academics), with a minimum period. Students with special status (worker / student) may be exempted from classes, presenting a written paper).