

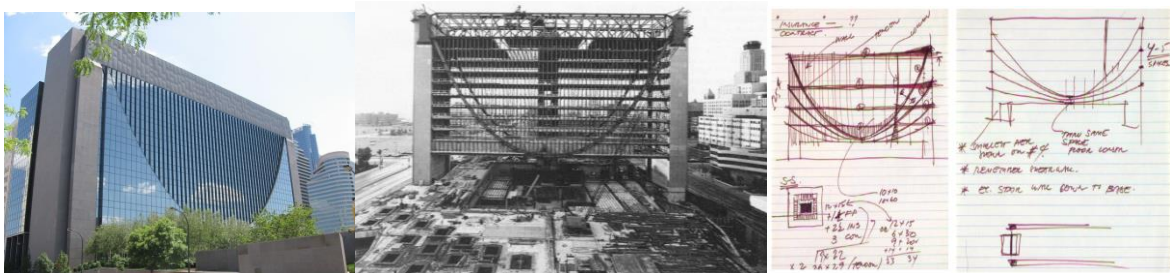
VSMN15, Integrated Design: Structural Design – Architectural Design, 7,5 credits

AAHN10, Integrated Design: Architectural Design – Structural Design, 7,5 credits

Course programme spring 2018

Introduction

The goal is to establish a common conceptual framework for the construction, optimization and architectural expression, in the interaction between engineers and architects during the last part of their training. The course is designed to run as a number of projects in which both engineers and architects will contribute to shaping, based on their individual professionalism. Some elements might be carried out individually by various student categories, but the key passages to be implemented jointly.



Course lay out

The course consists of a number of *lectures* introducing various examples, building a shared understanding of how we can consider structures. This common understanding also forms the basis for a dialogue-shaped design process starting from architects and engineers' skills.

Architects and engineers will work together in four tasks: three smaller projects ("Task A-C") and one somewhat larger project related to the studio projects – "Wine and architecture"

During week 8 (19th of February – 23rd of February) a computer-based exercise - Task C - will be performed.

You will work in groups, typically consisting of 3-5 architects and 2 engineers. Consultation takes place mostly in these groups. Consultation is scheduled and some consultation is compulsory, see next page.

Examination and compulsory attendance

The examination of the course is based on the active participation in the tasks and in the consultation. This means that all group members must be active and contribute to the groups' work. Thus, all students must attend at least 75% of the scheduled lectures and presentations (and attend all presentations done by their group). All students must participate in and actively contribute to all compulsory tasks and projects, i.e. tasks A, B and C + the studio project. To verify the active participation, attendance lists will have to be signed at each lecture/presentation. Notes will be taken by the teachers during consultation, in order to document the activity of all group members. During presentations/critique all members of a group must be prepared to answer for the complete group. Grading in the course is pass/no pass (godkänd/underkänd). ECTS-grading is not used, see [LTH-webpage](#).

Course schedule (subject to changes)

Week	Day	Date	Start	End	Topic/Activity	Room
3	Mon	2017-01-15	08:00	10:00	Course introduction, course admin and introduction to Task A (ES)	A:B
3	Mon	2017-01-15	13:00	17:00	Work with Task A, short presentation and feed back.	A:3015
4	Mon	2017-01-22	08:00	10:00	Lecture 1 Göran Sandberg Introduction Task B, work Task B	A:B
5	Mon	2017-01-29	08:00	10:00	Lecture 2 Marcin Kozlowski	A:B
5	Mon	2017-01-29	13:00	17:00	Work with Task B	A:3015
6	Mon	2017-02-05	08:00	10:00	Lecture 3 Alex van de Beld	A:B
6	Mon	2017-02-05	13:00	17:00	Task B. Consultation available	A:3015
7	Mon	2017-02-12	08:00	10:00	Lecture 4 Erik Serrano	A:B
7	Mon	2017-02-12	13:00	17:00	Presentation Task B	A:3015
8	Mon	2017-02-19	08:00	10:00	Lecture 5 IntroTask C Vedad Alic Computer exercise	A:B A:1031
8	Mon	2017-02-19	13:00	17:00	TASK C – Computer exercise	A:1031
9	Mon	2017-02-26	08:00	10:00	Introduction to studio projects	A:B
9	Mon	2017-02-26	13:00	17:00	Work with studio projects	A:3015
12	Mon	2017-03-19	08:00	12:00	Project consultation, <u>compulsory</u>	TBA*
12	Mon	2017-03-19	13:00	17:00	Project consultation, <u>compulsory</u>	TBA
13	Mon	2017-03-26	08:00	12:00	Mid critique, projects	TBA
13	Mon	2017-03-26	13:00	17:00	Mid critique, projects	TBA
16	Mon	2017-04-16	08:00	12:00	Project consultation available	TBA
16	Mon	2017-04-16	13:00	17:00	Project consultation available	TBA
17	Mon	2017-04-23	08:00	12:00	Project consultation, <u>compulsory</u>	TBA
17	Mon	2017-04-23	13:00	17:00	Project consultation, <u>compulsory</u>	TBA
19	Mon	2017-05-07	08:00	12:00	Project consultation available	TBA
19	Mon	2017-05-07	13:00	17:00	Project consultation available	TBA
20	Mon	2017-05-14	08:00	12:00	Project consultation available	TBA
20	Mon	2017-05-14	13:00	17:00	Project consultation available	TBA
21	Mon	2017-05-21	08:00	12:00	<u>Final critique, projects</u>	TBA
21	Mon	2017-05-21	13:00	17:00	<u>Final critique, projects</u>	TBA

*=To be announced

Deadlines, Task A-C

Tasks A-C should be handed in by uploading to shared Dropbox folder no later than:

Task A – Monday, 15rd of January, 24:00 (Task finalized during the day).

Task B – Sunday, 11th of February, 24:00

Task C – Monday, 19th of February, 24:00, (Task finalized during the computer exercise).

Studio projects – Thursday 17th of May, 24:00

Teachers

Erik Serrano (ES), erik.serrano@construction.lth.se

Christer Malmström (CM), christer.malmstrom@arkitektur.lth.se

Alex van de Beld (AvB), Alex@albsurroundings.com

Vedad Alic (VA), vedad.alic@construction.lth.se

+ Guest teachers

Reference literature

Conceptual Structural Design, Olga Popovic Larsen and Andy Tyas, ISBN 0-727732

Form and forces: designing efficient, expressive structures, Edward Allen and Waclaw Zalewski.

Shell Structures for Architecture - Form Finding and Optimization, Sigrid Adriaenssens et al.

Engineering a new Architecture, Tony Robin ISBN 0-300-06116-1

Finding Form, Frei Otto, Bodo Rash, ISBN 3-930698-66-8

Structure & Architecture, Angus J Macdonald, ISBN 0-7506-4793-0

Structural Order in Space, Ture Wester, ISBN 87-981698-0-7

Building Structures, Malcolm Millais, ISBN 0-419-21970-6