Module	**Hydraulic Engineering**
Module Number	MHSE 06 (BIW-MA-ABCD-04)
Responsible lecturer	Prof. Dr. Jürgen Stamm juergen.stamm@tu-dresden.de
Qualification Objectives	The students know the basics of the design, operation and dimensioning of hydraulic structures.
Contents	The contents of the module are natural watercourses, structures for flood protection such as dikes and retention basins, the use of water, such as weirs, dams and hydropower plants, as well as water volume, ecological and economic aspects. Other topics include nature-friendly construction methods, sustainability, renewable energies and waterway engineering.
Teaching and Learning	2 SWS lecture, 1 SWS exercise, 1 SWS internship, self-study.
Requirements for participation	Knowledge of physics and higher mathematics at bachelor's level is required.
Applicability	The module is a compulsory module in the Master's program in Water Security and Global Change. The module is one of 17 elective modules in the Master's program in Hydro Science and Engineering, of which modules totaling 50 credit points are to be chosen.
Requirements for the award of credit points	The credit points are earned when the module examination is passed. The module exam consists of a written exam of 90 minutes duration and a term paper of 30 hours. The exam language is English.
Credit Points and Grades	5 credit points can be earned through the module. The module grade is based on the weighted average of the grades of the two examinations. The exam paper is weighted three times and the term paper is weighted simply.
Frequency of Module	The module is offered every winter semester.
Effort	The total workload is 150 hours.

Duration of the module	The module lasts one semester.