

**SYLLABUS**

# **Electronic systems 7.5 credits E7030E**

**Elektroniksystem**

**Course syllabus admitted: Autumn 2023 Sp 1 - Present**

**DECISION DATE  
2023-02-15**

# Electronic systems 7.5 credits E7030E

## Elektroniksystem

### Second cycle, E7030E

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Elektroteknik	Electrical Engineering

## Entry requirements

The course E0007E Electronics 7.5 credits or equivalent.

Good knowledge in English equivalent to English 6.

## Selection

The selection is based on 30-285 credits

## Course Aim

The student shall after the course have knowledge of a number of common circuits and their theoretical fundamenta, including feedback systems, oscillators and filters. The student shall be able to describe the function of a number of electronic components such as AD converters, DA converters and regulators . The student shall be able to design, build, verify and document discrete circuits for electronic systems useful in areas such as metrology and communications.

## Contents

- Transistor circuit repetition
- AD/DA converters
- Noise
- Linear regulators
- Switched circuits
- Feedback
- Oscillators
- Filters and impedance matching
- Introduction to electronics production

## Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Lectures. Laborations with compulsory preparations consisting of design and simulations.

## Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Theoretical elements are examined via a written exam. Practical elements are examined via approved laboratory work.

## Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term “unauthorized aids” refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

## Remarks

The course can not be part of a degree together with E7014E.

## Overlap

The course E7030E is equal to E7014E

## Course offered by

Department of Computer Science, Electrical and Space Engineering

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Written Exam	G U 3 4 5	4.5	Mandatory	A17	
0002	Laboratory Work	U G#	3	Mandatory	A17	

## Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

## Last revised

by Robert Brännström 2023-02-15

## Syllabus established

by Jonny Johansson, HUL SRT 2017-02-15