

## t.BME1 - Biomechanical Engineering 1

**Person responsible for the course:** Bernd Heinlein, hnlh

**Credits:** 4

**Valid for:** 2011/2012

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### Learning objectives:

Introduction to the basics of endoprosthetics and related surgical techniques.

Appropriate approach to the formulation of biomechanical basic principals as well as concept, design, and dimensioning of medical products.

### Course content:

- Anatomy
- Functional anatomy
- Biocompatible materials
- Mechanical model of a joint muscle system
- Development of implants and instruments
- Surgical planning / surgical techniques

### Previous knowledge:

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### Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x2L
Tutorial/Practicum	14x2L
Group teaching	
Block instruction	
Seminar	

### Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

Number	Type	Weighting
1	End of term exam	90%
1	Exam during the semester	10%
	Further assessments	

### Language of instruction:

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### Instruction material:

Skripte: Anatomie, Funktionelle Anatomie, Biokompatible Werkstoffe

### Comments:

Matlab Simulink project during the semester with a written report equals 10% weighting