

25243 - Environmental remote sensing and GIS

Información del Plan Docente

Academic Year	2018/19
Subject	25243 - Environmental remote sensing and GIS
Faculty / School	201 - Escuela Politécnica Superior
Degree	277 - Degree in Environmental Sciences
ECTS	6.0
Year	
Semester	Four-month period
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 methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, practice sessions, directed work, tutorials and autonomous work and study.

4.2.Learning tasks

This course is organized as follows:

- **Lectures:** in these sessions, conceptual and methodological aspects of the program will be presented, alternating

25243 - Environmental remote sensing and GIS

the exhibition of PowerPoint presentations, with the access to web pages in which illustrative examples related to the topic in study appear. Extensive material will be available via Moodle. This offers a variety of resources including a repository of the lecture notes used in class as well as other forms of course-specific complementary materials which will have to be studied in the same way as recommended bibliography.

- **Practice sessions:** they will take place in the computer classroom. At the beginning of every session the necessary information will be facilitated to the student in order to carry out the tasks to be developed in the practice as well as additional information on how it has to be added to the portfolio in case the aforementioned practice has to be added to the portfolio.
- **Directed work:** The work will refer to an environmental problem for whose analysis and/or resolution the students will have to use some of the tools that the SIG and the remote sensing incorporate.
- **Tutorials:** They are implemented to help the students to carry out the assignments that they must solve individually and also as a help to solve doubts related with the theoretical and practical program of the course.

4.3.Syllabus

This course will address the following topics:

- Section 1. Introduction to spatial remote sensing.
- Section 2. Basic Physics of remote sensing
- Section 3. System of photo acquisition.
- Section 4. Tools for image analysis.

4.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Escuela Politécnica Superior de Huesca website (<http://eps.unizar.es/academico/horarios-ccaa>) and Moodle.

4.5.Bibliography and recommended resources

BB	Chuvieco Salinero, Emilio. Teledetección ambiental : la observación de la tierra desde el espacio / Emilio Chuvieco Salinero. - 1a ed. Barcelona : Ariel, 2002
BB	Sistemas y análisis de la información geográfica : manual de autoaprendizaje con ArcGIS / Coordinador Antonio Moreno Jiménez; autores Rosa Cañada Torrecillas ... [et al.] . Madrid : Ra-Ma, 2006
BC	Campbell, James B.. Introduction to remote sensing / James B. Campbell . 3rd ed London [etc.] : Taylor & Francis, 2002
BC	Chuvieco Salinero, Emilio. Fundamentos de teledetección espacial / Emilio Chuvieco . - 3a. ed. rev., reimp. corr. Madrid : Rialp, D.L. 2000
BC	Gibson, Paul J. Introductory remote sensing : digital image processing and applications / Paul J. Gibson and Clare H. Gibson. London : Routledge, 2000
BC	Gibson, Paul. Introductory remote sensing, principles and concepts / Paul J. Gibson ; with contributions to the text by H. Power and Website development by John Keating . [London] : Routledge, 2000
BC	Lillesand, Thomas M.. Remote sensing and image interpretation / Thomas M. Lillesand, Ralph W. Kiefer, Jonathan W. Chipman. 6th ed. Hoboken, NJ : John Wiley, cop. 2008

25243 - Environmental remote sensing and GIS

BC

Pinilla Ruiz, Carlos. Elementos de teledetección / Carlos P
Ruiz . Madrid : RA-MA, D.L. 1995

The updated recommended bibliography can be consulted in:
<http://psfunizar7.unizar.es/br13/egAsignaturas.php?id=2198>