Mittuniversitetet
MID SWEDEN UNIVERSITY

Course Syllabus:

Electronics MA, Applied Sensor Systems, 9 Credits

General data

Code	EL006A
Subject/Main field	Electronics
Cycle	Second cycle
Credits	9.00
Progressive specialisation	Second cycle, has only first-cycle course/s as entry requirements
Answerable department	Faculty of Science, Technology and Media
Established	2007-04-03
Date of change	2015-03-04
Version valid from	2013-09-12

Aim

The overall objective for the student is, based in his/hers, previous knowledge independently acquire basic and in-depth knowledge in applied measurement and instrumentation techniques, which includes:
- Design of a measurement system with, by the student, selected sensor(s) from a given requirement specification.
- Analyse a technological problem and based on the analysis plan and document the project
In the course the student is given the possibility to use simulation tools, software and hardware for data acquisition, and design readout electronics for interfacing the sensor to the system.

Course of objectives

After completion of the course you as student shall at least be able to:
- from a given problem within applied sensor technology, select appropriate technology to realise a solution
- Document to project according to given instructions
- Work in a team and divide the work, plan, and integrate the team members' different contributions.
- Verify the technological and physical limitations for the realised design

Content

The course includes:
- Design of a measurement system with sensor, readout electronics, and data processing
- Statistical data processing
- Labview in data acquisition
- Technical report writing skills

Entry requirements

Electronics 30 credits, including analog electronics and measurement technology

Selection rules and procedures

The selectionprocess is in accordance with the Higher Education Ordinance and the local order of admission.

Teaching form

The project starts with a mandatory project meeting. The course is given as project labs with a few lectures for introduction

Examination form

6.0 hp, R106: Written report
Grades: A, B, C, D, E, Fx and F. A-E are passed and Fx and F are failed.

3.0 hp, M106: Oral presentation
Grades: A, B, C, D, E, Fx and F. A-E are passed and Fx and F are failed.

Grading system

The grades A, B, C, D, E, Fx and F are given on the course. On this scale the grades A through E represent pass levels, whereas Fx and F represent fail levels.

Course reading

Required literature

Kurslitteratur meddelas sensare