SCIENCE AND MANAGEMENT OF GLOBAL CHANGE

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This specialization offers a deep scientific insight into the interrelated global environmental crises of climate change, biodiversity loss and pollution. It provides students with tools to address the socio-ecological impacts of global change and develop solutions that foster socio-environmental transformation and innovation. Students will learn to analyze the interactions between social and ecological systems on a planetary scale and to develop evidence-based solutions for adaptation and mitigation of global change. It offers an interdisciplinary view of the complex causes and far-reaching consequences, as well as the different social and policy responses implemented to address the triple planetary crisis. The specialization provides cutting-edge theoretical approaches and methodological tools to examine the dynamic interactions between humans and Earth systems and build integrative knowledge for a sustainable future. Global Change is understood as changes on a global scale resulting from the interaction of natural systems (atmosphere, biosphere, cryosphere, geosphere, hydrosphere) with human societies. Their study includes the analysis of processes such as climate change, the loss of biological and cultural diversity or the transformation of the territory. Understanding these biological, physical, chemical and social processes and their feedback are current challenges due to their complexity and the need to find solutions to the negative impacts.

In addition to the three compulsory subjects on "*Interdisciplinary Concepts on Environmental, Economic and Social Sustainability"* ("*Theory and Practice of Interdisciplinarity*" -3 ECTS-, "*Interdisciplinary Project*" -9 ECTS- and "*Scientific Communication and Dissemination*" -3 ECTS-) and the *"Master's Final Project*" (10 ECTS), this specialization has two compulsory subjects: "*Global Change*" (9 ECTS) and *"Analysis and Management of Natural Spaces"* (6 ECTS). While "*Global Change*" is a general introduction to the global impacts of human activities on different types of ecosystems (terrestrial and marine) both at spatial and temporal scales, "*Analysis and Management of Natural Spaces*" focuses more specifically on the understanding of the natural landscape and presents several tools for biodiversity monitoring and conservation management.

Students must complete the remaining credits of the program with a combination of four elective subjects (all 5 ECTS) such as: "*Climate Change*", "*Biocultural Diversity*", "*Water Management*", "*Mitigation and Adaptation Strategies to Global Change*", "*Geographic Information Systems*", "*Qualitative Methods for Research in Social Sciences*", "*Urban Ecology*", or "*Internships in Institutions*". You can consult the complete list of electives on the website. Regarding the "*Final Master's Project*" (TFM), an example of the project topics can be consulted here. The TFM can be developed both with professors and researchers from the UAB and ICTA and with external entities, such as IRTA, CREAF, CSIC, CTFC, the Barcelona Provincial Council, or Naturalea, among others.