Erasmus Mundus master's degree in Flood Risk Management

Erasmus Mundus master's degree in Flood Risk Management (Master's degree website) coordinated by the IHE Delft Institute for Water Education and with the UPC as a participant, provides an integrated approach to flood risk management that seeks to reduce human and socioeconomic losses caused by flooding. The need to adopt an integrated, holistic approach to flood risk management is reflected in Directive 2007/60/CE (RD 903/2010 of 9 July, on flood risk assessment and management). To date, European programmes have dealt with a variety of technical aspects but failed to propose integrated management; in this respect, the Erasmus Mundus master's degree in Flood Risk Management constitutes a breakthrough in hydraulics training in Europe.

It is offered by a consortium of institutions: the UNESCO-IHE Institute for Water Education (the Netherlands), the Technical University of Dresden (Germany), the University of Ljubljana (Slovenia) and the UPC.

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**GENERAL DETAILS**

**Duration and start date**
2 years, 120 ECTS credits. Starting September

**Timetable and delivery**
Mornings and afternoons. Face-to-face

**Scholarships**
Please check the official website of this master's degree for more information on EU scholarships: www.floodriskmaster.org/scholarships

**Language of instruction**
English

Information on language use in the classroom and students' language rights.

**Official degree**
Recorded in the Ministry of Education's degree register

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**ADMISSION**

**General requirements**
Academic requirements for admission to master's degrees

**Places**
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**Pre-enrolment**
To enrol for an interuniversity master’s degree coordinated by a university other than the UPC, you must enrol through the coordinating university:
IHE Delft Institute for Water Education (Delft, the Netherlands)

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**PROFESSIONAL OPPORTUNITIES**

**Professional opportunities**
On completion of the course, students will be able to analyse the reciprocal relationships between physical systems, institutional frameworks and the socioeconomic environment, and identify future social and climatic pressures and
needs and the consequent trends in system management; apply specific practical skills, such as the ability to identify
the main physical processes in a given river basin or coastal zone and their interaction with the associated assets and
receivers; identify the links between all issues related to flooding in order to apply an integrated approach to the
sustainable management of floods using the best decision-making support tools; review scientific literature and carry
out independent research; apply sophisticated hydroinformatics and modelling tools and best practices to address the
problems of flood risk management; and occupy positions of responsibility as flood risk managers.

Competencies

Generic competencies

Generic competencies are the skills that graduates acquire regardless of the specific course or field of study. The
generic competencies established by the UPC are capacity for innovation and entrepreneurship, sustainability and
social commitment, knowledge of a foreign language (preferably English), teamwork and proper use of information
resources.

The learning objectives (acquisition of knowledge) for the students include:

- A broad and cross-boundary scientific knowledge on flood risk management;
- A comprehensive knowledge base and understanding of the current theory and practice relating to flooding
  and flood management;
- The fundamental knowledge leading to the understanding of socio-economic issue related to flooding;
- A broad scientific knowledge about conservation, restoration and management measures to overcome
  challenges imposed on water by humans and by climate change, and;
- An extended knowledge on a basin-wide approach to flood risk management.

The acquired competencies (application of knowledge) include the ability to:

- Analyse the reciprocal relationships between the physical system, the institutional framework and the socio-
  economic environment, identifying future social and climatic pressures and needs and the consequent trends
  in system management;
- Apply specific practical skills, such as identifying the major physical processes in a given river basin or
  coastal zone and their interaction with the associated assets and receptors;
- Identify the links between all issues related to flooding in order to apply an integrated approach using the
  best tools to support decision making for the sustainable management of floods;
- Review scientific literature and carry out independent research (such as writing a state of the art paper
  based on research and practice literature);
- Apply sophisticated hydroinformatics and modelling tools and best practices to address the problems of flood
  risk management;
- Occupy an independent and responsible position as a flood risk professional;
- Communicate his/her knowledge and research results to the scientific and non-scientific communities (such
  as presenting papers/posters to scientific congresses, general lectures to policy makers and interested non-
  specialists);
- Acquire independently further knowledge and techniques, and operate in a team.

ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

European programme
Erasmus Mundus

UPC school
Barcelona School of Civil Engineering (ETSECCPB)

Participating institutions
Universitat Politècnica de Catalunya (UPC)
IHE Delft Institute for Water Education (Delft, the Netherlands) - coordinating university
Technische Universität Dresden
Univerza v Ljubjani

Academic coordinator
Allen Bateman