

Academic Year: 2019/2020		
Course: WebGIS		
Coordinator: Nelson Mileu		
Teaching Staff: Nelson Mileu		
ECTS: 6	Weekly Hours: 3,0 h	Typology: Theoretical and Practical
Contents		
1. Basic concepts of WebGIS 1.1 Suitability of Operating Systems 1.2 Definitions and Web concepts (1.2.1 TCP/IP and HTTP Protocols; Web 2.0) 1.3 Application Types (Mapping mashups; Server Side vs. Client side) 1.4 Standards and OGC Services 2. The role of the Web server 3. The map server 3.1 Concepts and architecture 3.2 Server Administration maps 3.3 Management of geographic information 3.4 Publication of data through web services 4. Client tools 4.1 Visualization, composition and publication of maps 4.2 Geographic data edition on published maps 4.3 Customizing WebGIS applications (HTML, CSS, JavaScript, etc.) 5. Caching mechanisms Introduction, Strategies, Accelerating the map display		
Objectives and skills		
Objectives: - knowing the structure of the web server and its basic configuration; - use key features of a map server; set the symbology of themes; - use of HTML, CSS and Javascript for a customizable interface; - optimize the view of geographic information on the Internet. Skills: - set up a web server and a map server; - import and set up geographical information on the map server; - manage connections to different data formats on the map server and themes symbology; - publish geographic information through a client tool; - manage the geographic information optimization mechanisms display on the Internet.		
References		
Faria, N. (2006) - Suporte à edição cooperativa de Informação Geográfica em ambiente Web, Dissert. Mestrado em Informática, Depart. Informát., Escola de Engenharia, Univ. Minho, Braga. Henderson, C. (2014) - Mastering GeoServer, Packt Publishing. Iacovella, S. e Youngblood, B. (2013) - Geoserver Beginner's Guide. Packt Publishing. Kropla, B. (2005) - Beginning MapServer: Open Source GIS Development, APRESS. Pereira, A. e Poupá, C. (2005) - "Linguagens Web". Edições Sílabo, 2.ª Edição, Lisboa. Schütze, E. (2007) - Current state of technology and potential of Smart Map Browsing in web browsers. Dissert. Mestrado, Bremen University of Applied Sciences, Osnabrück. Zhong-Ren Peng, Ming-Hsiang Tsou (2003) – "Internet GIS: Distributed Geographic Information Services for the Internet and Wireless Network", John Wiley & Sons, New Jersey.		
Knowledge evaluation methods and their partial grades		
1 individual test (50%); 1 practical individual work (50%)		