

COURSE SYLLABUS

1. COURSE DESCRIPTION

Degree:	GEOGRAPHY AND HISTORY
Double Degree:	
Course:	GEOGRAPHIC INFORMATION SCIENCES
Module:	GEOGRAPHY
Department:	Geography, History and Philosophy
Term:	1
Total Credits:	6
Year:	3
Type of Course:	Compulsory
Course Language:	English

Teaching model:	C1	
a. General/background:		50%
b. Theory-into-practice/developmental knowledge-building		50%
c. Guided Academic Activities:		

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2. COURSE COORDINATOR

Course Coordinator	
Name:	Dr. Fatima Navas
Faculty:	Humanities
Department:	Geography, History and Philosophy
Academic Area:	Physical Geography
Category:	Senior Lecturer
Office hours:	Wednesday & Thursday 12:00 14:00
Office No.:	Building 2, Second Floor, Office 18
E-mail:	fnavas@upo.es
Tel.:	954977859



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3. ACADEMIC CONTEXT

3.1. Course Description and Objectives

The field of geographic information science (GI-Science) explores the theory and concepts underpinning geospatial technologies, this is, all disciplines that can generate, process, represent and share geographic information. The development of the GI-Science is transforming and enriching some of the techniques and tools of traditional research and innovation in the field of geography and opening up new job opportunities.

This course focuses on the multi-disciplinary science concerned with the development and application of geographical information technologies. In this course, the students will be introduced to these disciplines, among which are Remote Sensing, Global Positioning Systems, Geographic Information Systems and Spatial Data Infrastructures. Knowledge of these sciences, therefore, is of fundamental importance in regard to the basic concepts of geography, the practical results of geographical research, and potential future professional activity of the students.

3.2. Contribution to the Training Plan

This course offers an introduction to the Geographical Information Sciences both from the theoretical and from the practical point of view, which prepare students for better learning of the use of the resources used throughout their education and throughout their professional life.

3.3. Recommendations or Prerequisites

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4. SKILLS

4.1 Degree Skills Developed during this Course

2. Develop the ability to analyze situations and complex media.
3. Scientific and rigorous data management.
5. Team work, respect for diversity and collaborative spirit.
7. Autonomous and creative thinking and working.
8. Information search and management in an autonomous and rigorous context.
9. Application of democratic and egalitarian work ethics.
11. Environmental and Social justice awareness.

4.2. Module Skills Developed during this Course

Specific skills - Discipline

26. Interrelate the physical and the social environmental and human.
29. Understand spatial relationships.

Specific skills - Professional

43. Knowledge of working methods in Geography.
44. Present with clarity findings of study in Geography.

Specific skills – Academic

58. Exercise study and training with a high sense of responsibility for one's own efforts and seeking the quality and rigor.
63. Generate awareness and interest in territorial, environmental and heritage issues. Develop self-criticism capacity to think and make judgments independently, increasing the critical capacity to understand and question the world and its problems and encourage reflection on values as well as a favorable attitude towards peace and towards dialogue among civilizations.

4.3. Course-specific Skills

45. Introduce the main research methods in Geography.
46. Use of Geographic information as a tool for territorial and spatial planning.
48. Relate and systematize cross geographic information for complex analyses.

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5. COURSE CONTENT (COURSE TOPICS)

1. - General Introduction to the Geographic Information Technologies and basic Geodesy.
2. - Introduction to geospatial information sources (photo interpretation, remote sensing, global positioning systems).
3. - Introduction to Geographic Information Systems (GIS) and other tools for spatial representation, spatial analysis and modeling in Geography.
4. - Introduction to the state of the art in GI-Science: Spatial Data Infrastructures (SDI).

6. METHODOLOGY AND RESOURCES

Lectures (face-to-face sessions) and Practical (both field and lab based) for direct field recognition, ground truthing and empirical measurements.

Use of virtual teaching platform for content access, bibliographic resources and communication.

7. ASSESSMENT

Continuous Assessment System through class attendance and participation or tests during the teaching period: 30%

Written exam of Theory and Practicals: 70%

In response to the provisions of Article 8.2.c of the “Normativa de Evaluación de los Estudiantes de Grado”, the student may resign voluntarily and expressly to the qualifications obtained during the course, to undergo a complete evaluation of the subject.

Important:

1. Under current legislation, plagiarism and misuse of information sources will be penalised with failing grade, without prejudice that administrative sanctions may be taken against offenders.

2. To pass the course students should express themselves orally and in writing with property, consistency and respecting the spelling rules.

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8. BIBLIOGRAPHY

- AGUILERA, M.J., et al.** (2003). *Fuentes, tratamiento y representación de la información geográfica*. Universidad Nacional de Educación a Distancia, Madrid, 421 p.
- ARCILA, M.** (2003). *Sistemas de información geográfica y medio ambiente: principios básicos*. Universidad de Cádiz, 129 p.
- CHUVIECO, E.** (1996). *Fundamentos de teledetección espacial*. Ed. Rialp, Madrid, 568 p.
- CHUVIECO, E.** (2002). *Teledetección Ambiental. La observación de la Tierra desde el Espacio*. Ed. Ariel Ciencia, Barcelona, 586 p.
- FERNÁNDEZ, F.** (2000). *Introducción a la fotointerpretación*. Ed. Ariel, Barcelona, 253 p.
- GOMEZ, B. y JONES, J. P.** (2010). *Research methods in geography: a critical Introduction*. Ed. Wiley-Blackwell, Oxford, 459 p.