



FSE3047 Crash Course in Pulp and Paper Technology 3.0 credits

Exekutiv kurs i massa- och pappersteknik

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

Establishment

Course syllabus for FSE3047 valid from Spring 2018

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

Basic knowledge of university mathematics, physics and chemistry.

Language of instruction

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

Intended learning outcomes

After completing the course the student should be able to

- Define different types of products made from paper and board
- Describe the different unit operations in manufacturing of products made from wood fibres prepared for papermaking and apply this for design of new such products
- Describe the pulp manufacturing processes and methods for evaluation of pulp properties
- Define and evaluate pulps with respect to the properties of the end product
- Describe physical limitations that governs the production capacity
- Define the basic mechanism behind the interaction between paper chemicals and fibres
- Describe how certain chemicals function as process improving chemicals and/or product quality enhancing chemicals
- Describe the most commonly used additives in papermaking
- Describe the relations between products, end-use and converting properties, and the most important physical and appearance properties of paper and board

Course contents

The products of the paper and pulp industry. Pulp manufacturing. Papermaking (forming, wet-pressing, drying, post-drying operations, coating). The use of chemicals in papermaking. End-use and converting properties. Fundamental business aspects for the pulp and paper industry.

Examination

- RAP1 - Report, 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.

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

- Short reflective essay/report on a topic related to the lectures, and
- Review of one such essay from another group.

The topic of the essay should focus on manufacturing of a new paper product and contain elements of consideration from all (or almost) all lectures. It is required that the students should look for additional information on details in the design of the new product or alternative opinions stated by people or companies on the internet or in the literature.

Other requirements for final grade

Approved report and review

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.