

## **DEPARTMENT AIM**

The purpose of the IZTECH International Water Resources Program is to conduct innovative research, provide a world-class education, and conduct scientific studies that contribute to the field. This program aims to help students acquire the technical and managerial knowledge and skills necessary to successfully plan, design, operate, and manage water resources projects. Our university provides the necessary infrastructure and equipment to ensure a comprehensive education in Integrated Water Recourses Management. Students also gain interdisciplinary knowledge in science and engineering as they master diverse topics including water management, urban water management, water law, water policies, transboundary water, water science, water engineering, hydrogeology, and water quality. Our graduates are able to design technical solutions to water resources problems, conduct analytical and model-based experimental research, and develop remedial technologies to reduce the impact of natural water related hazards.

## **DEGREE REQUIREMENTS**

Students admitted to the International Water Resources Program with a bachelor's degree must take at least 7 credit courses consisting of at least 21 total credits and 120 ECTS points.

## **RESEARCH TOPICS**

Faculty and students in our department make cutting-edge contributions to their fields through studies and journal publications.

Education and research in our department focus on the following areas:

- International Water Politics
- International Water Law
- Transboundary Water
- International Water Legislations
- · Climate Change and Water Resources
- Water Resources Planning and Management
- · Water Management in the Sectors
- Urban Water Management
- Integrated Water Resources Management
- Wastewater Management
- Water Resources and Energy
- Water and Health
- Research, Development and Monitoring of Water Resources
- Innovative Technologies in Development and Management of Water Resources
- Modelling Studies in Water Resources
- Hydrology

## **LABORATORIES**

The International Water Resources Department uses the IZTECH Environmental Research and Development Center, Geothermal Energy Research and Application Center, Materials Research Center, and Hydromechanics Laboratory within the Civil Engineering Department. These laboratories support all studies related to water resources, except for isotope studies. The technical and physical properties of these laboratories are summarized below.

**IZTECH Environmental R&D:** This center primarily provides research infrastructure and laboratory support for cold water resources. It supports the thesis and project studies of graduate students as well as projects and research from other universities, the private sector, and public institutions. The center also cooperates with environmental researchers from national and international organizations.

**IZTECH Geothermal Center:** This center primarily provides research infrastructure and laboratory support for hot water resources. Its staff consists of experts with knowledge and experience in geothermal energy applications. The center conducts studies and educational activities, collaborates with other universities and public institutions, and supports studies with a variety of laboratory and test systems.

**IZTECH MATERIAL RESEARCH CENTER:** This center primarily provides research infrastructure and laboratory support for solid samples. The center provides infrastructure support for researchers, research groups, and projects of industrial organizations with devices such as SEM, AFM, STM, XRD, XRF, TGA, DSC, BET, Dilatometer and Mechanical Tester.

**HYDROMECHANICS LAB:** This lab consists of a 3000 m2 closed main hall and two 90 m2 auxiliary halls. Two underground reservoirs store 800 m3 of water, and two pumping stations can lift water to the raised fixed head tanks and feed pipes with a capacity of 300 l/h.