



KF2510 Advanced Pulp and Paper Processes 7.5 credits

Massa- och pappersprocesser, fördjupningskurs

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 KF2510 valid from Autumn 2011

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

Specific prerequisites

Admission requirements for programme students at KTH:

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:
75 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and 6 university credits (hp) in computer science or corresponding.

Admission requirements for independent students:

75 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and 6 university credits (hp) in computer science or corresponding. Documented proficiency in English corresponding to English B.

Language of instruction

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

Intended learning outcomes

The overall aim of the course is that the participants after completing the course should be able to describe in detail the different process stages in a pulp and paper mill and also be able to reason how a change in one stage will affect the later process stages and the final end product properties.

After completed course the student should be able to:

- Describe the process flows in a pulp and paper mill
- Identify which control parameters should be used in different process stages
- Describe the energy consumption in the different process stages
- Describe the environmental impact of different process stages
- Interpret and analyze conclusions in scientific journals within the area
- Use simulation model for the pulp and paper processes

To achieve higher grades you should be able to:

- Explain and hypothesize on how changes in process flows affect the process and the pulp and paper properties
- Reason how different process stages are controlled
- Identify weakness in the process controls
- Reflect on different measures to affect the energy consumption for the pulp and paper manufacturing
- Hypothesize on the possibilities to minimize the environmental impact of a pulp and paper mill

Course contents

Process flows, control parameters, energy consumption and environmental aspects in the pulp and paper mill.

Disposition

Lectures and Seminars.

Course literature

The Ljungberg Textbook in Pulp technology and Paper Technoly.
Hand out materials.

Examination

- SEM1 - Seminars, 2.5 credits, grading scale: P, F
- TEN1 - Examination, 5.0 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.

The seminars are mandatory to attend

Other requirements for final grade

Examination (TEN1; 5 credits)

Seminar (SEM1; 2.5 credits)

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.