60424 - Basics of remote sensing

Información del Plan Docente

Academic Year 2018/19
Subject 60424 - Basics of remote sensing
Faculty / School 103 - Facultad de Filosofía y Letras
Degree 352 - Master's in Geographical Information Technology for Territorial Development: Geographical Informations Systems and Teledetection
ECTS 2.0
Year 1
Semester Annual
Subject Type Optional
Module ---

1. General information

1.1. Aims of the course

1.2. Context and importance of this course in the degree

1.3. Recommendations to take this course

2. Learning goals

2.1. Competences

2.2. Learning goals

2.3. Importance of learning goals

3. Assessment (1st and 2nd call)

3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The course has a predominantly theoretical and theoretical-practical orientation, thus teaching and learning activities are developed using the lecture approach. With the teacher's support, the analysis and practical discussion of satellite images is addressed, but without involving the use of specific software by the student. In this context it is of great significance both autonomous work (reading comprehension and study of the literature, visualization and interpretation of satellite images...) and a collaborative attitude in practice sessions, as well as the effectiveness of tutorials as a tool for autonomous learning.

4.2. Learning tasks
The course includes the following learning tasks:

- Lectures and practice sessions (16 hours): lecture (12 hours), interactive-practical activities (4 hours).
- Guided tasks to strengthen the critical learning of the competencies: 4 hours
- Study: 29 hours
- Assessment in the form of a written exam: 1 hour

4.3. Syllabus

The course will address the following topics:

1. General presentation (objectives, syllabus and agenda, assessment).
2. General literature and Internet resources in remote sensing.
3. Conceptual framework of remote sensing.
4. Physical principles of remote sensing.
5. Remote sensing systems, resolution of a sensor system.
7. Spectral signatures (introduction).

4.4. Course planning and calendar

This course (20 hours) is taught during the first month of the academic year, prior to the course "Introduction to geographic information technologies", where the use of dedicated software for remote sensing image processing is introduced.

For this course, the only assessment activity is a written exam, which takes places in the first exam period (February) of the three official periods.

4.5. Bibliography and recommended resources

| BB  | Campbell, James B. Introduction to remote sensing / James B. Campbell. 3rd ed |
| BB  | London [etc.] : Taylor & Francis, 2002 |
| BB  | Chuvieco Salinero, Emilio. Teledetección ambiental : la observación de la Tierra desde el espacio / Emilio Chuvieco. 1ª ed. act. Barcelona: Ariel, 2010 |
| BB  | Gibson, Paul. Introductory remote sensing, principles and concepts / Paul J. Gibson; with contributions to the text by Clare H. Power and Website development by John Keating. [London]: Routledge, 2000 |
| BB  | Lillesand, Thomas M. Remote sensing and image interpretation / Thomas M. |
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Girard, Michel C. Télédétection appliquée: zones tempérées et intertropicales / Michel C. Girard, Collete M. Giarard; préface de Gerard Brachet . Paris [etc.]: Manson, 1989