



University Master's Programme in Environmental Change: Analysis and Management



Màsters universitaris
Másteres universitarios
University Master's Programmes

www.udg.edu/masters



Universitat de Girona

UdG

60 ECTS-credits

Analysis, diagnosis
and management
Mitigation of impacts
Adaptation

Environmental change

Present action,
future solutions



Professional opportunities 

Environmental specialist,
consultant and manager
Access to doctoral studies

**BUILD
YOUR FUTURE**





PROFESSIONAL MASTER

LEARN TO DO RESEARCH DOING RESEARCH

University Master's Programme in Environmental Change: Analysis and Management

The Master's in Environmental Change: Analysis and Management is intended for university graduates who wish to specialise as professional analysts and managers of environmental problems, in private industry or public institutions and organisations.

The programme focuses on training professionals and researchers and aims to broaden the scientific, methodological and technical knowledge they need to analyse, diagnose and manage environmental change. The curriculum of the master's programme is focused on achieving the following three objectives:

1. Acquiring basic knowledge to analyse, diagnose and manage global environmental change.
2. Acquiring basic knowledge to mitigate the impacts on society and the environment.
3. Develop the skills, abilities and knowledge of instruments needed to respond to the problems created by environmental change and to facilitate adaptation to it.

Likewise, the master's programme aims to provide training in different scientific approaches to the study of climate change, and to apply them to the management of specific environmental changes on local and regional scales. It also seeks to identify adaptation processes and instruments for sustainable management based on the evaluation of adaptive strategies.

Curriculum

Environmental change analysis and diagnosis module (compulsory: 30 credits)

Scientific basis of climate change (9 credits)

Environmental impacts (9 credits)

Impact of and adaptation to human activity, the region and the landscape (9 credits)

Integrated practical placements (3 credits)

Management instruments module (minimum 18 credits)

Students must complete at least 18 credits in this module, whose objective is the acquisition of skills and knowledge of instruments that can be used to respond to the problems developed in the environmental change analysis and diagnosis module. Each subject is worth 3 credits.

GIS basics

Study of the basic applications of geographic information systems.

GIS applications in environmental analysis

Spatial analysis techniques of raster and vector models.

Multivariable analysis of environmental data

Knowledge of multivariable statistical analysis emphasising its applications.





ANALYSIS, DIAGNOSIS AND MANAGEMENT

MITIGATION OF IMPACTS

ADAPTATION

Environmental management models

Basic modelling concepts: from conceptualisation to model calibration and validation.

Adaptation tools in urban and regional planning

Analysis of urban and regional planning regulations and tools.

Adaptation and mitigation: Geopolitical dimension and public regulation instruments

Identify the political and geopolitical dimensions of the main strategies and actions considered in approaches to mitigate and adapt to environmental change.

Tools for conservation biology

Assessment and prioritisation in conservation biology: criteria and conservation indices.

Fauna: adaptation and management

Morphological, physiological and behavioural adaptations of marine, terrestrial and continental water fauna to environmental changes.

Plant adaptations: management bases.

Plant strategies to cope with global change factors Changes in plant phenology and in plant communities.. Tools for its study and control and management options.

Energy management

Efficiency and diversification of energy sources as decisive energy management tools, which will play a critical role in the future of global evolution.

Environmental monitoring

Description of the tools and methods used to study the atmosphere and aquatic systems.

Emissions and air pollution

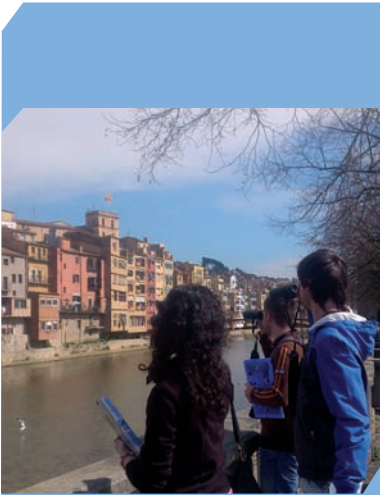
We study the different agents of physical contamination and its relation to global change. Also, the subject includes treatment of the regulations, doses, and health effects. There are included practices on measurement of different types of pollution, real cases are studied.

Final master's project module: 12 credits

The final master's project requires each student to complete a project, study or report that reflects and skills acquired in the master's programme. The research may be conducted in a private company, the public administration, or one of the UdG research groups participating in the Doctoral Programme in the Environment.

Teaching staff

The master's programme relies on lecturers from the Faculty of Arts, the Faculty of Science and the Polytechnic School who will contribute their experience as teachers and on the various research projects they carry out in the departments of Geography, Physics, Environmental Sciences, Biology, Mechanical Engineering



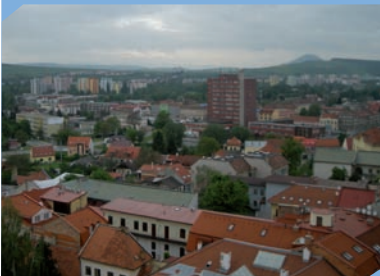


PRESENT ACTION, FUTURE SOLUTIONS

BUILD YOUR OWN FUTURE

ENVIRONMENTAL SPECIALIST,
CONSULTANT AND MANAGER

ACCESS TO DOCTORAL STUDIES



and Industrial Construction, and Computer Science, Applied Mathematics and Statistics.

For further information, see our website:
<http://www.udg.edu/mastercanviambiental>

Professional opportunities

- Researchers in universities, companies or other research centres.
- Specialists responsible for environmental issues in companies in different sectors and in the public administration.
- Environmental consultants.
- Directors of protected natural areas.
- Specialists responsible for carrying out and monitoring environmental audits and impact studies.
- Environmental professionals in the industrial sector or in environmental engineering firms.

Access to doctoral studies

Successful completion of the master's allows students to enter the research period of a doctoral programme of the University of Girona. The Master's in Environmental Change: Analysis and Management is part of the **Doctoral Programme in the Environment**.

Academic staff person in charge:
Dra. Margarida Castañer
mita.castaner@udg.edu

Find out what's new and about registration procedures on our website:

<http://www.udg.edu/mastercanviambiental>

INSTITUTE OF THE ENVIRONMENT
Campus Montilivi
Aulari Comú, floor -1
17071 Girona
Tel. 972 419 848
Fax. 972 419 849
twitter.com/MediAmbientUdG

Registration information:
UTM - Unitat Tècnica de Màsters
Edifici CIAE
C/ Maria Aurèlia Capmany, 38
Campus de Montilivi
17071 Girona
Tel. +34 972 418 843
Fax +34 972 419 844
masters@udg.edu