

**SYLLABUS**

# **Sustainable Building 7.5 credits V0015B**

**Hållbart byggande**

**Course syllabus admitted: Autumn 2023 Sp 1 - Present**

**DECISION DATE  
2021-02-17**

# Sustainable Building 7.5 credits V0015B

## Hållbart byggande

### First cycle, V0015B

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

### Main field of study

Architecture, 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 Knowledge of construction and building materials etc. V0011B, F0007B and K0002B.

## Selection

The selection is based on 1-165 credits.

## Course Aim

When you have taken this course you should be able to:

1. explain and critically remain to the concept "Sustainable development" at a national and global level; the origin of the concept, how it has developed and the definitions and of today.
2. explain the structures and functions of the ecosystems which contribute with resources and be able to relate these to the building.
3. explain and compare reasons that threaten a sustainable development of society. Be able to give examples and explain effects of non-sustainable activities and relate these to building.
4. explain what economical, juridical and political steering tools that are available, national and international and relate these to sustainable development
5. give examples of an engineer's professional role and responsibility to achieve a sustainable development of society.
6. describe energy, material and waste flows in society and give examples concerning handling of materials and recycling possibilities in construction.
7. give examples in which way urban areas can be planed, designed and be built to achieve a sustainable development to increase the social aspects in the urban areas and decrease the environmental pressure on nature and culture environments.
8. discuss and reflect on sustainable development in relation to planning, building and construction with a system perspective and be able to explain expressions such as suboptimization in this context.
9. write and review scientific manuscripts and argue with scientific references

## Contents

In this course, the concept sustainable development will be dealt with from ecological, economic and social perspectives and relate this to building of society and construction. Threats towards sustainable development will also be dealt with. Flows of materials and waste in society and recycling possibilities in construction is also included in the course as well as steering tools to promote a sustainable development.

Within the course frame, focus is also on scientific writing, and argumentation with scientific references as well as how citations should be made in scientific texts.

## 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 consists of lectures, a project task and mandatory seminars. Theoretical parts will be dealt with at lectures. The aim of the project task is to give the students a possibility of working more practical with the concept sustainability development and relate the concept to building of society and construction. The project work results in an article of scientific format and is presented in small groups. By the seminars and the reflection task, the students are given opportunity to reflect more about sustainable development, how the concept have developed during the years as well as about their own role and responsibility as a future professional engineer about a sustainable development in the building sector.

## 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 aims 1, 2, 3, 4, 6 och 7 are examined with written exam (#0005). The course aims 5 and 8 are examined by active participation at two seminars (#0007) and with individual written reflections (#0008). The course aims 3, 4, 7, 8, and 9 are examined by a project task (#0006). To pass the project task pass is needed for a written article, an individual written opposition as well as active participation at the oral presentation.

## 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.

## Overlap

The course V0015B is equal to L0010N

## Course offered by

Department of Civil, Environmental and Natural Resources Engineering

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0005	Written exam	G U 3 4 5	4.5	Mandatory	A10	
0006	Project task	G U 3 4 5	2.5	Mandatory	A10	
0007	Seminar	U G#	0.3	Mandatory	A10	
0008	Assignment	U G#	0.2	Mandatory	A10	

## 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**

by Department of Civil and Environmental Engineering 2009-01-20