



# IK255U Ericsson Radio School - analog to digital conversion 3.0 credits

Ericsson radioskola - analog till digital omvandling

This is a translation of the Swedish, legally binding, course syllabus.

## Establishment

Course syllabus for IK255U valid from Spring 2022

## Grading scale

P, F

## Education cycle

Second cycle

## Main field of study

Electrical Engineering

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

After passing the course, the students should be able to

- account for basic sampling theory
- account for basic digital-to-analog and analog-to-digital conversion.

## Course contents

### RF receiver architectures

- Mixing
- Sampling Processes
- Analog-to-Digital Conversion (ADC)
- Continuous Time receivers
- Discrete Time receivers

### Direct RF digitization receivers

- System Level Aspects
- Receiver System-Level Design

### Realization and measurements

- RF Front End
- Mixed Signal Front End
- Mixed Signal AGC Loop
- System Level Measurements

## Examination

- INL1 - Assignment, 1.0 credits, grading scale: P, F
- SEM1 - Seminars, 2.0 credits, grading scale: P, F

## Other requirements for final grade

At least 90 percent participation at the seminars is required.

## Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.