

28304 - General cartography

Syllabus Information

Academic year: 2024/25

Subject: 28304 - General cartography

Faculty / School: 103 - Facultad de Filosofía y Letras

Degree: 419 - Degree in Geography and Land Management

ECTS: 6.0

Year: 1

Semester: First semester

Subject type: Compulsory

Module:

1. General information

Cartography allows us to know the territory and, at the same time, it is an essential tool to capture in a graphic form the results obtained in the analysis of many variables of a geographical and territorial nature. In this line the General Cartography course aims to answer the following questions:

- * what are the basic features and elements that characterize a good map?
- * what types of maps are there?
- * where can I get mapping information?
- * how are topographic maps made and what kind of information do they provide?
- * how can I locate and orient myself on a map and on the ground?

These approaches and objectives are aligned with the following Sustainable Development Goal: Goal 4: Education of quality.

2. Learning results

Demonstrate knowledge of the basic concepts of the cartographic process.

Identify and evaluate the main sources of cartographic information.

Be able to interpret and analyze the information collected in topographic mapping

Identify and correctly explain the fundamentals of topographic mapping, the type of problems encountered and the proposed solutions.

Be able to correctly use various techniques and instruments for measurement, location and spatial orientation on the map and in the field..

Demonstrate autonomy to produce cartography derived from the topographic map.

Identify and apply the fundamentals of photo interpretation.

3. Syllabus

Thematic Block I. Conceptual Framework of Cartography.

Unit 1. General concepts: introduction to the cartographic document.

Unit 2. The historical process of Cartography.

Thematic block II. Fundamentals of Geodesy.

Unit 3. Basic concepts of Geodesy.

Unit 4. The projections cartographic.

Thematic block III. Topographic Cartography.

Unit 5. The National Topographic Map.

Unit 6. Methods of representation of the relief.

Unit 7. Mapping servers (WMS): resources available in topographic mapping.

Thematic block IV. Spatial relationships.

Unit 8. The scale.

Unit 9. Calculation of distances and surfaces.

Thematic block V. Spatial referencing.

Unit 10. Determination of geographic and UTM coordinates.

Unit 11. Orientation.

Unit 12. Global Navigation Satellite Systems: fundamentals and applications in Geography.

Thematic block VI. Analysis of topographic variables.

Unit 13. Calculation and mapping of topographic variables: heights, relief energy, slopes, topographic profiles.

Unit 14. Digital Elevation Models: elaboration and exploitation of data.

4. Academic activities

The student is offered several face-to-face and non-face-to-face activities. The lectures participatory, problem solving and case studies (including numerical problem solving, commentary and elaboration of maps, etc.), problem posing. In these sessions the students will be given some assignments or exercises that they will have to solve as academically directed work or as part of the learning portfolio.

Field work will be used to learn some of the techniques related to spatial localization (compass and GPS), interpretation of maps and field plans, etc.

As for the non-face-to-face activities, they consist of reading and studying the material presented to the student, and the completion of the directed work and the learning portfolio.

5. Assessment system

First Call

Global evaluation test. It will consist of an objective written test that will include theoretical questions and practical questions. All the theoretical and practical contents of the course will be evaluated, including questions related to the directed work and the exercises carried out in the learning portfolio. 100% weighting.

Evaluation criteria: the accuracy in the response to the questions posed, their correct approach, appropriate wording and formal presentation.

Second call

Global assessment test

6. Sustainable Development Goals

4 - Quality Education