



COURSE SYLLABUS

Architectural Engineering, 6 credits

Arkitektur och teknik, 6 högskolepoäng

Course Code: TATN19	Education Cycle: First-cycle level
Confirmed by: Dean Jun 1, 2019	Disciplinary domain: Technology
Revised by: Director of Education Jan 17, 2022	Subject group: BY1
Valid From: Aug 1, 2022	Specialised in: G2F
Version: 3	Main field of study: Civil Engineering

Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding

-display knowledge of the planning process, from concept, program stage and planning to the design of a public building in its physical environment

-display knowledge of various public building types, their historical development and use, as well as the design and performance of contemporary spaces and architectural theories

-display knowledge and understanding of a public buildings structural design, technical systems and solutions related to materials, indoor environment and the climate screen based on Swedish legislation and standards

Skills and abilities

-demonstrate the ability to independently make a design proposal, analyze and visualize a part of a public building by functional, structural, technical, material-related and architectural aspects

-demonstrate the ability to make drawings and models for presentation, calculations, analysis and simulation of a part of a public building in the system phase

Judgement and approach

-demonstrate the ability to identify, analyze and evaluate aspects of public buildings by functional, structural, technical, material-related and architectural aspects, supporting a sustainable development

Contents

The course provides basic knowledge in planning and design of public buildings, based on technical and qualitative aspects, with respect to legislation and standards, supporting a sustainable development.

The course includes the following elements

-The history and development of public buildings

-Typologies of public buildings and conditions for their planning and design

- Qualitative aspects of the design of public buildings
- Aspects of sustainability that affect the planning and design
- The design of spaces and spatial concept of modern architecture
- Structural systems and technical solutions for public buildings
- Solutions for material, indoor environment and the climate screen for public buildings
- Legislation, standards and regulations regarding the planning of public buildings
- Sketching and modeling work for presentation
- Graphic presentation techniques

Type of instruction

Lectures, project work and a field trip.

The teaching is conducted in English.

Prerequisites

General entry requirements and completed courses 60 credits in first cycle, including BIM 2 Analysis and Simulation - Architectural Engineering, 6 hp (or the equivalent).

Examination and grades

The course is graded 5,4,3 or Fail.

Registration of examination:

Name of the Test	Value	Grading
Project work	6 credits	5/4/3/U

Course literature

The literature list for the course will be provided 8 weeks before the course starts.

Structure as architecture: A source book for architects and structural engineers; Andrew W. Charleson

Publisher: London: Routledge År:2015

ISBN-number: 978-0-415-64459-4

Facade Construction Manual; Thomas Herzog

Publisher: Edition Detail

ISBN-number: 978395533694