Reg No: KTAD33/20252

Faculty of Health, Science and Technology
Chemical Engineering

Syllabus

Pulp and Paper Technology II

Course Code:	KTAD33
Course Title:	Pulp and Paper Technology II *Massa- och pappersteknik II*
Credits:	7.5
Degree Level:	Master's level
Progressive Specialisation:	Second cycle, has second-cycle course/s as entry requirements (A1F)

Major Field of Study:
KTA (Chemical Engineering)

Course Approval
The syllabus was approved by the Faculty of Health, Science and Technology 2025-01-30, and is valid from the Autumn semester 2025 at Karlstad University.

Prerequisites
Pulp and paper technology, 15 ECTS credits, and upper secondary level Swedish 3 or Swedish as a second language 3 and English 6, or equivalent

Learning Outcomes
Upon completion of the course, students should be able to:
1. Compare and contrast different types of pulp production processes,
2. Define and assess different types of pulp in relation to the intended finished product,
3. Give an account of chemical reactions in pulp production processes,
4. Analyse how different process parameters and additives influence the properties of the finished product,
5. Describe and reflect upon the use of raw materials and energy in pulp and paper production,
6. Design laboratory experiments for a study of a research problem in pulp or paper

technology,
7. Investigate and explain the effect of different wet end additives upon the properties of a fibre suspension, and
8. Discuss environmental aspects of the processes and products of pulp and paper technology, and their role in a circular economy.

Content
The course covers the following:
Different pulp production methods
Hornification
Wet end chemistry
Forming
Dewatering
Pressing
Drying
Material and energy balances
Environmental aspects of pulp and paper production
Recycled fibre

Instruction is in the form of lectures, seminars, and a project which includes practical components.

Reading List
See separate document.

Examination
Assessment is based on a written exam and oral and written presentations of a project. Laboratory sessions, practical components, and seminars are mandatory.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades
One of the grades 5 (Pass with Distinction), 4 (Pass with Some Distinction), 3 (Pass), or U (Fail) is awarded in the examination of the course.

Quality Assurance
Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate
A course certificate will be provided upon request.

Additional information
The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.