

Module Biophysics Lab

Module Name: Biophysics Lab

Module Number	X4M 2315	Level	Master	Short Name	BPL
Responsible Lecturers	Prof. Dr. Max Urban				
Department, Facility	THL, Applied Natural Sciences				
Course of Studies	Biomedical Engineering, Master				
Compulsory/elective	Elective	ECTS Credit Points	2		
Semester of Studies	2	Semester Hours per Week	2		
Length (semesters)	1	Workload (hours)	48h		
Frequency	SuSe	Presence Hours	4 lab sessions, each for 6h		
Teaching Language	English	Self-Study Hours	4-6h per lab session (a total of 4 lab sessions)		
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 2: Biophysics Lab

Course Number		Short Name	BME-BPL
Course Type	Lab	Form of Learning	Presence
Mandatory Attendance	<input checked="" type="checkbox"/>	ECTS Credit Points	2
Participation Limit	8	Semester Hours per Week	4 weeks 12h
Group Size (practical training, exercises, ...)	4 Groups of 2 students (There are 4 experiments in total).	Workload (hours)	48h in total
Teaching Language	English	Presence Hours	4 times 6h
Study Achievements („Studienleistung“, SL)	Graded lab reports	Self-Study Hours	4 times 4-6h
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 are able to successfully implement the theoretical biophysical skills from the lecture to practical problems.		
Participation Prerequisites	None, preferably the BME biophysics lecture		
Contents	<p>The students work on several tasks in the following fields:</p> <ul style="list-style-type: none"> • Experiments testifying the Nernst-eq. and the Goldman-eq. • Experiments for understanding the electrophoresis and iontophoresis and the electrical behaviour of different tissues • Experiments testifying the Law of Van't Hoff (understanding the filtrations processes) • Experiments for understanding MRI 		
Literature	see lecture		
Remarks	None		