

Modulbezeichnung/ module notation	<b>11. Experimental Hydraulics II</b>
Modulniveau/ module level	Master
Studiensemester/ semester	2
Kürzel/ abbreviation	EH II
Lehrveranstaltungen/ courses	11. 1 Scale models II
	11.2 Morphological flume experiments
	11.3 Scouring at hydraulic structures
Modulverantwortlicher/ module responsible	Prof. Dr.-Ing. Bernd Ettmer
Dozent(in)/ lecturer	Prof. Dr.-Ing. Bernd Ettmer Stefan Orlik, M.Eng. Franciska Orth, M.Eng.
Sprache/ language	english
Zuordnung zum Curriculum/ correlation to curriculum	Optional course
Lehrform/SWS/ teaching form/contact hours	6 SWS lecture, laboratory work and excursion
Arbeitsaufwand/ amount of work	180 h
Kreditpunkte/ credit points	6
Voraussetzungen nach Prüfungsordnung/ requirements	Bachelor degree
Empfohlene Voraussetzungen/ recommended requirements	Hydraulics, Fluid Mechanics and Physics
Form der Prüfung/ form of exam	homework
Angestrebte Lernergebnisse/ target educational objective	The students are able to use and interpretate experimental tests as an instrument for the prediction of hydraulic and morphological processes.
11.1: Scale models II (Ettmer)	Review to Froude and Reynolds similarity laws and basics in model scaling. Morphological similarity laws and application on physical models. Physical models as an instrument of prediction for hydraulic and morphological processes. Basic research and applied research experments.
11.2: Morphological flume experiments (Orlik)	Morphological flume experiments with experimental tests. Autonomous measurement of settling velocity and critical velocity for the initiation of motion of sediment particles as most important parameters for morphological processes. Flume experiments in a sediment recirculating flume with a high resolution detection of sediment transport.
11:3: Scouring at hydraulic structures (Orth)	Erosion processes and scouring at hydraulic structures like piers, abutments, wiers etc. . Experimental tests aunder clear water, bed-load and suspension load conditions. Prediction of morphological processes.
Medienformen/ used media	Script, Powerpoint presentation, White board
Literatur/ literature	