Linnæus University

Course syllabus

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

1ED062 Analoga signaler och system, 7,5 högskolepoäng
Analogue signals and systems, 7.5 credits

Main field of study
Electrical Engineering

Subject Group
Electrical Engineering

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved by the Board of the School of Computer Science, Physics and Mathematics 2009-08-11

Revised 2010-06-10. Revision of prerequisites and course evaluation.

The course syllabus is valid from spring semester 2011

Prerequisites
At least one year of study in electrical engineering (60 credits) incl. the courses ED1041 Electronics (7.5 credits), 1ED052 Digital signals and systems (7.5 credits), or the equivalent.

Expected learning outcomes
The course gives an introduction to analogue circuit theory. The student is expected to combine previously acquired knowledge of Mathematics and Electronics, to understand and mathematically describe electric circuits.

Content
The course comprises the following topics:

- transfer functions
- impulse and impulse response
- second order systems
- stability
- convolution, Laplace transforms
- analogue filters
- frequency transformations and filter types.

Type of Instruction

Teaching consists of lectures, tutorials and mandatory laboratory sessions.

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. Practicals and exam.

Course Evaluation

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

Required Reading and Additional Study Material

Required reading

Harnefors L., Holmberg J. och Lundqvist J., *Signaler och system*, Liber, 2004. Pages 100 (400).