

Module number PTI222	Name of the Module Medical Instrumentation Development	Lecturer(s) Prof. Dr. A. Nobles, PTI
Academic Course(s): Biomedical Engineering (BME) (B. Eng.) - optional	Semester:	
Specialization(s):	ECTS-Credits: 5 Workload (in h): 150 Teaching and learning methods in h:	
	Lectures/exercises	30 (2 SWS)
	Lab-course	30 (2 SWS)
	Private study	60
	exam preparation	30
Learning outcomes: The understanding of basic biomedical engineering principals as applied to the development of instrumentation. Material selection and performance standards for design considerations during the research and development of a medical instrument. Understanding how design an instrument that can be manufactured in volumes and be cost effective.		
Contents: Selection of a device/ design of a proto-type/ Proof of concept and construction of the Design Dossier (DD) and Device Requirements Document (DRD) Lab-course: Build a proto-type/ design functionality test and perform. Literature: Chapter one of “Applied Biomedical Engineering” text book.		
Prerequisites/Previous knowledge: Modules Basic Principles of Biomedical Engineering, Medical Basics		
Assessment/exams		
Type of exams:		Length of time/timetable:
oral examination 50 %		30 minutes
alternative examination (laboratory course with report) 50 %		
Pre-conditions: no		

Developed on: 7/2012 by: Prof. Dr. A. Nobles and Prof. L. Heiland

PLS 30. September 2013