Universitat de les Illes Balears

Teaching guide

Subject identification

Subject	11461 - Geographical Information Systems for Tourism Management
Credits	0.72 de presencials (18 hours) 2.28 de no presencials (57 hours) 3 de totals (75 hours).
Group	Group 2, 1S (Campus Extens)
Teaching period	First semester
Teaching language	English

Professors

Lecturers	Horari d'atenció als alumnes					
	Starting time	Finishing time	Day	Start date	Finish date	Office
Ivan Murray Mas ivan.murray@uib.cat	10:00	12:00	Thursday	01/09/2015	30/06/2016	45. Edifici Beatriu Pinós

Contextualisation

Geographic Information Systems (GIS) are capable to integrate cartographic information with thematic data, providing a wide range of application possibilities for tourism management. GIS are able to acquire, manipulate, analyze, manage, visualize and cartography all kind of information based upon its spatial location and relationships. Nowadays, GIS represent an easily usable technology with great potentialities for Tourism and Geo-Marketing research.

This course is an introduction to GIS and the use of some of its most relevant capabilities applied in the field of Tourism research, including the creation of socio-economic cartography, market areas analysis and 3-D representation of cadastral information. Geographic Information Systems for Tourism Management is an instrumental course aimed to provide the students a useful selection of tools to resolve geographical problems concerning Tourism management and analysis.

Requirements

Essential requirements

Students must have user-level computer handling.

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Recommendable

Students with previous experience with some GIS software and knowledge about cartography will carry out the tasks easily.

Skills

Specific

* METME CE8 - To know and understand the diverse impact that different tourism development alternatives can have on social wellbeing (environment, health, equality of opportunities, etc.)..
* METME CE10 - To develop skills that facilitate integration into labour markets related to the tourism industry and, especially, to the companies and institutions that monitor and evaluate projects and programmes in the tourism environment..
* MDPL CE1 - Learn how to deal with techniques of data collection and analysis and their application in the tourism sector..
* MDPL CE16 - Learn how to deal with the different information and communication technologies associated with geographical information systems for tourism analysis and planning..
* MDPL CE19 - Command analytical and observational strategies developed from the usual methods of geographical research based on field trips, laboratory (scientific and computational), and concreteness in office work companies and tourism organizations..

Generic

* METME CG1 - To know the new tendencies emerging in the tourism system and the challenges faced by it, at the same time deepening the knowledge of advanced economic analysis, and making possible the development of an innovative vision to provide ideas and solutions..
* METME CG4 - To be able to interpret and evaluate critically the results obtained regarding the sustainability and competitiveness of the tourism system..
* METME CG8 - To know how to apply information and communications technology (ICT) in the context of tourism projects..
* MDPL CG1 - Know how to find, process and analyze information concerning the tourism sector from different sources..
* MDPL CG4 - Know the fundamentals and apply methodologies suitable for the analysis of the tourism sector..

Transversal

* MDPL CT3 - Oral and written communication in English..
* MDPL CT4 - Information management skills..
* MDPL CT6 - Being able to take decisions and solve problems..

Basic

* You may consult the basic competencies students will have to achieve by the end of the Master's degree at the following address: http://estudis.uib.cat/master/comp_basiques/

Content

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Theme content

1. Introduction to Geographic Information Systems
    - 1.1. GIS definition, components and functions.
    - 1.2. GIS data models: vectorial and raster.

2. Geographical Information acquisition
    - 2.1. Geographical Information definition and components.
    - 2.2. CARTOSSIGT server.
    - 2.3. Accessing public institutions data.
    - 2.4. WMS.

3. Thematic mapping of socio-economic variables
    - 3.1. Population, population density and income maps.
    - 3.2. Land cover and land cover changes.

4. Network Analysis applied to tourism management
    - 4.1. Optimal routes calculation.
    - 4.2. Market Service Areas analysis.

5. Advanced visualization of geographical data
    - 5.2. 3-D representation of cadastral information.
    - 5.1. 3-D scenes recording.

