SYLLABUS

Surveying 2 7.5 credits Y0004B

Byggmätning 2

Course syllabus admitted: Autumn 2021 Sp 1 - Spring 2023 Sp 4

DECISION DATE
2021-02-17

Luleå University of Technology 971 87 Luleå, Sweden
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Surveying 2 7.5 credits Y0004B

Byggmätning 2

First cycle, Y0004B

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	U G VG *	Väg- och vattenbyggnad	Civil Engineering

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and Basic surveying 1 (Y0003B) or corresponding.

Selection

The selection is based on 1-165 credits.

Examiner

Jonny Nilimaa

Course Aim

The course aims to develop basic knowledge and practical skills in detailed measurement in construction, civil engineering and design measurement, as well as an understanding of backbone network measurement. After completing the course participants should be able to…

Knowledge and understanding
Search for information in governing documents HMK and SIS, and know how they are applied in construction and civil engineering measurement.
Interpret and describe the basics of laser scanning, photogrammetry and UAV.
Check models that form the basis for quantity control and machine control.
Quality-assured measurements, and have an understanding of basic fault theory and tolerances in building and construction measurement.
Check, calibrate and adjust, GNSS rover, balance and total station.

Competence and skills
Establish simpler construction site networks for GNSS and total station measurement.
Perform and calculate a double-weighted high-speed train.
Reduce and process batch measurements.

Judgement and approach
Prepare a simpler measurement report in accordance with "good measurement practice".

Contents

The course deals with the following:
Balancing train
Batch measurement
Construction site network and adaptations
Detailed measurement with GNSS, total station, balancing instruments, and data processing
Measurement for design
Laying of bolt groups and concrete structures

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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 consists of lectures, laboratory work, arithmetic exercises, individual work, group work, field exercises.

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.
The course is examined through design assignments and a written test.

Grading takes place according to grade scale G U VG. All included examination parts must be completed for the final grade on the course.

Transition terms

1000

Literature. Valid from Autumn 2021 Sp 1

Course offered by

Department of Civil, Environmental and Natural Resources Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0003	Written test	U G VG *	4	Mandatory	A21	
0004	Assignment report	U G#	3.5	Mandatory	A21	

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 Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2021-02-17

Syllabus established

The plan is established by the Department of Civil and Environmental Engineering 2008-01-22 and is valid from H08.