



## COURSE SYLLABUS

# Architectural Engineering, 6 credits

*Arkitektur och teknik, 6 högskolepoäng*

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Course Code:	TATN15	Education Cycle:	First-cycle level
Confirmed by:	Dean Feb 9, 2015	Disciplinary domain:	Technology (95%) and social sciences (5%)
Valid From:	Aug 1, 2015	Subject group:	BY1
Version:	1	Specialised in:	G2F
Reg number:	JTH 2015/1041-313	Main field of study:	Civil Engineering

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### Intended Learning Outcomes (ILO)

After completing the course, the student shall:

#### *Knowledge and understanding*

- demonstrate knowledge of the planning process, from concept, program stage and planning to the design of a public building in its physical environment
- demonstrate knowledge of various public building types, their historical development and use, as well as the design and performance of contemporary spaces and architectural theories
- demonstrate 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 ability to independently make a design proposal, analyze and visualize a part of a public building by functional, structural, technical, material-related, cultural and architectural aspects
- demonstrate 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*

- be able to identify, analyze and evaluate aspects of public buildings by functional, structural, technical, material-related, cultural and architectural aspects, supporting a sustainable development

### Contents

The course provides the student 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:

- 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
- Economic assessment that includes indicators for different activities for descriptions and calculations in the program stage
- Sketching and modeling work for presentation
- Graphic presentation techniques

### Type of instruction

Lectures, project work, field trip.

The teaching is conducted in English.

### Prerequisites

General entry requirements and completed Courses 60 credits in first cycle , including BIM Project 2, Analysis and Simulation - Architectural Engineering, 12 hp, Energy and Building Services Engineering, 6 hp, Structural Engineering 1, 6 hp and Industrial Management, Entrepreneurship and Marketing, 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 is preliminary until one month before the course starts.

Structure as architecture

A source book for architects and structural engineers

Andrew W. Charleson

Förlag: Architectural Press 2005 (slut på förlaget, finns som e-bok på biblioteket)

ISBN-nummer 13:978-0-7506-6527-8