



Academic year	2018-19
Subject	11461 - Geographical Information Systems for Tourism Management
Group	Group 2

## Syllabus

### Subject

<b>Subject / Group</b>	11461 - Geographical Information Systems for Tourism Management / 2
<b>Degree</b>	Master's Degree in Economics of Tourism: Monitoring and Evaluation Master's Degree in Tourism Management and Planning
<b>Credits</b>	3
<b>Period</b>	First semester
<b>Language of instruction</b>	English

### Professors

Lecturers	Office hours for students					
	Starting time	Finishing time	Day	Start date	End date	Office / Building
Mauricio Ruiz Pérez <a href="mailto:maurici.ruiz@uib.es">maurici.ruiz@uib.es</a>	You need to book a date with the professor in order to attend a tutoring session.					

### Context

Geographic Information Systems (GIS) are capable to integrate cartographic information with thematic data, providing a wide range of application possibilities for tourism planning and 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 research.

This course is an introduction to GIS and the use of some of its most relevant capabilities applied to the field of Tourism research, including the creation of socio-economic cartography and spatial analysis. 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 analysis, planning and management.

### Requirements

#### Essential

Students must have user-level computer handling.

#### Recommended

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

### Skills



## Syllabus

### Specific

- \* CE8 - To know and understand the diverse impact that different tourism development alternatives can have on social wellbeing (environment, health, equality of opportunities, etc.). .
- \* 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. .

### Generic

- \* 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. .
- \* CG4 - To be able to interpret and evaluate critically the results obtained regarding the sustainability and competitiveness of the tourism system. .
- \* CG8 - To know how to apply information and communications technology (ICT) in the context of tourism projects. .

### 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/](http://estudis.uib.cat/master/comp_basiques/)

## Content

---

### Range of topics

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.
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.

## Teaching methodology

---

## Syllabus

### In-class work activities (0.72 credits, 18 hours)

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.	10
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 them and help the students during the process.	4
Assessment	Assessment	Large group (G)	Teacher and students make a participatory review of the exercises	2

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

### Distance education tasks (2.28 credits, 57 hours)

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

### Frau en elements d'avaluació

In accordance with article 33 of Academic regulations, "regardless of the disciplinary procedure that may be followed against the offending student, the demonstrably fraudulent performance of any of the evaluation elements included in the teaching guides of the subjects will lead, at the discretion of the teacher, a undervaluation in the qualification that may involve the qualification of "suspense 0" in the annual evaluation of the subject".

## Syllabus

---

### Workshop

Modality	Seminars and workshops
Technique	Papers and projects ( <b>retrievable</b> )
Description	Students must solve spatial problems using the methodology proposed by the teacher.
Assessment criteria	
Final grade percentage:	15%with a minimum grade of 4.5

---

### Spatial problems and GIS

Modality	Practical classes
Technique	Attitude scales ( <b>non-retrievable</b> )
Description	Students must consolidate the learning by completing a collection of exercises proposed by the teacher, who will previously demonstrate how to solve them and help the students during the process.
Assessment criteria	
Final grade percentage:	10%with a minimum grade of 4.5

---

### Assessment

Modality	Assessment
Technique	Oral tests ( <b>retrievable</b> )
Description	Teacher and students make a participatory review of the exercises
Assessment criteria	
Final grade percentage:	25%with a minimum grade of 4.5

---

### Practical classes dossier

Modality	Group or individual self-study
Technique	Student internship dissertation ( <b>retrievable</b> )
Description	Students must produce a dossier containing the collection of exercises developed during practical classes.
Assessment criteria	
Final grade percentage:	50%with a minimum grade of 4.5

---

## Resources, bibliography and additional documentation

---

### Basic bibliography

- Brewer, C.A. (2005). Designing better maps. A guide for GIS users. Esri Press, New York.
- Dent, B. (1999). Cartography. Thematic Map Design. Wm.C.Brown Publishers. London.
- 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.
- Mitchell, A. (2001) The ESRI Guide to GIS Analysis Volume 1: Geographic Patterns & Relationships. Esri Press, New York.
- Mitchell, A. (2005) The ESRI Guide to GIS Analysis Volume 2: Spatial Measurements and Statistics. Esri Press, New York.



## Syllabus

- Mitchell, A. (2012) *The ESRI Guide to GIS Analysis Volume 3: Modeling Suitability, Movement, and Interaction*. Esri Press, New York.
- Schmidts, M. (2013). *Esri ArcGIS Desktop Associate Certification Study Guide*. ESRI Press, New York.
- 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).
- Jiménez, A. M. (2006). Sistemas y análisis de la información geográfica: Manual de autoaprendizaje con ARC Gis. *Cuadernos Geográficos*, 39(2), 231-233.
- 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
- Singh, P. (2015). Role of geographical information systems in tourism decision making process: a review. *Inf Technol Tourism* (2015) 15:131–179. DOI 10.1007/s40558-015-0025-0
- 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
- Wei, W. (2012). Research on the Application of Geographic Information System in Tourism Management. *Procedia Environmental Sciences* 12, pp.1104 – 1109.