NOVA Information Management School

NOVA IMS

Course	Geographic Information Systems
Coordinator:	Pedro Cabral
ECTS	6
Objectives:	The aim of this course is to provide students with theoretical and practical knowledge of Geographic Information Science (GISc). The theoretical concepts will be explored using a combination of lectures with discussion. The practical pcomponent will be taught using GIS desktop software for GIS (ESRI ArcGIS) and GIS tools available in the Cloud (ArcGIS Online, Story Maps).
Curricular Unit Contents:	Theoretical classes: 0. Introducing GIS analysis 1. Mapping where thing are 2. Mapping the most and least 3. Mapping density 4. Finding what's inside 5. Finding what's nearby 6. Mapping change 7. Measuring geographic distribution 8. Analyzing patterns 9. Identifying clusters 10. Publishing Data on the Web - ArcGIS OnlinePractical classes: These sessions correspond to exercises directly related to the content of the theoretical classes.
Teaching methods:	Lectures with debate. Practical classes for problem solving through exercises, project support.
Grading methods:	1st phase: Continuous evaluation • 2 tests during the semester (45%) • Final GIS project (40.5%)

	• Tutorial solving (12%) • Virtual Campus ESRI (2.5%) 2ª phase: Non-continuous evaluation • 2nd phase exame (100%)
Bibliography:	• Mitchell, 2001, “The ESRI Guide to GIS Analysis, Volume 1: Geographic Patterns and Relationships,” Environmental Systems Research Institute, Inc., Redland California, 190 p. ISBN: 9781879102064 • Mitchell, 2005, “The ESRI Guide to GIS Analysis: Volume 2: Spatial Measurements & Statistics,” Environmental Systems Research Institute, Inc., Redland California, 252 p. ISBN: 9781589481169 • Allen, 2013, &quotGIS Tutorial 2: Spatial Analysis Workbook Edition 3" (arcgis10.1) ESRI Press, Redlands California, 408 p. ISBN: 9781589483378ESRI • Virtual Campus course, Turning Data into Information by Paul Longley, Michael Goodchild, David Maguire, and David Rhind