



Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

2ED043 Digitala signalprocessorer, 7,5 högskolepoäng
Digital Signal Processors, 7.5 credits

Main field of study
Electrical Engineering

Subject Group
Electrical Engineering

Level of classification
First Level

Progression
G2F

Date of Ratification
Approved by Organisational Committee 2009-08-11

The course syllabus is valid from spring semester 2010

Prerequisites
ED2022 Computer Technology (7.5 credits) ED2052 Digital Signals and Systems (7.5 credits) or the equivalent.

Expected learning outcomes

Upon completion of the course, the student should have:

- good knowledge about signal processors and their specific characteristics
- good knowledge about use of development systems for digital signal processors
- good knowledge about programming digital signal processors
- good knowledge about use of digital signal processors at different types of signal processing
- sufficient knowledge about signal processors to choose, design and program a digital filter for a certain application

Content

The course comprises the following topics:

- architecture for digital signal processors
- numeric representation
- different types of digital signal processors
- Analog Devices ADSP 2100 family
- architecture
- development systems
- assembler programming
- Program development for applications in digital filters communication and control systems.
- Application specific digital signal processors.

Type of Instruction

Lectures, seminars and practicals. Participation in practicals is mandatory.

Examination

The course is assessed with the grades U, 3, 4 or 5.

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

Course Evaluation

A written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The course evaluation will be filed at the department.

Required Reading and Additional Study Material

Required reading

Kester, W, *Mixed-signal and DSP Design Techniques*, (Analog Devices), Nevnes, 2003. Pages 150 (300).