

AAR4620 Architectural Design with Light and Colours

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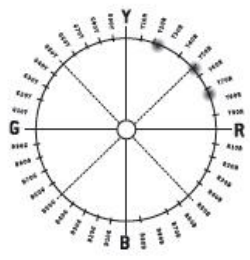
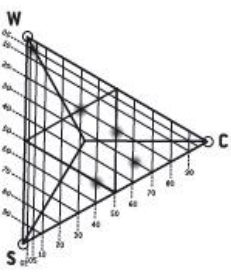
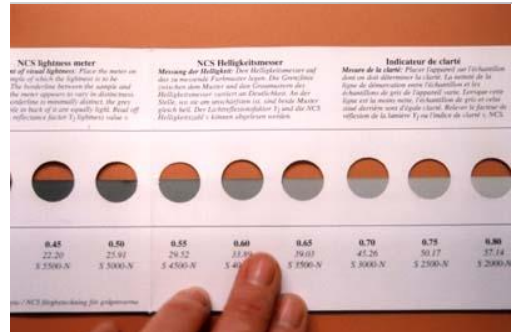
- simple programs with a focus on light, colour and materials

The course aims to give students basic knowledge and skills to work with light, colour and materials in an architectural context

- daylight as a light source in architecture and as an architectural element, and the interaction between natural and artificial light.
- the interaction between light, colour and materials, and its impact on the overall spatial and aesthetic experience of space.
- general architectural design competence.

Methods:

Seminars, lectures, workshops and practice. Full scale modelling in Roomlab and scale modelling in Daylight Lab. Students will be working on three assignments: *Exhibition, Vertical Transparency and Materialized Space.*



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The Design Course requires participation in the Theory Course

AAR4850 Light and Lighting (7.5 cr)

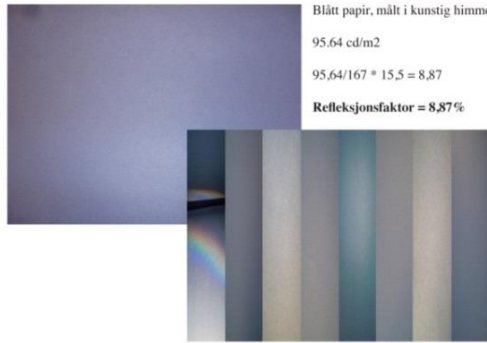
Responsible teacher: Barbara Matusiak.

The course aims to give students knowledge and skills on:

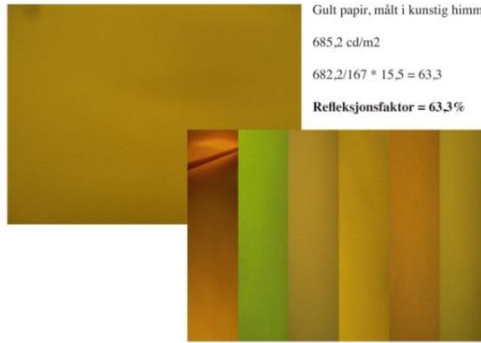
- knowledge on human visual perception
- knowledge on photometric laws and rules
- knowledge on daylight as a light source and daylighting design, monitoring and evaluation
- skills in lighting design, with focus at natural light
- how to do qualitative and quantitative evaluation of the visual environment in buildings
- general competence about cooperation with lighting-technical consultants in architectural practice

Timeframe:

The Theory Course is intensified to the first six weeks, followed by an exam in medio October (app. week 40).



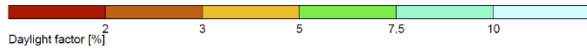
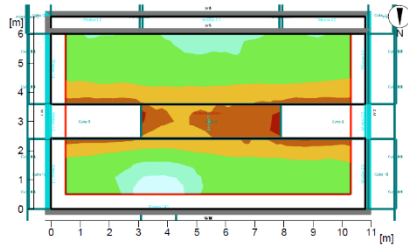
Blått papir, målt i kunstig himmel
 95.64 cd/m²
 $95.64/167 * 15.5 = 8.87$
Refleksjonsfaktor = 8,87%



Gult papir, målt i kunstig himmel
 685.2 cd/m²
 $682.2/167 * 15.5 = 63.3$
Refleksjonsfaktor = 63,3%



Rødt papir, målt i kunstig himmel
 95.64 cd/m²
 $212.2/167 * 15.5 = 19.7$
Refleksjonsfaktor = 19,7%

