FKF3430 Synchrotron Characterization Methods in Fibre and Polymer Technology - Practice 3.0 credits

Synkrotron karaktäriseringsmetoder för Fiber och Polymerteknologi - Praktik

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 FKF3430 valid from Spring 2022

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Comparable knowledge to FKF3420 - Synchrotron Characterization Methods in Fibre and Polymer Technology - Theory.

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 doctoral student should have the knowledge and ability to

- perform standard sample alignment and data acquisition during an experiment at the beamline P03/MiNaXS at PETRA III, DESY, Hamburg, Germany using standard samples
- perform standard treatment of SAXS/WAXS/GISAXS/GIWAXS data
- quantitatively analyze SAXS/WAXS/GISAXS/GIWAXS data
- perform a fundamental, self-designed experiment with the possibility of an exemplary measurement of own samples

Course contents

- Introduction to advanced scattering methods at P03/MiNaXS, DESY, Hamburg
- Optimization of experiments during hands-on training at the beamline
- Data treatment of data taken during the hands-on experiments
- Quantitative analysis of data using standard software

Examination

- 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.

For a passed course, mandatory attendance at the measuring station at the beam tube and completed exercises are required.

Transitional regulations

If the examination form is changed, the student will be examined according to the examination form that applied when the student was admitted to the course. If the course is completed, the student is given the opportunity to be examined on the course for another two academic years.

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.