

Module Medical Technology – Selected Topics

Module Name: Medical Technology – Selected Topics

Module Number	X4M 2325	Level	Master	Short Name	MTS
Responsible Lecturers	Prof. Dr.-Ing. Stefan Müller				
Department, Facility	THL, Applied Natural Sciences				
Course of Studies	Biomedical Engineering, Master				
Compulsory/elective	Elective	ECTS Credit Points	4		
Semester of Studies	2	Semester Hours per Week	4		
Length (semesters)	1	Workload (hours)	120		
Frequency	SuSe	Presence Hours	50		
Teaching Language	English	Self-Study Hours	70		
Consideration of Gender and Diversity Issues	<input checked="" type="checkbox"/> Use of gender-neutral language (THL standard) <input type="checkbox"/> Target group specific adjustment of didactic methods <input type="checkbox"/> Making subject diversity visible (female researchers, cultures etc.)				
Applicability	Biomedical Engineering				
Remarks	None				

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Course 1: Medical Technology – Selected Topics Lecture and lab

Course Number		Short Name	MTS
Course Type	Lecture and lab	Form of Learning	Presence
Mandatory Attendance	<input checked="" type="checkbox"/>	ECTS Credit Points	4
Participation Limit	16	Semester Hours per Week	4
Group Size (practical training, exercises, ...)	None	Workload (hours)	120
Teaching Language	English	Presence Hours	50
Study Achievements („Studienleistung“, SL)	None	Self-Study Hours	70
SL Length (minutes)	n. a.	SL Grading System	n. a.
Exam Type	Graded project reports	Exam Language	English
Exam Length (minutes)	n. a.	Exam Grading System	One-third Grades
Learning Outcomes	Deeper knowledge in medical devices		
Participation Prerequisites	Basic knowledge in physics, mathematics, engineering sciences, and biomedical engineering		
Contents	Lecture: <ul style="list-style-type: none"> • step by step discussion of the construction for a typical medical device (e.g. pulse oximeter, ECG amplifier) Lab: <ul style="list-style-type: none"> • building and test of the device discussed in the lecture 		
Literature	Hand-out John G. Webster „Medical Instrumentation“, 3rd edition, Wiley and Sons.		
Remarks	None		