

Academic Year: 2017/2018			
<b>Course: Spatial Modelling</b>			
<b>Coordinator: Paulo Morgado</b>			
<b>Teaching Staff: Paulo Morgado</b>			
<b>ECTS: 6</b>	<b>Weekly Hours: 4h</b>	<b>Typology: Theoretical/Practical</b>	
<b>Contents</b>			
1. Models in Geography: An overview			
2. 3D Modelling. Procedures for a DEM			
3. Visualization and 3D representation			
4. Extracting information from a DEM			
5. Surfaces analysis from the DEM and Hydrologic modelling			
6. Spatial interaction models			
7. Spatial statistics analysis in Geography			
<b>Objectives and skills</b>			
1. To understand the importance of Spatial Modeling and the Models in Geography;			
2. To know the concepts related to Digital Elevation Models;			
3. Know how to build a geographical model: The methods, the techniques and the roadmap;			
4. To know how to compute geographical models;			
5. To know how to analyse and interpret spatial models results;			
<b>References</b>			
Chorley, R. and Haggett, P. 1967 Models in geography. Mathew Co. Ltd. 816p.			
Fischer, M. 2006 - Spatial Analysis and Geocomputation. Selected Essays. Springer.			
Fotheringham, A. Stewart 2004 Quantitative geography: perspectives on spatial data analysis. London : Sage. ISBN 0-7619-5948-3			
Reis, Eusébio 1996, Aplicação dos sistemas de informação geográfica na análise morfológica			
de bacias hidrográficas, dissertação de mestrado em Hidráulica e Recursos Hídricos, IST, UTL, Lisboa.			
WENG, Qihao 2010 Remote sensing and GIS integration: theories, methods, and applications. New York : McGraw Hill. ISBN 978-0-07-160653-0			
Rocha, F. Jorge, 2012, Sistemas Complexos, Modelação e Geosimulação da Evolução de Padrões de Uso e Ocupação do Solo. Dissertação de doutoramento em Geografia – Ciências da Informação Geográfica, Cap. 3, IGOT/UL.			
<b>Knowledge evaluation methods and their partial grades</b>			
Ordinary evaluation:			
2 practical assignments (1º – 30%, 2º – 30%);			
1 test – 40%.			
Assignments are in team of 2 elements.			
Special evaluation: 2 practical assignments (60%);			
1 test – 40%.			
Assignments are in team of 1 or 2 elements.			