

Module	Urban Water Management
Module Number	MHSE 33 (BIW-MA-ABCD-02)
Responsible lecturer	Prof. Peter Krebs isi@mail.zih.tu-dresden.de
Qualification Objectives	The students are able to map and optimize important processes of urban water management, to design and dimension the systems and to assess the consequences for the polluted water.
Contents	The content of the module is an overview of the systems of urban water management, which includes the methods for raw water extraction, water treatment and distribution, wastewater and stormwater drainage, as well as wastewater and sludge treatment. The module focuses on the dimensioning, operation and optimisation of drinking water and wastewater systems. In addition, the module includes the characterization of water pollution caused by wastewater disposal as an optimization goal as well as the mechanisms of material pollution. Another module content is the discussion of approaches to integrated operational optimization, taking into account the interactions between the subsystems.
Teaching and Learning	3 SWS lecture, 1 SWS internship, self-study.
Requirements for participation	Basic knowledge of mathematics, hydrobiology, hydrochemistry and hydromechanics at bachelor's level is required.
Applicability	The module is a compulsory module in the Master's programme 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. The exam language is English.
Credit Points and Grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of	The module is offered every summer semester.

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Effort	The total workload is 150 hours.
Duration of the module	The module lasts one semester.