



FKF3160 Paper Surfaces - Characterization and Properties 4.5 credits

Pappersytor - karakterisering och egenskaper

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

Establishment

Course syllabus for FKF3160 valid from Spring 2020

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Eligible for studies at the third-cycle level.

Language of instruction

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

Intended learning outcomes

After the course, the participants should be able to...

- apply a wide range of techniques used to characterize paper surface structure, paper surface chemistry and print quality, and account for the validity of the results of the same characterization techniques
- explain interfacial phenomena like wetting, absorption, and adhesion
- describe the relationship between surface topography and paper optical properties
- describe how paper surface properties affect ink-paper interaction and print quality in different printing technologies
- describe the surface cracking phenomena on the basis of converting processes, substrate properties and coating layer composition

Course contents

The coating layer's raw materials and application processes

- Surface chemistry
- Advanced characterization methods
- Paper optics
- Pore structure and absorption
- Surface topography and contact mechanics
- Mechanical properties and converting
- Pressure quality
- Printing methods

Examination

- **TEN1** - Examination, 4.5 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.

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

