KF2470 Pulp and Paper Processes 7.5 credits

Massa- och pappersprocesser

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 KF2470 valid from Autumn 2019

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Chemical Science and Engineering,Chemistry and Chemical Engineering

Language of instruction

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

Intended learning outcomes

The aim of the course is to cover the different unit processes involved in pulp and paper manufacturing and how the end-product properties are affected by the different process stages. The course will also focus on the energy and environmental issues that arise in the processes.

After passing the course the student should be able to:

- Summarize and compare the most important processes used in pulp and paper production and the methods for pulp properties evaluation
- Determine how the different unit processes affect the pulp and paper properties
- Analyze the energy consumption in the different process stages
- Evaluate the impact of process changes on the subsequent process stages

To achieve higher grades the student should be able to:

- Describe how different process parameters are affecting the chemical composition of pulp and how this influences pulp and paper properties
- Evaluate the impact of process changes on the energy consumption in the pulp and paper production
- Explain and evaluate the technical developments within the pulp and paper industry and suggest possible development trends within pulp and paper technology

Course contents

The course covering the manufacturing processes for paper, cardboard and textile from wood-based raw materials and how the product properties are affected by different process steps. It will also focus on the overall pulp and paper production process and on the energy and environmental issues that arise in the process.

Specific prerequisites

At least 150 credits from grades 1, 2 and 3 of which at least 110 credits from years 1 and 2, and bachelor's work must be completed, within a programme that includes:
50 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and in computer science or corresponding.

Examination

- LAB1 - Laborations, 3.0 credits, grading scale: P, F
- TEN1 - Written exam, 4.5 credits, grading scale: A, B, C, D, E, FX, 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.

Other requirements for final grade

Laboratory Work (LAB1; 3 hp)
Examination (TEN1; 4.5 hp)

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.