Module	Unit	Semester	CPs/SWS	Lan-guage
PB26 Environment	**PB26-1 Water Treatment/Sewage Treatment**	**P6 | SS+WS**	**2/2**	**English**

Lecturer	Prof. Dr.-Ing. Heckele
Prerequisites	Knowledge of the contents from PB13-1 Communal Water Management and PB08 Construction Business, acquiring the necessary admission to exams in the second section of studies according to the study and exam regulations § 28 (3) Structure of the study programme
Teaching format	☒ Lecture ☐ Project work ☒ Tutorial ☐ Work in a team ☐ Laboratory ☐ Miscellaneous
Learning objective (knowledge, skills, competencies)	The students possess an overview of the essential procedures for treating water for domestic use and drinking water, for the treatment of contaminated groundwater, as well as for the treatment of industrial and communal sewage. They are able to measure and design simple facilities in an appropriate and environmentally-compatible way.

Contents	▪ Basic processes of water treatment and sewage treatment
	  ▪ Possibilities for use and combination
	  ▪ Selected applications
	  ▪ Landfill leachate treatment
	▪ Further treatment of communal sewage
	  ▪ Biological procedures for nutrient elimination
	  ▪ Chemical-physical phosphorous elimination
	  ▪ Filtration procedures
	▪ Transport of water and sewage
	▪ Metrology

Exam prerequisite	Ungraded coursework
Exam	Module exam see module sheet
Workload	Attendance: 30.0 h Preparation and post-processing incl. exam prerequisite: 29.0 h Exam duration: 1.0 h (part of the module exam)
Forms of media	☒ Project/Laptop ☒ Blackboard ☐ Script ☒ Miscellaneous
Literature	*Hendricks, D.:* Fundamentals of Water Treatment Unit Processes: Physical, Chemical, and Biological. Crc Press Inc, 9th November 2010 *Tchobanoglous, G.:* Wastewater Engineering, treatment and reuse. 4th. New York, Mc Graw Hill, 2003 *Standard ATV-DVWK-A 131E* - Dimensioning of Single-Stage Activated Sludge Plants - May 2000
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