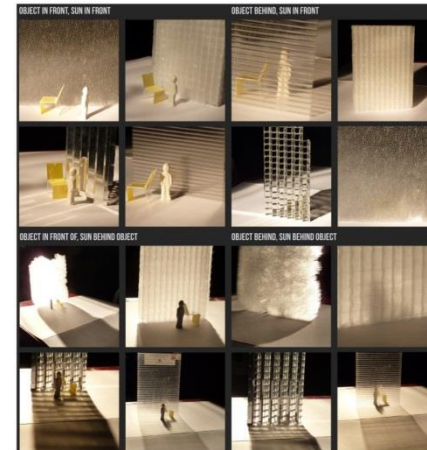
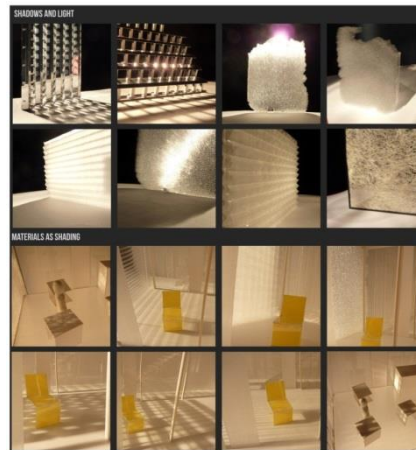
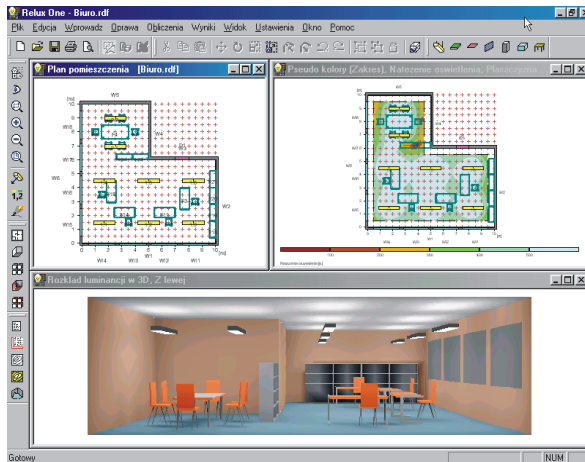


	Without artificial lighting		With artificial lighting	
	Horizontal	Vertikal	Horizontal	Vertikal
Living room	137	72	202	69
Kitchen	168	229	168	224
Bed room	98	81	141	116
Bath room	87	51	285	127

