



HALMSTAD UNIVERSITY

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School of Information Science, Computer and Electrical Engineering

SYLLABUS

-translated from Swedish
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Course Code: ET2009 / 3

Sensor System, 7.5 credits

Sensorsystem, 7.5 hp

First level

Progression: 1-30

Main field: Electrical engineering

Syllabus is adopted by the School of Information Science, Computer and Electrical Engineering (2009-03-12), effective starting spring 2010.

Placement in the Academic System

The course is included in the Computer, Electrical, and Mechatronical Engineering Programmes 180 credits, and in the Electrical Engineering with Emphasis on Wireless System Design 60 credits.

Prerequisites and Conditions of Admission

Electrical Circuits 7.5 credits, Electronics 7.5 credits.

Course Objectives

The course aims for students to acquire basic knowledge of principles and applications of measurement systems.

Upon successful completion of the course the student should be able to:

Knowledge and understanding

- describe the building blocks in a measurement system and their function
- describe sensor principles for non-electric measurements
- describe noise reduction methods in a measurement system
- describe how the uncertainty is computed and presented for a measurement value

Skills and ability

- implement a measurement system using building blocks

Judgement and approach

- identify problems and search for solutions to the problems in a real measurement application

Primary Contents

Sensor principles and measurement methods. Noise and noise reduction methods. Applications of various sensor systems.

Teaching Formats

Instruction is in the form of lectures and laboratory exercises. The laboratory exercises are reported in writing.

Teaching is in English.

Examination

The overall grades of Fail, 3, 4 or 5.

Examination is in the form of a written exam and laboratory works.

Course Evaluation

Course evaluation is part of the course. This evaluation should offer guidance in the future development and planning of the course. Course evaluations should be documented and made available to the students.

Preliminary Course Literature

Course literature is to be decided.