



## Course syllabus

Faculty of Technology

Department of Forestry and Wood Technology

1TS037 Träets anatomi och identifiering, 7,5 högskolepoäng

1TS037 Wood anatomy and identification, 7.5 credits

### **Main field of study**

Forest and Wood Engineering

### **Subject Group**

Forest Science

### **Level of classification**

First Level

### **Progression**

G1N

### **Date of Ratification**

Approved by Faculty of Technology 2022-08-29

The course syllabus is valid from spring semester 2023

### **Prerequisites**

General entry requirements. Biology 1 or Physics 1a (1b1 and 1b2) or Naturkunskap 2 or equivalent.

## Objectives

After completing the course, the student shall be able to:

- prepare specimen for optical microscopic observation
- use of optical microscope
- identify common Nordic softwood and hardwood species using key features
- identify fibers from different softwood and hardwood
- identify unknown wood species systematically
- develop skills in the practical aspect of wood anatomy
- be able to report results of experimental work both in writing and orally

## Content

The course aims to provide in-depth knowledge on the anatomical structure of most common Nordic softwood and hardwood species and the interplay between structure and properties of the wood material. This course will provide the know-how and skills required to prepare samples and to identify wood through microscopic analysis.

This course deals with:

- structure and function of the tree
- microscopic structures of wood
- wood anatomy in practice
- wood maceration
- systematic wood identification
- report writing

### Type of Instruction

The teaching consists of lectures, laboratory sessions, exercises and group projects.. Laboratory sessions and exercises are the compulsory elements of this course. An internet-based learning platform is used for distribution of tasks and materials as well as submission of tasks.

### Examination

The course is assessed with the grades U, 3, 4 or 5.

Assessment of student's performance is done through two exam elements which are tasks and examination in the form of written report. For the grade pass, the course objectives must be achieved, i.e. the student must have obtained approved results at all the exam elements.

- Tasks, 3.0 credits (U/G)
- Examination, 4.5 credits (U/3/4/5)

Repeat examination is offered in accordance with Local regulations for courses and examination at the first and second-cycle level at Linnaeus University.

If the university has decided that a student is entitled to special pedagogical support due to a disability, the examiner has the right to give a customised exam or to have the student conduct the exam in an alternative way.

### Course Evaluation

During the implementation of the course or in close conjunction with the course, a course evaluation is to be carried out. Results and analysis of the course evaluation are to be promptly presented as feedback to the students who have completed the course. Students who participate during the next course instance receive feedback at the start of the course. The course evaluation is to be carried out anonymously.

### 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: 4TS515 Wood - structure, properties and identification, 7.5 credits.

### Required Reading and Additional Study Material

IAWA Committee (2004) IAWA list of microscopic features for softwood by an IAWA Committee. Richter, Hans Georg; Grosser, Dietger; Heinz, Immo; and Gasson, Peter E. (eds.). IAWA Journal 25(1):1-70. doi: <https://doi.org/10.1163/22941932-90000349>.

IAWA Committee (1989) IAWA List of microscopic features for hardwood identification by an IAWA Committee. Wheeler, Elisabeth A.; Baas, Pieter; and Gasson, Peter E. (eds.). IAWA Bull. n.s. 10(3):219-332.

Ilvessalo-Pfäffli, Marja-Sisko (1995) Fiber atlas: identification of papermaking fibers. 1st edition. Springer-Verlag Berlin Heidelberg. ISBN 978-3-642-08138-5. 400 pages.

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