TECHNISCHE HOCHSCHULE LÜBECK

Module: Air Pollution Control

Level	Bachelor	**Short Name**	IMS
Responsible Lecturers	Heymann		
Department, Facility	Applied Natural Sciences		
Course of Studies	Environmental Engineering and Management, Bachelor		
Compulsory/elective	Compulsory	**ECTS Credit Points**	5
Semester of Studies	4	**Semester Hours per Week**	4
Length (semesters)	1	**Workload (hours)**	150
Frequency	SuSe	**Presence Hours**	60
Teaching Language	German/English	**Self-Study Hours**	90

The following section is filled only if there is **exactly one** module-concluding exam.

Exam Type	Written Exam	**Exam Language**	German/English
Exam Length (minutes)	90	**Exam Grading System**	One-third Grades
Learning Outcomes	After successfully completing the module, students are able to use the specialist terminology and the elements of air pollution control. They can identify and assess pollutant emissions and immissions and have basic knowledge of how to carry out air pollution measurements and are able to apply this in a competent and problem-oriented manner. The students can carry out and evaluate emission measurements correctly and appropriately, evaluate impacts and develop proposals for emission reduction, as well as apply essential knowledge required in the 5th BImschV §7 No. 2.		
Participation Prerequisites			

The previous section is filled only if there is **exactly one** module-concluding exam.

Consideration of Gender and Diversity Issues	✔ Use of gender-neutral language (THL standard) ✘ Target group specific adjustment of didactic methods ✔ Making subject diversity visible (female researchers, cultures etc.)
Applicability	
Remarks	

Module Course: Air Pollution Control (Lecture)

(of Module: Air Pollution Control)

Course Type	Lecture	**Form of Learning**	Presence
Mandatory Attendance	no	**ECTS Credit Points**	3
Participation Limit		**Semester Hours per Week**	2
Group Size		**Workload (hours)**	90
Teaching Language	German	**Presence Hours**	30
Study Achievements ("Studienleistung", SL)		**Self-Study Hours**	60
SL Length (minutes)		**SL Grading System**	

The following section is filled only if there is a course-specific exam.

Exam Type		**Exam Language**	
Exam Length (minutes)		**Exam Grading System**	
Learning Outcomes			
Participation Prerequisites			

The previous section is filled only if there is a course-specific exam.

Contents	Basics and problem areas of immission control • Meteorological basics of emission spread and immission • Structure and regulations of immission control law • Procedures for measuring emissions and immissions • Assessment of emissions from combustion processes • Overview of procedures for reducing emissions • Special topics of immission control, e.g. • Carrying out workplace measurements • Carrying out emission measurements • Carrying out immission measurements • Fire and explosion protection

Literature	1. Förtsch, G., & Meinholz, H. (2013). *Handbuch Betrieblicher Immissionsschutz*. Springer Fachmedien Wiesbaden.
	2. Bundesimmissionsschutzgesetz mit zugehörigen Verordnungen (aktuelle Fassung)
	  1. TA Luft (aktuelle Fassung)
	  2. Relevant Standards and Norms
	3. Umweltbundesamt (2008). *Luftreinhaltung. Leitfaden zur Emissionsüberwachung*. 2., überarb. Aufl., Selbstverlag

Remarks	

Module Course: Air Pollution Control (Practical)

(of Module: Air Pollution Control)

Course Type	Practical Training	**Form of Learning**	Presence
Mandatory Attendance	yes	**ECTS Credit Points**	2
Participation Limit		**Semester Hours per Week**	2
Group Size		**Workload (hours)**	60
Teaching Language	German/English	**Presence Hours**	30
Study Achievements ("Studienleistung", SL)	Practical Training	**Self-Study Hours**	30
SL Length (minutes)		**SL Grading System**	Pass

The following section is filled only if there is a course-specific exam.

Exam Type		**Exam Language**	
Exam Length (minutes)		**Exam Grading System**	
Learning Outcomes			
Participation Prerequisites			

The previous section is filled only if there is a course-specific exam.

Contents	• Case-related problem identification and assessment of specific emissions and immission problems (usually practical problem cases from the region); including the following or similar tasks: • Assessment of emissions and immissions using the existing measuring devices and methods of the laboratory for immission control • Emissions measurement with direct-reading measuring systems (workplace measurements, indoor and outdoor air measurements) • Simulation of emission situations in the laboratory (e.g. with the development of our own test benches) • Monitoring of systems and processes in accordance with the Federal Immission Control Act (planning and carrying out measurements, legal assessment) • Determination and characterization of immission situations with regard to the significance of nuisances
Literature	
Remarks	