FKD3390 Physical Methods in Surface and Material Characterisation 3.0 credits

Fysikaliska metoder i yt- och materialkarakterisering

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 FKD3390 valid from Spring 2020

Grading scale

P, F

Education cycle

Third cycle

Language of instruction

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

Intended learning outcomes

After completion of the course the doctoralstudent should have the knowledge and ability to

- demonstrate adequate acquired knowledge of the techniques to characterize surfaces and materials.
- Examine at least one of the techniques in greater depth, either as an example from own research or an example from the literature which is topical
- present and justify orally this study, and critically evaluate own and others' presented studies.
- reflect on a selected materials characterisation problem with respect to solving it with tools from the course, and the environmental, human or societal aspects.

Course contents

- Methods and probes used in materials characterization.
- Surface Analysis
- Ion Beam Methods
- Microscopy
- Scanned Probe Methods
- Electron Microscopy
- Diffraction Methods
- Optical and Spectroscopic Methods
- Polymer Characterization

Specific prerequisites

Eligible for studies at the third-cycle level

Examination

- INL1 - Hand in assignment, 2.5 credits, grading scale: P, F
- SEM1 - Seminars, 0.5 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.

Approved seminar and homework.

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.