UAB
Universitat Autònoma de Barcelona

Master's Degree Dissertation

Code: 43856
ECTS Credits: 6

2024/2025

Degree	Type	Year
4315985 Geoinformation	OB	0

Contact

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Teachers

Albert Pelachs Mañosa

Teaching groups languages

You can view this information at the end of this document.

Prerequisites

The Master's Degree Dissertation has to be done necessarily in the second semester, once the rest of the modules of the specialty have been completed.

Objectives and Contextualisation

The goal of the Master's Degree Dissertation is to be able to carry out an actual applied project to be suggested by students or choosen from the list of practical cases proposed and coordinated by the professors responsible of each spacialty (one coordinator for specialty). The Master's Degree Dissertation must be presented as a scientific paper and has to be defended in the presence of a committee made up of three teachers from the Master programme. The student has to demonstrate to have achieved the skills of the Master programme and that he or she is able to integrate them.

Competences

- Analyze user needs and the formal and interface requirements to define and design end- user geospatial applications in corporate environments or those open to the public.
- Apply programming methodologies and procedures, and those for implementation of geospatial applications for different types of platforms (desktop, web, mobile), using different programming paradigms and environments.
- Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.

- Design and elaborate cartographic documents and, in general, geovisualization of geospatial data products, and implement the corresponding production and publication processes using analogue and digital media.
- Design and manage geospatial information application products or services.
- Design and manage geospatial information systems, integrating spatial and alphanumerical, relational and object-oriented data bases, in client-server distributed architectures, or those oriented to services.
- Design intelligent applications of geospatial information for managing cities and region (smart cities) and for managing their implementation.
- Develop and apply geospatial and alphanumeric information analysis methodologies to resolve urban or land management problems, generating useful information for the implementation of intelligent processes and for decision making.
- Develop imaginative, creative and innovative ideas in projects for geospatial information systems, services, products or applications.
- Direct and manage geospatial information systems, services, products and applications projects, from a strategic, technical, economic and human resources and materials angle.
- Integrate geospatial information technologies, services and applications with the aim of providing an optimal solution to each application case.
- Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.
- Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
- Use knowledge critically and understand and take on board the ethical responsibility, legislation and social implications of the use and diffusion of geospatial information and its derived products.

Learning Outcomes

1. Apply acquired knowledge and skills to real problem-solving in urban environments.
2. Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
3. Define technological solutions that help to develop end-user geospatial applications tailored to specific situations and requirements.
4. Design and implement databases tailored to the needs of a real case.
5. Develop cartographic visualisation products that respond to the specific needs of an organisation.
6. Develop imaginative, creative and innovative ideas in projects for geospatial information systems, services, products or applications.
7. Direct and manage geospatial information systems, services, products and applications projects, from a strategic, technical, economic and human resources and materials angle.
8. Establish the technical project for producing and distributing geospatial information products or services.
9. Integrate geospatial information technologies, services and applications with the aim of providing an optimal solution to each application case.
10. Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.
11. Programme ubiquitous and smart web or mobile applications for geospatial information that respond to the needs of an organisation.
12. Satisfy spatial-analysis needs in a specific application dominion.
13. Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
14. Use knowledge critically and understand and take on board the ethical responsibility, legislation and social implications of the use and diffusion of geospatial information and its derived products.

Content

Development and implementation of a methodological and technical solution for an actual specific need of an application, product or service with geospatial content proposed by an external organization (company, government or institution).

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Tutorials	8	0.32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Type: Supervised			
Results revision and quality control	8	0.32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Type: Autonomous			
Research and development	104	4.16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

The Master's Degree Dissertation is based mainly in the student autonomous work, which includes the practical work of development and implementations, bibliographical and documental search, and the writing of the formal report od the Dissertation as well as the material support for its oral presentation.

The monitoring and management of the entire process of preparation, delivery and evaluation of the Final Master

The activities that could not be done onsite will be adapted to an online format made available through the UAB's virtual tools. Exercises, projects and lectures will be carried out using virtual tools such as tutorials, videos, Teams sessions, etc. Lecturers will ensure that students are able to access these virtual tools, or will offer them feasible alternatives.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Oral presentation of the Master's Degree Dissertation	30	9	0.36	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Report of the Master's Degree Dissertation	70	21	0.84	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

In the event that assessment activities cannot be taken onsite, they will be adapted to an online format made available through the UAB's virtual tools (original weighting will be maintained). Homework, activities and class participation will be carried out through forums, wikis and/or discussion on Teams, etc. Lecturers will ensure that students are able to access these virtual tools, or will offer them feasible alternatives.

a) Evaluation procedure and activities:

Assesment of the Master's Degree Dissertation includes both the evaluation of the formal report of the Dissertation (70% of the total grading) and the evaluation of the oral presentation of the Dissertation (30% of the grading).

Assignment of Tutor February-March 2025 and preparation of the TFM during the second semester.

The evaluation rubric can be consulted through the tool https://tfe.uab.cat/tfe2/

b) Evaluation schedule through the TFE tool (https://tfe.uab.cat/tfe2/):

Notes of the initial meeting with Tutor: first week of practice.

Delivery of the drafting of the objectives and provisional index of the work: deadline 22 May 2025.

Delivery of the draft of the TFM: deadline 12 June 2025.

Report of the Master's Degree Dissertation: Making during the 2nd semester. Submission at the end of semester, on June 26th 2025.

Oral presentation of the Master's Degree Dissertation: Making during the 2nd semester. Oral presentation at the end of semester, on July 3th 2025.

c) Grade revision:

Once the grades obtained are published, students will have one week to apply for a grade revision by arranging an appointment with the corresponding teachers.

d) Procedure for reassessment:

The Master's Degree Dissertation can not be reassessed.

e) Conditions for a 'Not assessable' grade:

Students will receive the grade 'Notassessable' instead of 'Fail' if they had not submitted neither the Master's Degree Dissertation report nor done the oral presentation of the dissertation.

f) UAB regulations on plagiarism and other irregularities in the assessment process:

In the event of a student committing any irregularity that may lead to a significant variation in the grade awarded to an assessment activity, the student will be given a zero for this activity, regardless of any disciplinary process that may take place. In the event of several irregularities in assessment activities of the same subject, the student will be given a zero as the final grade for this subject..

Assessment acitivities with a zero grade because of irregularities can not be reassessed.

This subject/module does not incorporate single assessment. On carrying out each evaluation activity, lecturers will inform students of the procedures to be followed for reviewing all grades awarded, and the date on which such a review will take place.

Bibliography

Not aplicable.

Software

Programmer of the master's degree available in the computer room and in the companies that carry out the interr

Language list

Information on the teaching languages can be checked on the CONTENTS section of the guide.