



# KD2010 Analytical Chemistry

## 6.0 credits

Analytisk kemi

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

### Establishment

Course syllabus for KD2010 valid from Autumn 2007

### Grading scale

A, B, C, D, E, FX, F

### Education cycle

Second cycle

### Main field of study

Chemistry and Chemical Engineering

### Specific prerequisites

KD1020, General chemistry and KD1110 Chemical Measuring Techniques

### Language of instruction

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

## Intended learning outcomes

After performing the course the student should be able to

- describe the most common analytical techniques used in laboratories and process control; spectroscopy, chromatography, mass spectrometry and electro analysis
- define which alternative methods are available within each technique, explain the principles and mention advantages and disadvantages
- describe the function of the parts of instrumentations for the different techniques/methods
- choose technique, method and instrumentation for a given analytical problem and motivate the choices
- plan and evaluate a sampling procedure

## Course contents

Lectures: Spectroscopy. Chromatography and mass spectrometry. Automatic analytical methods and process analytical chemistry. Methods for environmental monitoring. Choice of analytical method.

Laboratory work: Mass spectrometry. Liquid chromatography. Diode-array spectrometry.

Atomic absorption spectroscopy.

## Course literature

Quantitative Chemical Analysis, D.C. Harris, 7ed, ISBN 9780716776949

## Examination

- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 3.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

## Other requirements for final grade

Written examination, 3 credits  
Laboratory work, 3 credit

## 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.