



Course syllabus

Faculty of Technology

Department of Forestry and Wood Technology

1TS030 Trä som ingenjörsmaterial, 7,5 högskolepoäng

1TS030 Wood as an Engineering Material, 7.5 credits

Main field of study

Forest and Wood Engineering

Subject Group

Forest Science

Level of classification

First Level

Progression

G1F

Date of Ratification

Approved 2023-07-05

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

The course syllabus is valid from autumn semester 2024

Objectives

After completing the course, the student is expected to be able to know:

- Wood structure
- the physical properties of the wood
- the mechanical properties of the wood
- test methods for mechanical properties
- handle information about mechanical properties so that it can be applied and also criticized
- relationship between the structure and behavior of wood in use
- independent presentation of written report with critical discussion about a problem statement related to the wood properties

Content

Hardwood and softwood, growing in the Nordic region, will be the main subject in this course. The contents are:

- Structure of timber
- Wood and moisture
- Liquid and heat flow in wood
- Wood deformation
- Wood strength
- Report writing

Type of Instruction

Teaching is conducted in the form of lectures, laboratory work, quiz and written reports. Internet-based learning platform is used for distribution of materials and submission of tasks.

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 1TS014 Wood as an engineering material, 7.5 credits and partially with 4TS013 The wood material, 7.5 credits or 4TS003 The wood 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 & wood science: An introduction. Seventh Edition. Wiley-Blackwell Publishing Ltd., West Sussex, UK. 482 pages.

Dinwoodie J.M. (2000) Timber: Its nature and behaviour. Second Edition. Taylor & Francis Group, Oxfordshire, UK. 257 pages.

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

