Curricular Unit Form

POLITÉCNICO DE PORTALEGRE

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Escola Superior Agrária de Elvas

Updated On	2021/09/28
Curricular Year / Period	2021/22 / S1
Course	Agronomia
Curricular Unit	Topografia e Cartografia
Language(s) of Instruction	Português

ECTS/tempo de trabalho (horas)

ECTS	Total	Horas de contacto semestral								
		T	TP	PL	S	TC	E	O	OT	EC
6	160		64	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.

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Other teachers (GDPR consent) [complete name, email]	Susana Barreto Saraiva Dias / sdias@ipportalegre.pt
Prerequisites [Curricular Units that must precede and specific entry competences]	
Learning outcomes [Description of the overall and specific objectives] [Knowledge, skills and competences to be developed by students]	With the UC of Topography and Cartography is intended to enable the student so that at the end of the program can accurately represent the terrain and its objects, in two or three dimensions, using a variety of methods and techniques in function of needs, available means and conditions. The student is still able to use the representation of the land in solving a range of common problems in agriculture. Finally, the student is trained in the elaboration and interpretation of cartographic representations. Skills to be acquired: 1. Understand the basics of geodesy 2. Know the main coordinate systems 3. Know the main projections used in cartography 4. Know and know how to use topographic surveying instruments (direct and indirect measurement) 5. Know the topographic survey methods 6. Know how to accurately represent the terrain and its objects 7. Know how to interpret cartographic representations (plants, charts and maps), namely with calculations of distances and areas in the terrain and cartographic representations 8. Know how to accurately represent the terrain and its objects in digital format (AUTOCAD) 9. Know how to use the GPS for orientation and as a support to the topographic survey
Syllabus	Cartography 1. Introduction 2. Coordinate systems 3. Analog and digital cartography 3.1. National cartography to support agricultural activity 4. Introduction to AUTOCAD 5. Introduction to Geographic Information Systems 5.1. Satellite positioning system Topography 6. Measurement units and and Instruments of observation 7. Planimetry 8. Altimetry 9. Topographic survey
Teaching methodologies (including assessment) [Specify the types of assessment and the weights and evaluation criteria]	**1 - Teaching methodologies** Theoretical classes with explanation of concepts and discussion. Theoretical-practical classes with exercises and presentation and analysis of practical cases. Laboratory classes with practical

experiences. Practical work and reports (10%); practical tests (topography practice 15%, Autocad 15%); Written assessment tests (cartography 30%, topography 30%).
In order to avoid the final exam, students must obtain a grade in the interim assessments equal to or greater than 10 values, with none of the individual classifications being less than 8.5 values.
To be admitted to the final exam, 75% of practical reports are required.
Students with worker-student status are exempt from the minimum classification of practical reports.

All practical evaluation reports should be made available to teachers in digital format.

2 - Period assessment

Practical work and reports (10%); practical tests (topography practice 15%, Autocad 15%); Written assessment tests (cartography 30%, topography 30%).
In order to avoid the final exam, students must obtain a grade in the interim assessments equal to or greater than 10 values, with none of the individual classifications being less than 8.5 values.
To be admitted to the final exam, 75% of practical reports are required.
Students with worker-student status are exempt from the minimum classification of practical reports.

All practical evaluation reports should be made available to teachers in digital format.

3 - Examination assessement

practical tests (topography practice 15%, Autocad 15%); Written assessment tests (cartography 30%, topography 30%).

Bibliography

1 - Main Bibliography

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2 - Complementary Bibliography

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SABINS, Floyd F. (1997), Remote sensing: principles and interpretation, 3ª ed.. New York: W.H.Freeman and Company, 494 pag., ISBN 0-7167-2442-1.

Special Situations

[Students with special status]

1 - Period assessment - Students with special status

practical tests (topography practice 15%, Autocad 15%); Written assessment tests (cartography 30%, topography 30%).

	2 - Examination assessement - Students with special status practical tests (topography practice 15%, Autocad 15%); Written assessment tests (cartography 30%, topography 30%).