Modulbezeichnung	**Water and Waste Water (Wasser und Abwasser)**
Semester	WPM
ECTS-Punkte (Dauer)	5 (1 Semester)
Art	Wahlpflichtmodul (compulsory elective module, in English, if necessary)
Studentische Arbeitsbelastung	45 h Kontaktzeit + 105 h Selbststudium
Voraussetzungen (laut MPO)	
Empf. Voraussetzungen	
Verwendbarkeit	MaALS
Prüfungsform und -dauer	Exam 1,5 h or oral examination
Lehr- und Lernmethoden	Lecture, practical course
Modulverantwortlicher	R. Habermann

Qualifikationsziele
The students compose understanding in environment problems by wastewater discharge. They learn the methods of mechanical and biological wastewater treatment. Methods for wastewater characterization are known to them. Furthermore, they can design apparatus for mechanical and understand the fundamentals of biological wastewater treatment.

Lehrinhalte
The fundamentals of natural wastewater treatment are characterized. The students get to know basics about water quality and chemical analytics of water. The requirements for discharging treated water are introduced. Typical components of wastewater treatment plants are presented. The mechanical, biological and advanced water treatment as well as related technology are conveyed to the students. The practical course represents a selected part with limited attendance.

Literatur
Teichmann, H.: ATV-Handbuch: Biologische und weitergehende Abwasserreinigung, Ernst&Sohn-Verlag, 1997
C. P. Leslie Grady e.a.: Biological wastewater treatment, London : IWA Publ. ; Boca Raton, Fla. [u.a.] : CRC Press, 2011
M. Henze e.a.: Wastewater Treatment, second Edition, Springer, Berlin ; Heidelberg ; New York, 1997

Lehrveranstaltungen

Dozent	**Titel der Lehrveranstaltung**	**SWS**
R. Habermann,	Water & Waste Water	2
R. Habermann	Water & Waste Water practical course	1