

SUBJECT TEACHING GUIDE

5172 - Photo Interpretation and Remote Sensing

Degree in Geography and Land Planning

Academic year 2024-2025

| 1. IDENTIFYING DATA | | | | | |
|----------------------------------|---|------------------|--------------------|------------------|--------------------|
| Degree | Degree in Geography and Land Planning | | | Type and Year | Compulsory. Year 2 |
| Faculty | Faculty of Humanities | | | | |
| Discipline | Technical Fundamentals in Geography and Land Use Planning Technical Subjects in Geography | | | | |
| Course unit title and code | 5172 - Photo Interpretation and Remote Sensing | | | | |
| Number of ECTS credits allocated | 6 | Term | Semester based (2) | | |
| Web | https://personales.unican.es/rasillad/docencia/g174/Presentacion.html | | | | |
| Language of instruction | Spanish | English Friendly | No | Mode of delivery | Face-to-face |

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|------------------|---|--|--|--|--|
| Department | DPTO. GEOGRAFIA, URBANISMO Y ORDENACION DEL TERRITORIO | | | | |
| Name of lecturer | DOMINGO FERNANDO RASILLA ALVAREZ | | | | |
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| Other lecturers | | | | | |

3.1 LEARNING OUTCOMES

- Upon completion of the course, the student will be able to:
- Understand the physical principles underlying both Aerial Photography and Remote Sensing .
- Know the main applications in Geography of Aerial Photography and Remote Sensing .
- Understand the processes that are transforming the territory and its evolution over time.

4. OBJECTIVES

The primary objective of the course is the acquisition of basic knowledge about the physical and conceptual foundations of Aerial Photography and Remote Sensing and their practical applications in relation to the spatial organization of the territory and the resolution of environmental problems.

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As an additional objective, students will know the dynamics of the territory from the contrast of images from different periods or moments in time.

6. SUBJECT PROGRAM

CONTENTS

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|---|-----------------------------|
| 1 | 1. INTRODUCTION |
| 2 | TOPIC 1: AERIAL PHOTOGRAPHY |
| 3 | TOPIC 2: REMOTE SENSING. |

7. ASSESSMENT METHODS AND CRITERIA

| Description | Type | Final Eval. | Reassessn | % |
|--|-----------------------|-------------|-----------|---------------|
| Continuous Assessment | Others | Yes | Yes | 45,00 |
| Final Dissertation | Work | Yes | No | 20,00 |
| Evaluation of theoretical and practical knowledge. | Laboratory evaluation | Yes | Yes | 35,00 |
| TOTAL | | | | 100,00 |

Observations

Attendance is compulsory due to the practical nature of the module. A serie of laboratory exercises will be provided in the sessions, as such as the stereoscopes, specific analysis and image processing software. Only in the case of having a physical disability to perform some of the practical activities described, the evaluation of those parts will take place through the estimation of a similar work, adapted to their conditions if possible, and with the same weight in the final note than the one applied in general. Marks in hand-in practical will be considered as minimum resit mark for the extraordinary call.

Observations for part-time students

If part-time students miss a practical session for certificated reasons, the marking criteria for those activities will be held by an estimated alike work adapted to their conditions, and with the same weight in the final mark than the one applied in general.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

- FERNÁNDEZ GARCÍA, F. (2000) Introducción a la fotointerpretación. Barcelona: Ediciones Ariel. 253p.
- CAMPBELL, J.B., WYNNE, R.H. (2011) Introduction to the Remote Sensing. New York: Guilford Press, 5th ed, 667 p.
- CHUVIECO, E. (2000): Fundamentos de Teledetección espacial, Madrid, Rialp.
- KAMUSOKO, C (2019): Remote Sensing Image Classification in R. Springer Geography, Singapore, 189 pp.
- GARCÍA RODRÍGUEZ, M. P., SANZ DONAIRE, J. J., PÉREZ GONZÁLEZ, M. E. y NAVARRO MADRID, A. (2013): Guía Práctica de Teledetección y Fotointerpretación, Madrid, Universidad Complutense de Madrid, PIMCD 82/2011-12.
- RANI, A; KUMAR, N; SINGH SK. y SINHA NK (2021): Remote Sensing Data Analysis in R. ? CRC Press, 364 pp.

