

Module Medical Electronics - Project

Module Name: Medical Electronics - Project	Level Master	Short Name MEP
Module Number		
Responsible Lecturers	Prof. Dr Tim Jürgens	
Department, Facility	THL, Applied Natural Sciences	
Course of Studies	Biomedical Engineering, Master	
Compulsory/elective	Compulsory	ECTS Credit Points 2
Semester of Studies	2	Semester Hours per Week 2
Length (semesters)	1	Workload (hours) 50
Frequency	SuSe	Presence Hours 10
Teaching Language	English	Self-Study Hours 40
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	<p>The students shall acquire consolidated knowledge of physical, electrical, and mechanical principles of medical products.</p> <p>The students shall be enabled to contribute to the development of medical products according to relevant standards.</p> <p>The students shall know about development processes in medical technology and manage these processes according to their professional experience.</p> <p>The students shall be able to present results of their work adequately.</p>	

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Course 1: Medical Electronics - Project

Course Number		Short Name	MEP
Course Type	Project	Form of Learning	Presence
Mandatory Attendance	<input checked="" type="checkbox"/>	ECTS Credit Points	2
Participation Limit	None	Semester Hours per Week	2
Group Size (practical training, exercises, ...)	None	Workload (hours)	50
Teaching Language	English	Presence Hours	10
Study Achievements („Studienleistung“, SL)	Graded lab-report, presentation	Self-Study Hours	40
SL Length (minutes)	n. a.	SL Grading System	One-third Grades
Exam Type	n. a.	Exam Language	n. a.
Exam Length (minutes)	n. a.	Exam Grading System	n. a.
Learning Outcomes	The students shall understand the development process of medical electronic devices with special focus on electrical safety.		
Participation Prerequisites	Basic knowledge in engineering sciences and analog electronics. Knowledge of the regulatory affairs for medical products and knowledge in project-management.		
Contents	By group work the students design a medical electronic device and compile the necessary documentation.		
Literature	EN 60601-1 and related standards Specific literature about the chosen medical electronic device		
Remarks	None		