

SYLLABUS

Design of Timber Structures 7.5 credits W7008T

Träkonstruktion

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2021-02-17**

Design of Timber Structures 7.5 credits W7008T

Träkonstruktion

Second cycle, W7008T

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Träteknik	Wood Physics and Wood Technology

Main field of study

Wood Technology

Entry requirements

The course requires skills corresponding to W0009T Wood manufacturing, process and material optimization and W0010T Wood material science, anatomy and mechanical characteristics.

Selection

The selection is based on 30-285 credits

Course Aim

The course will give students broader knowledge in wood design.

Learning outcomes: The student is given the opportunity to deepen their understanding regarding wood-based designs as well as training in independently perform calculations and simulations using FEM, finite-element method. With wood-based constructions means components and structures composed mainly of wood example glulam, CLT-wood, building and joinery products.

The student will also be trained in report writing and oral presentation skills.

See the course's Study for a more detailed description of the course objectives and course content.

Contents

The student should be in this course to deepen their knowledge of how to construct with wood, the research topic Wood Technology.

The course is divided into two parts, theory and assignment as follows:

- Theoretical Foundations: Includes the construction techniques of wood-based products such as glulam, CLT, building components, building and joinery products. Introduction to the finite-element simulation method, FEM.
- Assignment: You apply the theoretical foundations on given construction tasks. Provides training in conducting a design project regarding calculations and simulation skills, as well as further training in oral presentation techniques and report writing.
- See the study guide for a more detailed description of the course content regarding theoretical learning and implementation.

It should be noted that deviation from plan can be made, but only after consultation with the examiner and the subject representative.

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

The teaching is based on self-study with individual supervision, where the progress regarding learning outcomes is regularly monitored and evaluated together with the supervisor.

For a detailed description of the structure see the study guide that contains the following:

- Definition of the theoretical topics and learning outcomes
- Implementation plan including time schedule, suggested exercises and assignments
- Assessment Plan including the performance requirements and time frames.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.

Passed laboratory work / assignments 2,5hp

Oral or written exam, depending on the number of participants on the course. 5,0HP

See the course's study guide for a more detailed description of the course structure and schedule. Alternative forms of examination may occur.

Examination can be a maximum of three years after course registration.

Grading: U, 3, 4, 5

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Written Exam	G U 3 4 5	5	Mandatory	S18	
0002	Assignment Report	U G#	2.5	Mandatory	S18	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students

applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Head Faculty Programme Director Niklas Lehto 2021-02-17

Syllabus established

by Mats Näsström 2017-02-15