

SYLLABUS

Civil and Building Engineering Design 7.5 credits P0009B

Bygg- och anläggningsprojektering

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2023-02-13**

Civil and Building Engineering Design 7.5 credits P0009B

Bygg- och anläggningsprojektering

First cycle, P0009B

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Väg- och vattenbyggnad	Civil Engineering

Main field of study

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 + Swedish upper secondary school courses Mathematics 2a or 2b or 2c.

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Course Aim

The overall goal after passing the course is for the student to have a basic understanding of the deliveries and documents that a delivery from the design of a built object should contain.

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

1. understand the construction process and its execution for construction projects at an overall level
2. understand the design process including its activities, actors, and the responsibilities of different roles
3. understand and apply simpler project planning including activity and process division
4. understand and apply industry standards for construction documents
5. understand and apply industry-specific reference works for the production of technical descriptions
6. understand and apply CAD tools and systematic construction at a basic level
7. analyze and relate acquired knowledge to industry-specific challenges

Contents

This course provides general knowledge of the construction process for construction projects but focuses more on providing in-depth knowledge of the design process. Design and planning are a central sub-processes within civil engineering in which one plans, designs, and determines the design of construction works. Both planning and designing is the part of the construction process where the architect's intentions are realized and described so that the building can be erected by one or more contractors. The course describes the design process based on both the construction of buildings as well as infrastructure, between which there are both similarities and differences. The design process for both buildings and infrastructure is divided into several phases with an increased level of detail the closer you get to the production process.

Realization

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

Within the course, the work takes place both individually and in small groups in the various activities. Group assignments are primarily carried out in the form of CAD drawings, while individual reflections and seminars are carried out to link theory and practice. The individual elements relate in different parts to design in terms of lectures and seminars in drawings, BIM design, building codes (AMA), and that practical and theoretical lectures are reflected around in order to both understand and apply relevant skills for the industry.

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 learning activities consist of lectures, project work, seminars, reflection tasks and written quizzes. The activities contain both individual and group project work for the various modules. Project work is mainly carried out when applying CAD tools, while the individual elements relate in different ways to planning through both practical and theoretical elements. Theoretical knowledge is mainly acquired through lectures and course literature, while the practical elements also include seminars and laboratories.

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
0006	Written exam - theory	G U 3 4 5	2.5	Mandatory	A23	
0007	Submission - Planning	G U 3 4 5	1	Mandatory	A23	
0008	Submission - systematized construction	G U 3 4 5	1	Mandatory	A23	
0009	Seminar - Drawing understanding	U G#	1	Mandatory	A23	
0010	Seminar - AMA understanding	U G#	1	Mandatory	A23	
0011	Submission - Reflection	U G#	1	Mandatory	A23	

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 2023-02-13

Syllabus established

by Eva Gunneriusson 2015-02-09