



**Nome da disciplina: Geomatics**

**Coordenador(es): M<sup>a</sup> da Graça Abrantes (em 2007/08, posteriormente Manuel Campagnolo e Rui Marçal em regime de rotatividade)**

**Outros docentes: Pedro Arsénio**

**Precedências requeridas: 36 ECTS em qualquer área**

**Semestre pretendido (no caso da disciplina não ter semestre atribuído): 1º ciclo 4º sem**

**Número e tipo de horas lectivas semanais: 2x1h teórica + 2x2h práticas**

<b>Program</b>	<b>Hours per week (14 weeks)</b>
<b>Geographic Information Systems</b> Data structures: raster and vector Map creation Spatial operations Introduction to spatial analysis Data editing.	9h theory + 18h lab
<b>Data collection and Cartography</b> Spatial referencing systems. Conversion between coordinate systems. Basic notions of cartography (scale and projections). Topographic maps and digital terrain models (DTMs – raster, vectorial, and TIN). Operations over topographic maps and DTMs: calculation of slopes, aspect, viewshed, areas and volumes. Basic notions of photo interpretation. GPS data collection and storing.	9h theory + 18h lab
<b>Remote Sensing</b> Basic principles. Remote sensing platforms and sensors. Pre-processing of remotely-sensed data. Introduction to image classification. Image transforms and vegetation indexes.	9h theory + 18h lab