

PHD IN COASTAL ENGINEERING, HYDROBIOLOGY AND AQUATIC SYSTEM MANAGEMENT (IH20)

Basic and applied research is promoted in all aspects of the "integrated water cycle", from global (ocean, river basin ...) to local (beach, port, habitat) scales.



BASIC INFORMATION

Schedule: Official admission to the program is carried out in October, allowing extended access until the annual quota (12) for full time (3 years) and part time (5 years) dedication projects is covered.

Organization: Doctoral School of the University of Cantabria (EDUC).

Status: It was implemented in October 2014, following the integration of previous programs (2000-2014), which obtained the excellence distinction of the Spanish Ministry of Education.

Venue: EDUC and Environmental Hydraulics Institute of the University of Cantabria (IHCantabria).

Languages: Spanish and English.

Training: EDUC develops activities that are common to all programs, promoting a transversal training and interdisciplinarity. IHCantabria facilitates the specific training of PhD students in the various aspects of the water cycle, through a program including seminars, specialized courses and international meetings.

APPLICANTS PROFILE

The IH20 Program is open to Engineers (Civil, Industrial, Naval, Computer, Chemistry, etc), Undergraduates (Biology, Marine sciences, Environmental Sciences, Physics, Chemistry, Mathematics, etc.) and Official Masters in related areas, subject to a verification of basic knowledge and skills after examination of their curricular profiles.

PROFESSIONAL CAREERS

Training of doctoral students is aimed at their professional insertion in university research units, public and private institutes and technological centers, public administrations and high education centers.



Related institutions: The program collaborates primarily with the Foundation of the Environmental Hydraulics Institute of Cantabria (FIHAC), the Spanish Institute of Oceanography (IEO) and the Cantabric Maritime Museum (MMC).

Bilateral collaboration agreements are signed with academic and R&D centers (e.g. Netherland Institute of Sea Research, NIOZ; The Nature Conservancy, TNC; Institut de Recerca i Tecnologia Agroalimentàries, IRTA; or the Universidad Austral de Chile, UACH).

Agreements are signed to manage the secondments of doctoral students in other centers (e.g. Swiss Federal Institute of Aquatic Science & Technology; Seymour Mar Discovery Center of Santa Cruz, CA; National Laboratory of Engenharia of Lisbon; University of Exeter, University of South Florida; École Polytechnique Fédérale de Lausanne), and the reception of undergraduate researchers from other universities in IHCantabria.



DESCRIPTION

Water systems management represents one of the main global concerns. Losses in the quantity and quality of resources, changes in basic processes affecting aquatic ecosystems, or the vulnerability of these environments and their population represent some of the problems and risks associated to the "water cycle" requiring a multidisciplinary approach to their management.

All this shall be part of the training of doctors who can undertake in the future their responsibilities from different perspectives (research, management, consulting, administration), without giving up on integration and multidisplinary.

This program promotes basic and applied research in the areas of engineering, aquatic ecology and environmental management. The joint use of environmental designs and validation of alternatives provides adequate solutions to promote the sustainable development of socio-ecological systems associated to the integrated water cycle.

This approach is carried out in a context of temporal evolution conditioned by the effects of climate change.

RESEARCH AREAS

The program is structured in three major research areas, which are developed through the eight R&D Groups of IHCantabria*:

Line 1. Hydraulic and Coastal Engineering.

- Coastal Engineering and Coast Management.
- Hydraulic Engineering.
- Oceanography, Estuaries and Water Quality.

Line 2. Climate, Energy and Marine Infrastructures.

- Climatic Change and Marine Climate.
- Energy and Offshore Engineering.
- Hidrodinamic and Coastal Infrastructures.

Line 3. Hydrobiology and Environmental Management.

- Coastal Ecosystems.
- Freshwater Ecosystems.

* <http://www.ihcantabria.com>

MORE INFORMATION:

<https://web.unican.es/centros/escuela-de-doctorado>

<http://web.unican.es/estudios/detalle-doctorado?p=185&a=2017>

<http://www.ihcantabria.com/formacion/programa-de-doctorado/>

