Universidad Zaragoza

Year : 2019/20

60401 - Acquisiton and Organization of Geographic Information

Syllabus Information

Academic Year: 2019/20
Subject: 60401 - Acquisiton and Organization of Geographic Information
Faculty / School: 103 - Facultad de Filosofía y Letras
Degree: 352 - Master's in Geographic Information Science and Technology for Land Management: Geographic Information Systems and Remote Sensing
ECTS: 10.0
Year: 1
Semester: Annual
Subject Type: Compulsory
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 learning and teaching methodology developed in the course is aimed to promote the achievement of the learning objectives.

A wide range of teaching and learning activities is implemented, such as lectures, practice sessions, practical exercises, individual or group activities, guided tasks and study.

A high level of student participation will be required from all students throughout the course.

Extensive material will be available *via* the Moodle site of the course. It offers a variety of resources including a repository of the lecture notes used in class as well as other forms of course-specific materials.

4.2.Learning tasks

The course includes the following learning tasks:

Topic 2.1. The geographic information and its modelling through information technologies: principles and elements.

- Lectures: 7,5 hours
- Study - Guided tasks: 15 hours

Topic 2.2. Principles, instruments and methodologies for acquiring spatial information: topography and GPS.

- Lectures: 7,5 hours
- Field Work: 2,5 hours
- Guided tasks: 5 hours
- Study: 17 hours

Topic 2.3. Principles, instruments and methodologies: sensors/platforms.

- Lectures: 8 hours
- Practical activities: Interactive, individual or group activities: 2 hours
- Guided tasks: 5 hours

Topic 2.4. Principles, instruments and methodologies: field spectrometry.

- Lectures: 2.5 hours
- Practical activities: Interactive, individual or group activities: 7,5 hours
- Field Work: 2.5 hours
- Guided tasks: 5 hours
- Study : 8 hours
- Assessment: 50 minutes

Topic 2.5. Creation and management of geographic databases: basic database concepts, database design and implementation, SQL.

- Lectures: 20 hours
- Study - Guided tasks: 29 hours
- Assessment: 1 hour

Topic 2.6. Creation and management of geographic databases: edition in ArcMap, access to shared databases.

- Practical activities: Interactive, individual or group activities: 15 hours
- Study - Guided tasks: 22.5 hours

Topic 2.7. Creation and management of geographic databases: georeferencing satellite images.

- Lectures: 5 hours
- Practical activities: Interactive, individual or group activities: 5 hours
- Study - Guided tasks: 3 hours
- Assessment: 50 minutes

Topic 2.8. Spatial data infrastructures (SDI): standards and metadata.

- Lectures: 10 hours
- Practical activities: Interactive, individual or group activities: 5 hours
- Field Work: 5 hours
- Study - Guided tasks: 22 hours
- Assessment: 50 minutes

4.3.Syllabus

The course will address the following topics:

Topic 2.1. The geographic information and its modelling through information technologies: principles and elements.

Topic 2.2. Principles, instruments and methodologies for acquiring spatial information: topography and GPS.

Topic 2.3. Principles, instruments and methodologies: sensors/platforms.

Topic 2.4. Principles, instruments and methodologies: field spectrometry.

Topic 2.5. Creation and management of geographic databases: basic database concepts, database design and implementation, SQL.

Topic 2.6. Creation and management of geographic databases: edition in ArcMap, access to shared databases, ArcPAD.

Topic 2.7. Creation and management of geographic databases: georeferencing satellite images.

Topic 2.8. Spatial data infrastructures (SDI): standards and metadata.

4.4.Course planning and calendar

Sessions will be developed during the first months of the semester, before the Christmas holiday period. Written assessment and assignments will be conducted in the first of the three assessment periods (February). Students will also have the June and September exam periods to re-sit exams when needed.

For further details concernig the timetable, classroom and other information of the course please refer to the*?Facultad de Filosofía y Letras?* website (https://fyl.unizar.es/horario-de-clases#overlay-context=horario-de-clases)

4.5.Bibliography and recommended resources

http://psfunizar7.unizar.es/br13/eBuscar.php?tipo=a