● Measuring points



Living room



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Credits: 15

LIGHT &
COLOUR
CENTRE



Responsible Teacher Design Course: AAR4620: Kine Angelo

Responsible Teacher Theory Course: AAR4850 : Barbara Matusiak

Guest lectures by Alex Booker, Marte Valderaune and relevant professionals

Students: 16 - 18

Language: English

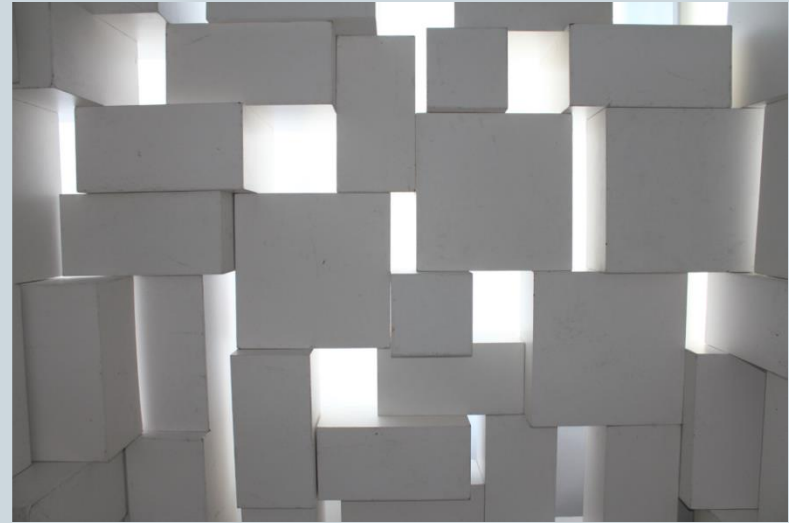
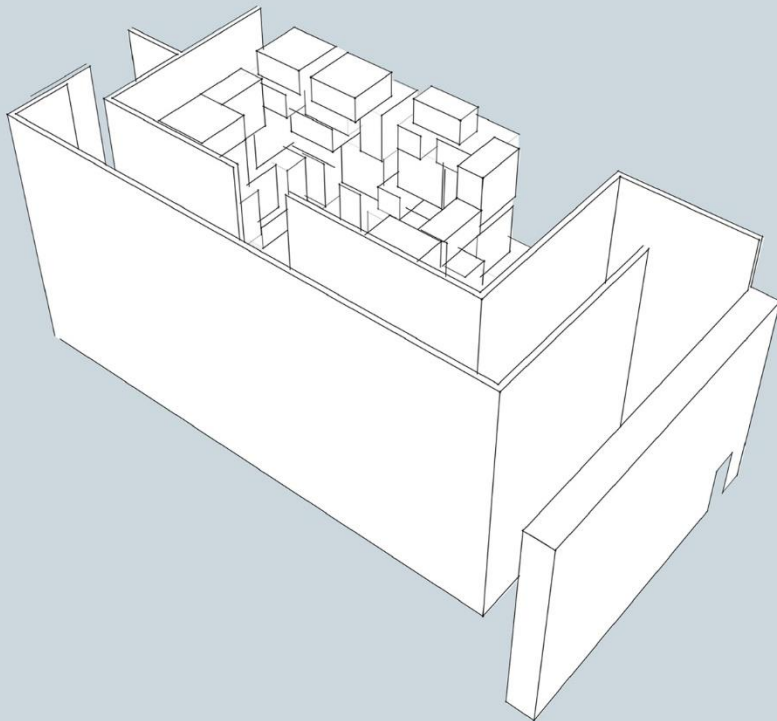
Course duration: week 35 - 50

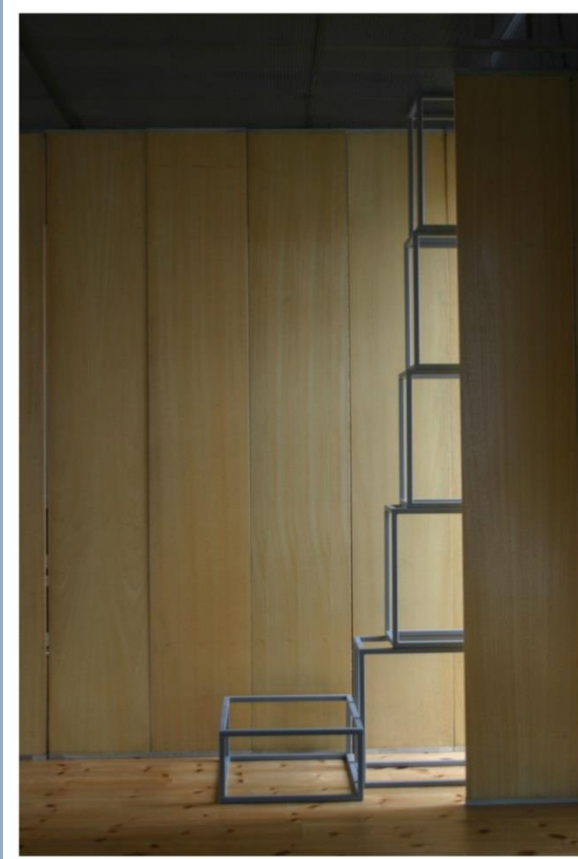
Excursion: No mandatory course excursion, but individual research in week 44

