Joint Master´s program Biomedical Engineering

X4M 2355 Anaesthesia and Artificial respiration	Lecture, 2 SWS Lab/project, 2 SWS
Workload:	see related module
Credit-points:	5
Lecturer:	Ullrich Wenkebach
Language:	English
Curriculum:	Master`s program Biomedical Engineering, 2nd Semester
Prerequisites according to examination regulations	None
Recommended prerequisites:	None
Learning outcomes:	The students know fundamental techniques of respiratory or anaesthetic workstations and know products currently used in the market. The students know how devices are constructed and know the design rules. The students are able to identify the current operating mode of a respiratory or anaesthetic workstation and know how to change is to achieve a therapeutical goal. The students have practical experience with an anaesthesia simulator and both passive and active lung-simulators. The students have experienced the effect of different ventilation modes on their own (under supervision of a clinically skilled supervisor).
Content:	Lectures: The Human Lung, Respiratory Devices (aka. ventilators, Lung Models, Anaesthesia. Optional: Homecare, NIMV, Monitoring and hints on academic writing and applications. Practical Work: Anaesthesia. Ventilation basics (w/ passive lung simulator). Advanced Ventilation (w/ active lung simulator). A two-hour excursion into the heart-surgery operating theatre is offered (voluntary).
Literature:	None. Special material is distributed by the lecturer as pdf-files. Use of this material is permitted during the lectures only.
Examination:	Written examination
Teaching methods:	All material on beamer and as pdf-files, the hand-written panel paining as Windows Journal files on FH servers (Moodle).