



# KD2170 Nano-structured Materials 7.5 credits

Nanostrukturerade material

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

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

## Establishment

Course syllabus for KD2170 valid from Autumn 2007

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Chemical Science and Engineering, Chemistry and Chemical Engineering

## Specific prerequisites

Three years of study at the School of Chemistry and Chemical Engineering, KTH or equivalent.

## Language of instruction

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

## Intended learning outcomes

To give an introduction to nanochemical materials. To understand how nanocrystalline materials can be manufactured. To be able to explain in which aspects their properties are different from those of ordinary chemical compounds.

## Course contents

Different types of nanomaterials. Controlled manufacturing of nanomaterials and their application. Nano-structures semiconductors. Nanotechnology in carbon-based materials. "Self-assembly" techniques. Physical properties of nanomaterials. Bottom-up: to build structures with single atoms. Top-down: To break down structures to the desired size.

## Course literature

To be announced.

## Examination

- LAB1 - Laboratory Course, 1.5 credits, grading scale: P, F
- PRO1 - Project, 1.5 credits, grading scale: P, F
- TEN1 - Written exam, 4.5 credits, grading scale: A, B, C, D, E, FX, 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.

## Other requirements for final grade

Written examination, 4,5 credits

Completed laboratory course, 1,5 credits Project, 1,5 credits

## 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.

