Hydraulic design of structures – river structures

Water management from hydraulic infrastructure requires safe allocation to satisfy demands. These structures are also subject to extreme events that may pose a threat to society and nature. Hydraulic engineering structures require: i) knowledge on design, to allow spatial and functional solutions, and ii) applied hydraulics, to ensure safe passage of floods. A shared part of the module will introduce the fundamentals of design and functionality for different types of structures (mountain, river and low-land structures; for flood protection, irrigation, hydropower) whereas each thematic track will expand on different singularities around hydraulic structures. For the Water Resources and Ecosystem Health track the focus is put on river flood protection structures. The integral role of hydraulic structures across the river basin is explored, comprehending mountain, river and low-land structures. Functionality and performance of selective structures is analyzed through design projects framed in an international context.