

## **Erasmus Mundus-UNESCO-IHE Scholarships**

The UNESCO-IHE Institute for Water Education is an international institute for water education that was established in 2003. UNESCO-IHE continues the work that was started in 1957 when IHE first offered a postgraduate diploma course in hydraulic engineering to practicing professionals from developing countries.

Integrated flood risk management aims to reduce the human and socio-economic losses caused by flooding while at the same time taking into account the social, economic, and ecological benefits from floods and the use of flood plains or coastal zones. The need for the adoption of a holistic integrated approach to managing flood risks has been reflected in the Flood Directive of the European Parliament. Existing Masters programmes on floods offered at EU cover many technical aspects but lack integration. The programme follows the holistic approach and is explicitly designed to cover a wide range of topics - from drivers and natural processes to models, decisions and socio-economic consequences and institutional environment, and is therefore an important advance in water education for Europe.

The Erasmus Mundus Masters Course on Flood risk management is offered by the consortium consisting of UNESCO-IHE Institute for Water Education (the Netherlands), the Technical University of Dresden (Germany), the Technical University of Catalonia (Spain) and the University of Ljubljana (Slovenia). The associated members include European hydraulics laboratories, namely, DHI (Denmark), Deltares and HR Wallingford (UK), and from key national organisations responsible for flood management, including Rijkswaterstaat (the Netherlands). ICHARM (Japan), and three organisations from Bangladesh are associated members as well. All these partners bring their specific complementary expertise in flood risk management to the EMMC, which graduates educated flood risk professionals with a broad vision of the processes occurring in river basins and in coastal zones at different spatial and temporal scales, and who can master the links between systems, processes and natural and socio-economic constraints for all the aspects of the water cycle.

During the 2-year programme students start at the Technical University of Dresden, where they complete their first semester with 30 ECTS with courses on hydro-meteorological processes, global change and its impact, flood risk management and GIS. Then the students move to UNESCO-IHE for their 2nd semester with 30 ECTS where they receive courses on modelling for planning, forecasting, control and decision support, hazard mapping, ICT, and fluvial flooding and urban flood disasters. Subsequently, the students move to the Technical University of Catalonia to follow part of their 3rd semester with 20 ECTS with courses on hazards due to flash floods, debris flow, coastal flooding, and climate change. The last part of the 3rd semester is hosted by the University of Ljubljana where students follow courses on spatial planning, and socio-economic and institutional framework of flood risk management to earn 10 ECTS. Each semester provides a number of electives, and there are international fieldtrips. Finally, the students carry out their thesis work (30 ECTS) at one of HIEs or with an industrial partner. Successful candidates receive MSc degrees from the Technical University of Dresden, UNESCO-IHE and the Technical University of Catalonia, Barcelona.

### **Partners**

- \* UNESCO-IHE Institute for Water Education, Delft, the Netherlands (Co-ordinating Institution)
- \* Technical University of Dresden, Germany
- \* Technical University of Catalonia, Barcelona, Spain
- \* University of Ljubljana, Slovenia

**Duration:** 2 years, starting September 2011

Successful students will receive 3 MSc degrees from UNESCO-IHE, TU Dresden and UPC Barcelona. A number of attractive fellowships will be available, which will cover tuition fees and living expenses.

### **Contact**

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Moreinfo: <http://www.unesco-ihe.org/About/News/New-Erasmus-Mundus-Masters-Course-on-Flood-Risk-Management>