

t.ETP1 - Electrical Engineering Project 1

Person responsible for the course: Marcel Rupf, rumc
Responsible OU:
ECTS: 2
Valid for: 2012/2013
Last saved: 20.06.2013 15:18

Expertise:

-

Methodological skills:

-

Social skills:

-

Personal skills:

-

Learning objectives:

Technical scopes:

Every student develops HW and HW-related SW in a digital signal processing context (amplify, sample and analyse sensor signals)

Goals for English:

Every student writes a technical report and presents the project

Course content:

In groups of two, the students develop an electronic device (in 2013 a distance and velocity meter will be developed using the time of flight of ultrasonic waves)

These steps have to be accomplished during the project:

- get familiar with the subject at hand
- circuit development and simulation
- printed circuit board layout, assembling and testing
- SW development and simulation of performance
- microcontroller programming
- system integration and overall tests
- optimization of performance
- documentation and presentation in English

In ETP1 the objective is to build a sender for ultrasonic waves.

In ETP2 a corresponding receiver will be added to yield the complete distance and velocity meter.

Previous knowledge:

Analogue and digital electronics, programming in C

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	
Tutorial/Practicum	
Block instruction	

Assessment:

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

description	type	form	scope	assessment	weighting
Performance records during school hours					
Semester end exam					

Language of instruction:

English

Instruction material:

Documentation for sensors, HW-components and the microcontroller is available.

Additional literature:

-

Comments:

-