



## Course guide

### 310750 - 310750 - Gis and Territory

Last modified: 17/10/2023

**Unit in charge:** Barcelona School of Building Construction  
**Teaching unit:** 751 - DECA - Department of Civil and Environmental Engineering.

**Degree:** BACHELOR'S DEGREE IN ARCHITECTURAL TECHNOLOGY AND BUILDING CONSTRUCTION (Syllabus 2019).  
(Optional subject).

**Academic year:** 2023    **ECTS Credits:** 3.0    **Languages:** Spanish

#### LECTURER

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**Coordinating lecturer:** Mercedes Sanz Conde

**Others:**

#### PRIOR SKILLS

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Solid knowledge of computer tools.

#### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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**Transversal:**

04 COE N3. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.

06 URI N3. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.

#### TEACHING METHODOLOGY

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Master classes.  
Laboratory practice.  
Team practice.  
Autonomous work.

#### LEARNING OBJECTIVES OF THE SUBJECT

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Geographic Information Systems are tools that allow the capture, analysis and representation of geo-referenced information for decision-making. The objectives pursued in this introductory course, are to achieve the use of these tools and their relationship with the BIM.

#### STUDY LOAD

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Type	Hours	Percentage
Self study	45,0	60.00
Hours large group	30,0	40.00

**Total learning time:** 75 h



## CONTENTS

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### Theme 1. Introduction to Cadastre.

**Description:**

In this first theme of the subject, the origins and evolution of the cadastre and the management of cadastral data will be studied.

**Specific objectives:**

Acquire basic knowledge of cadastral management and documentation.

**Full-or-part-time:** 10h

Theory classes: 6h

Self study : 4h

### Theme 2. Introduction to GIS.

**Description:**

Basic concepts of GIS.

**Full-or-part-time:** 3h

Theory classes: 2h

Self study : 1h

### Theme 3. ArcGIS PRO.

**Description:**

The student will learn to work with GIS software.

**Related activities:**

Activity 1 and 2.

**Full-or-part-time:** 31h

Theory classes: 5h

Laboratory classes: 6h

Self study : 20h

### Theme 4. Data analysis and representation.

**Description:**

Tools for analyzing and representing vector data with a GIS.

**Related activities:**

Activity 3 and 4.

**Full-or-part-time:** 31h

Theory classes: 5h

Laboratory classes: 6h

Self study : 20h

## GRADING SYSTEM

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Week 4 : first test 15%

Partial week: second test 15%

Delivery of the four activities 60%

Delivery of class exercises 10%



## EXAMINATION RULES.

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All tests are mandatory.

## BIBLIOGRAPHY

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### Basic:

- ESRI. Tutoriales online ArcGIS PRO [on line]. Available on: <https://pro.arcgis.com/es/pro-app/get-started/pro-quickstart-tutorials.htm>.
- Moreno Jiménez, Antonio [et al.]. Sistemas y análisis de la información geográfica : manual de autoaprendizaje con ArcGIS. 2ª ed . Madrid: RA-MA, 2007. ISBN 9788478978380.
- Victor Olaya. Sistemas de Información Geográfica [on line]. Available on: <https://volaya.github.io/libro-sig/>.

## RESOURCES

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### Computer material:

- ArcGIS PRO. Resource

### Other resources:

QGIS