Teaching methodology

In-class work activities

Modality	Name	Typ. Grp.	Description	Hours
Theory classes	Lectures	Large group (G)	The teacher will develop orally each part in order to set the conceptual and procedural basis for the understanding of the course.	8
Seminars and workshops	Workshop	Medium group (M)	Students must solve spatial problems using the methodology proposed by the teacher.	2
Practical classes	Spatial problems and GIS	Large group (G)	Students must consolidate the learning by completing a collection of exercises proposed by the teacher, who will previously demonstrate how to solve it and help the students during the process.	4
Assessment	Evaluation	Large group (G)	Teacher and students make a participatory review of the exercices.	4

At the beginning of the semester a schedule of the subject will be made available to students through the UIBdigital platform. The schedule shall at least include the dates when the continuing assessment tests will be conducted and the hand-in dates for the assignments. In addition, the lecturer shall inform students as to

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whether the subject work plan will be carried out through the schedule or through another way included in the Campus Extens platform.

Distance education work activities

Modality	Name	Description	Hours
Group or individual self-study	Practical classes dossier	Students must produce a dossier containing the collection of exercises developed during practical classes.	57

Specific risks and protective measures

The learning activities of this course do not entail specific health or safety risks for the students and therefore no special protective measures are needed.

Student learning assessment

Workshop

Modality	Seminars and workshops
Technique	Papers and projects **(retrievable)**
Description	Students must solve spatial problems using the methodology proposed by the teacher.
Assessment criteria	

Final grade percentage: 15% with minimum grade 4.5

Spatial problems and GIS

Modality	Practical classes
Technique	Attitude scales **(retrievable)**
Description	Students must consolidate the learning by completing a collection of exercises proposed by the teacher, who will previously demonstrate how to solve it and help the students during the process.
Assessment criteria	

Final grade percentage: 10% with minimum grade 4.5

Evaluation

Modality	Assessment
Technique	Oral tests **(retrievable)**
Description	Teacher and students make a participatory review of the exercices.
Assessment criteria	

Final grade percentage: 25% with minimum grade 4.5

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Practical classes dossier

Modality	Group or individual self-study
Technique	Student internship dissertation **(retrievable)**
Description	Students must produce a dossier containing the collection of exercises developed during practical classes.
Assessment criteria	

Final grade percentage: 50% with minimum grade 4.5

Resources, bibliography and additional documentation

Basic bibliography

Jiménez, A. M. (2006). Sistemas y análisis de la información geográfica: Manual de autoaprendizaje con ARC Gis.Cuadernos Geográficos,39(2), 231-233.

Konecny, G. (2014).Geoinformation: remote sensing, photogrammetry and geographic information systems. CRC Press.

Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2001). Geographic information system and Science.England: John Wiley & Sons, Ltd.

Peuquet, D. J., & Marble, D. F. (Eds.). (2003).Introductory readings in geographic information systems. CRC Press.

Puebla, J. G., & Gould, M. (1994).SIG: Sistemas de información geográfica. Síntesis.

Wong, W. S. D., & Lee, J. (2005).Statistical analysis of geographic information with ArcView GIS and ArcGIS(pp. xiii-446). Wiley.

Complementary bibliography

Bahaire, T. & Elliott-White, M. (1999). The Application of Geographical Information Systems (GIS) in Sustainable Tourism Planning: A Review
Journal of Sustainable Tourism, 7, 159-174.

Boers, B. & Cottrell, S. (2007). Sustainable Tourism Infrastructure Planning: A GIS-Supported Approach. Tourism Geographies, 9, 1-21.

Chu, T. H., Lin, M. L., Chang, C. H., & Chen, C. W. (2011). Developing a tour guiding information system for tourism service using mobile GIS and GPS techniques.Advances in Information Sciences and Service Sciences,3(6), 49-58.

Dye, A. S. & Shaw, S.-L. (2007). A GIS-based spatial decision support system for tourists of Great Smoky Mountains National Park Journal of Retailing and Consumer Services, 14, 269-278.

Farsari, Y., & Prastacos, P. (2004). GIS applications in the planning and management of tourism.A companion to tourism, 596-607.

Jovanović, V., & Njeguš, A. (2013). The application of GIS and its components in tourism.Yugoslav Journal of Operations Research ISSN: 0354-0243 EISSN: 2334-6043,18(2).

Lau, G., & McKercher, B. (2006). Understanding tourist movement patterns in a destination: A GIS approach.Tourism and Hospitality Research,7(1), 39-49.

Pérez, O. M.; Telfer, T. C. & Ross, L. G.(2003). Use of GIS-Based Models for Integrating and Developing Marine Fish Cages within the Tourism Industry in Tenerife (Canary Islands) Coastal Management, 31, 355-366

van der Knaap, W. G. (1999). Research report: GIS-oriented analysis of tourist time-space patterns to support sustainable tourism development. Tourism Geographies, 1999, 1, 56-69

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