FEK3300 Applied Micro and Nanofabrikation 15.0 credits

Tillämpad mikro- och nanofabrikation

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

Establishment

Course syllabus for FEK3300 valid from Autumn 2014

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

This course is open for students enrolled in the KTH EES third-cycle study program.

Language of instruction

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

Intended learning outcomes

After the completed course the student shall be able to:

- Describe how a set microfabrication tool or processes work and critically assess performance limitations.
- Master operation of these microfabrication tools or processes.
- Evaluate fabrication results from these tools and processes.
- Fabricate micro or nanostructures independently.

Course contents

The course consists of practical training on ten micro or nanofabrication tools. The choice of tools should reflect necessary tools to independently be able to fabricate and evaluate a micro or nanostructure.

Disposition

The student get hands-on training from a tool instructor to obtain a tool license and develop own process recipies/procedures for the tool.

Course literature

M. J. Madou, Fundamentals of microfabrication 2ed, ISBN 0849308267.

Examination

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

To pass the course successful tool license or equivalent on ten microfabrication and characterization tools for micro or nanofabrication is required. The choice of tools should cover at least one pattern definition tool, one material removal tool, one material deposition tool and one characterization tool.

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.