

SYLLABUS

Steel and Timber Structures 7.5 credits K7015B

Stål- och träkonstruktioner

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2022-11-03**

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Stål- och träkonstruktioner

Second cycle, K7015B

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Konstruktionsteknik	Building Technology

Entry requirements

Knowledge about

- building materials corresponding to K0002B Building Materials
- strength of materials and solid mechanics and structural mechanics corresponding to B0002B Structural Engineering and B7004B Structural Mechanics I.
- structural design corresponding to K0013B Structural Design, W7006B/K7012B Structural Design or S0007B Fire Exposed Structural Elements.

Selection

The selection is based on 30-285 credits

Course Aim

After the course, the students should be able to

- describe and explain the function and behaviour of steel and timber structures under load
- narrate and describe the background to current regulations for design and execution of steel and timber structures
- apply and chose relevant parts in current regulations for design and execution of steel and timber structures
- plan and perform calculation tasks individually and laboratory tasks in groups and present results and analyses in writing in a structured way so that a technically qualified person can follow the work and reach the same conclusions

Contents

The course deals with

- operation of steel and timber structures under load
- design of steel and timber structures according to current regulation with regard to local buckling (steel), buckling, lateral torsional buckling, flexural buckling and joints

Realization

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

The course is conducted in the form of lectures, arithmetic exercises and laboratory work.

At lectures, backgrounds and theories of function and mode of action under load are derived, presented and exemplified under load

Application of current regulations and calculation methodology is practiced individually

- on calculation exercises in classrooms
- in computer room using calculation computer software
- in assignments

Methods of action under load are tested in laboratories. The ability to plan, carry out and report on group work is practiced in laboratory tasks.

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.

Backgrounds, theories and calculation methodology are examined with a written final exam with differentiated grades. Rating scale: U, 3, 4, 5. Calculation methodology and ability to plan and perform calculation task individually are examined through a written calculation report. Rating scale: U, G. The ability to plan and perform laboratory tasks in groups, process data and present results is examined through written laboratory reports. Rating scale U, G All included examination parts must be completed for the final grade on the course.

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 Civil, Environmental and Natural Resources Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Written exam	G U 3 4 5	4	Mandatory	A19	
0002	Assignment reports	U G#	2	Mandatory	A19	
0003	Laboratory work	U G#	1.5	Mandatory	A19	

Last revised

by Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2022-11-03

Syllabus established

by Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2019-02-14