

Program and subjects

The Master's degree in Remote Sensing and GIS consists of a total of 7 modules, which cover the 60 ECTS. From these 7 modules, 5 of them are formed by core subjects (M1, M2, M3, M4 and M7 a total of 51 credits), and M5 and M6 modules allow students to choose between two blocks of 9 credits to delve into aspects of GIS or Remote Sensing.

Core Subjects	Credits
M1: Geographic Information Science: Remote Sensing & GIS SIG Fundamental, Composition and printing of cartographic documents, Photogrammetry, Principles of cartography, Synoptic view of remote sensing, Platforms and sensors, Geodesy and positioning systems	15
M2: Remote sensing imagery processing Geometric correction of aerial and satellite images, Physical principles, Radiometric correction of images	6
M3: Spatial analysis Analysis in SIG, Digital terrain models, Interferometry	9
M4: Obtaining geographic information. Methods Statistical methods, Photointerpretation	6
M7: Final project	15

Elective subjects (students must take 9 credits)	Credits
M5: Advanced formation in GI Relational databases. SQL, Use cases in GIS implementations, Standard for distributed geoservices, Publishing cartography on the Internet	9
M6: Advanced formation in remote sensing RS & Meteorology, RS & Oceanography, RS & Geology, RS & Vegetation and land uses Techniques and examples	9

Academic administration:

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Official Master's Degree in Remote Sensing & GIS

From satellite images to publishing
cartography on the Internet

Universitat Autònoma
de Barcelona

edition
2018-19



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worldwide

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UAB
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Official Master's Degree in Remote Sensing & Geographic Information Systems

Specific training in techniques of observation of the Earth for the study of the territory and management of its resources

Nowadays, Remote Sensing and Geographic Information Systems (GIS) techniques are absolutely essential in order to **study the Earth and manage its resources**. They are considered among the most active worldwide in both the academic context and in the business in fields as diverse as:

- The instruments: satellites, drones, GPS systems.
- The geographic information: cartographic institutes, Bing and Google Maps, OpenStreetMap, etc.
- The data and metadata cataloging in spatial data infrastructures.

- The software, as the free availability of MiraMon and other software.

Consequently, there is a growing need for well-trained specialists in these disciplines. Specialists with an in-depth knowledge not only of the basic principles, but also of the latest developments in the field, such as the standardization initiatives promoted by the Open Geospatial Consortium (OGC).

The aim of the Master's degree in Remote Sensing and GIS, which has a **scientific and technical orientation**, is to provide sound **scientific training in techniques for observing the Earth** and for generating and analyzing information in order to be able **to study a given territory and manage its resources using GIS**.

General information

Modality	Classroom based
Credits	60 ECTS
Duration	1 year
Schedule	Classes: Monday to Thursday, from 5pm to 9pm Tutored practical lessons: Friday afternoon
Start	September 28, 2018
Languages	Spanish/Catalan. Read English (B1 or equivalent)
Fees	Admission fee: 30,21 € Registration fee EU students: 4.500 € (75€/credit) Registration fee Non-EU students: 5.700 € (95€/credit)
Pre-registration	From January to September through the UAB website: www.uab.cat
Certification	Allows access to doctoral studies
Coordination	Scientific coordinator: Dr. Xavier Pons Coordination assistant: Ms. Cristina Cea

Designed for

Graduates with honor's and general degrees who are interested in the principles and applications of Remote Sensing and GIS like:

- Geographers
- Biologists
- Environmental scientists
- Physicists
- Geologists
- Geodesists
- Engineers from different disciplines
- Topographers
- Statisticians
- Mathematicians

Professional opportunities

- As a Remote Sensing and GIS technician in private companies or in public administration, where the use of the GIS is extended and personal with advanced knowledge in geospatial data management is required.
- As a methods and applications in Remote Sensing and GIS researcher in universities and public or private centers.

Faculty

This Master's degree consists of a solid team of instructors who are professionally dedicated to Remote Sensing and GIS.

They are well-known internationally and come from the following institutions:

- Universitat Autònoma de Barcelona (UAB)
- Center for Ecological Research and Forestry Applications (CREAF)
- Universitat de Barcelona (UB)
- Universitat Politècnica de Catalunya (UPC)
- National Institute for Aerospace Technology (INTA)
- Spanish National Research Council (CSIC)
- County councils, etc.

Material

- Lessons take place in a CREAM classroom equipped with computers and the fastest Internet connection via the Scientific Ring. The classroom is also equipped with specialized software which is most commonly used in the academic and professional world (MiraMon, Envi, ArcGIS, Erdas-Hexagon).
- The enrolment fee includes a full license for MiraMon and 1 year campus license ArcGIS so that they can be installed on a personal computer.

Supported by

- GRUMETS
- MiraMon
- UAB Geography department

Best students' award: upon completion of the Master's degree, students with better marks will receive a prize of € 1500. A prize will be awarded for every five students.