

SUBJECT TEACHING GUIDE

5209 - Workshop on Geographical Information Systems

Degree in Geography and Land Planning

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Degree in Geography and Land Planning			Type and Year	Optional. Year 4
Faculty	Faculty of Humanities				
Discipline	General Training in Land Use Planning Subject Area: Land Planning				
Course unit title and code	5209 - Workshop on Geographical Information Systems				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. GEOGRAFIA, URBANISMO Y ORDENACION DEL TERRITORIO				
Name of lecturer	OLGA DE COS GUERRA				
E-mail	olga.decos@unican.es				
Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 2. DESPACHO PROFESORES (2008)				
Other lecturers	VIRGINIA CARRACEDO MARTIN RUBEN CORDERA PIÑERA				

3.1 LEARNING OUTCOMES
- Students will be able to use software GIS to capture and to process geographic information.
- Students will be able to demonstrate their knowledge about theoretical and methodological concepts to design a GIS project.
- Students will develop and implement GIS projects, using different software.
- Students will demonstrate their skills in interoperability, using Geographic Information Technologies.

4. OBJECTIVES	
To facilitate students the acquisition of theoretical and methodological concepts to design GIS projects.	
To introduce students in the work in every phase of a GIS project.	
To show students the guidelines of organization and writing GIS projects dossiers.	
To facilitate students the use of different sources and resources to access to digital data.	
To guide students in the exploration of GIS software towards interoperability goal.	

6. SUBJECT PROGRAM	
CONTENTS	
1	CONCEPTUAL BASES AND METHODOLOGICAL GUIDELINES TO DESIGN PROJECTS GIS
2	CONCEPTUAL DESIGN AND METHODOLOGICAL APPROACH OF A GIS PROJECT
3	DATA ENTRY (I): IMPORTING DIGITAL DATA
4	DATA ENTRY (II): EDITING SPATIAL DATA
5	IMPLEMENTATION PHASE IN A GIS PROJECT
6	SPATIAL AND THEMATIC QUERIES, USING A GIS PROJECT
7	EDITING THEMATIC CARTOGRAPHY AND REPORTING WITH A GIS PROJECT
8	FINAL PRESENTATIONS OF GIS PROJECTS

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Continuous activities assessment. Students have to solve practical exercises not only in the computer lab classes, but also non-classroom work.	Others	No	Yes	25,00
Practical work to design and develop a GIS Project.	Work	No	Yes	60,00
A multiple choice test about concepts and methods.	Activity evaluation with Virtual Media	No	Yes	15,00
TOTAL				100,00
Observations				
It is necessary to get a minimum mark of 4 points in the group work to calculate the final weighted average in the subject. Students have to respect the dates established to present their activities. Teachers will not accept sends after date.				
Observations for part-time students				
Part-time students will be attended according to the internal regulations of the UC.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

MAGUIRE, D.; KOUYOUJIAN, V. & SMITH, R. (2008): The Business Benefits of GIS: An ROI Approach. Redlands (California): ESRI Press.

OLAYA, V. (2020): Sistemas de Información Geográfica. Un libro libre de Víctor Olaya. Disponible en formato Pdf en <https://volaya.github.io/libro-sig/>

PÉREZ, A. –Coordinador- (2011): Introducción a los Sistemas de Información Geográfica y geotelemática. Editorial UOC, Barcelona.

PETERS, D. (2008): Building a GIS. System Architecture Design Strategies for Managers. Redlands (California): ESRI Press.

TOMLINSON, R. (2007): Pensando en el SIG: Planificación del Sistema de Información Geográfica dirigida a gerentes. Redlands (California): Esri Press.