



Course syllabus

Faculty of Technology

Department of Forestry and Wood Technology

4TS030 Materialet trä, 7,5 högskolepoäng

4TS030 The wood material, 7.5 credits

Main field of study

Forest and Wood Engineering

Subject Group

Forest Science

Level of classification

Second Level

Progression

A1N

Date of Ratification

Approved 2023-07-03

Revised 2023-09-04 by Faculty of Technology. Assessment methods and examination are revised.

The course syllabus is valid from autumn semester 2024

Prerequisites

Knowledge corresponding to English B together with a exam of 180 credits in a technical subject.

Objectives

The student shall be able to

- understand the north European forestry
- understand the impact of silviculture on wood quality
- understand about wood decomposition and methods of wood preservation
- know on the recent advances in wood modification
- describe wood properties and how they are affected by handling conditions
- understand the wood mechanical processing from tree to finished consumer product
- report results of experimental work both in written and orally

Content

The course deals mainly with hard- and softwoods from northern Europe. It includes

- The principles for north European forestry
- Identification of tree species
- Wood structure and anatomical, chemical, physical and technical properties
- Quality sorting rules for round and sawn lumber
- Timber sorting
- Wood durability and how it can be achieved (with respect to maintaining the essential properties of lumber despite external stresses)
- How both roundwood and sawn lumber should be handled and stored.
- Principles for mechanical processing
- Report writing

Type of Instruction

The education is through lectures, laboratory work and exercises. For distance student, a computer with Internet access is necessary.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Assessment of the students' performance takes place through three exam moments, which are assignments, lab report and written exam. For the grade passed, the course objectives must be achieved, i.e. the student must have obtained approved results on all the exam moments.

- Assignments, 3.0 credits (U-G)
- Lab report, 1.0 credits (A-F)
- Exam, 3.5 credits (A-F)

Renewed examination is given in accordance with Local rules for courses and examinations at basic and advanced level at Linnaeus University.

If the university has decided that a student has the right to special educational support due to a disability, the examiner has the right to give a customized test or that the student performs the test in an alternative way.

Course Evaluation

During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the faculty.

Credit Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course: Overlaps totally with 4TS003 The wood material, 7.5 credits and partially with 1TS013 Forest products, 7.5 credits, 1TS014 Wood as an engineering material, 7.5 credits, 1TS018 Wood as an engineering material, 7.5 credits.

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the

start of the course at the latest.

Required Reading and Additional Study Material

Shmulsky R., Jones P.D. (2019) Forest products and wood science: An introduction. Seventh Edition. Wiley-Blackwell Publishing Ltd., West Sussex, UK. 482 pages.

Anon. (2013) Grundbok för skogsbrukare - Fakta om skog och skogsbruk. Skogsstyrelsen, Jönköping. 200 pages.

Other material is provided by the department at the start of the course.