Assignment 1

Exhibition

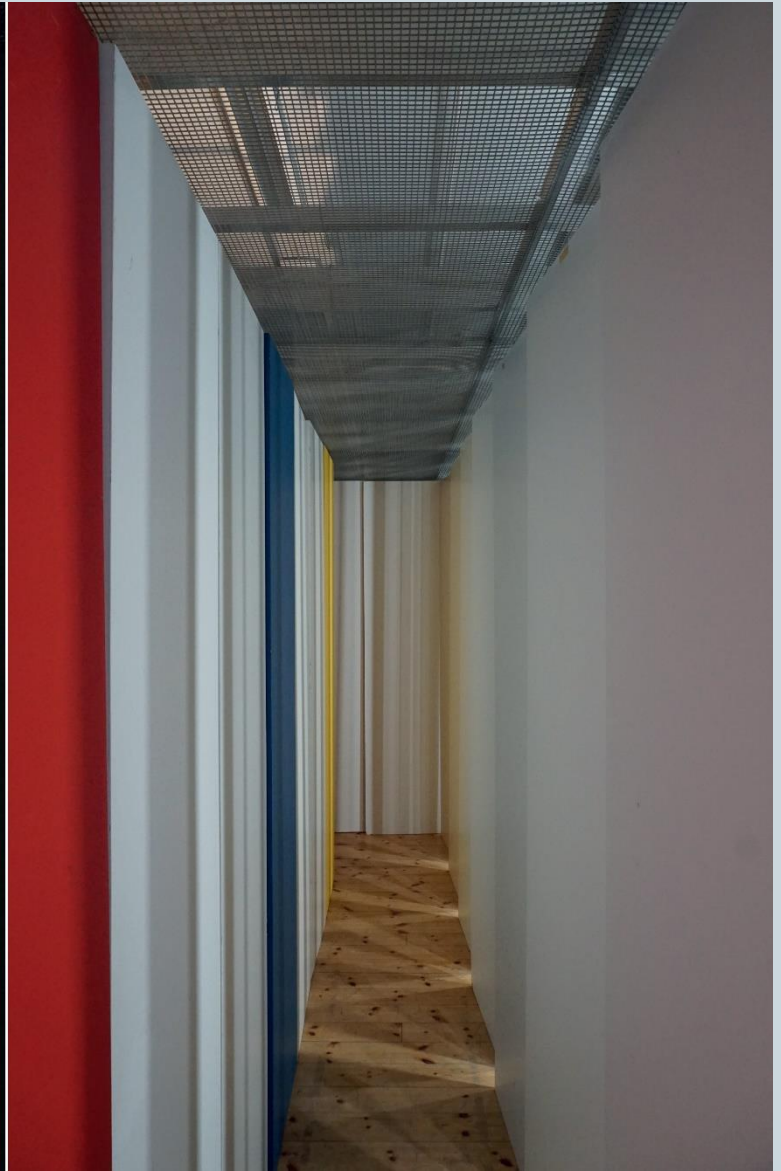
Exhibition assignment in Roomlab
Full scale (1:1)









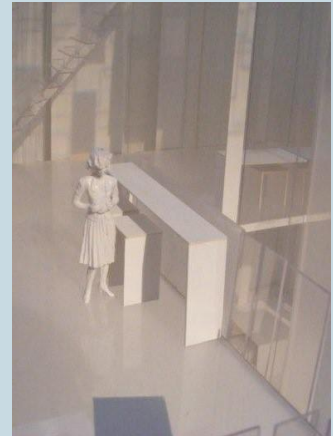
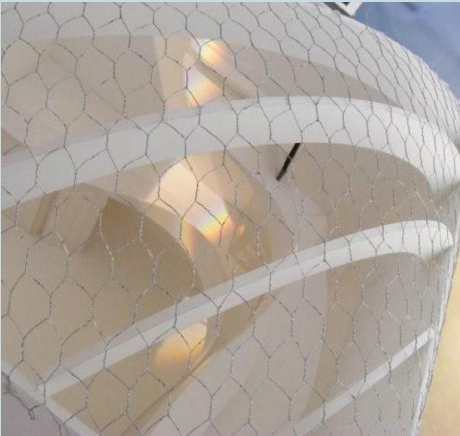
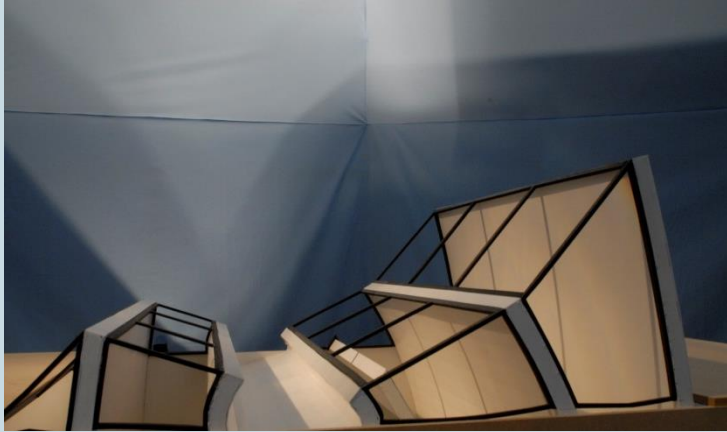


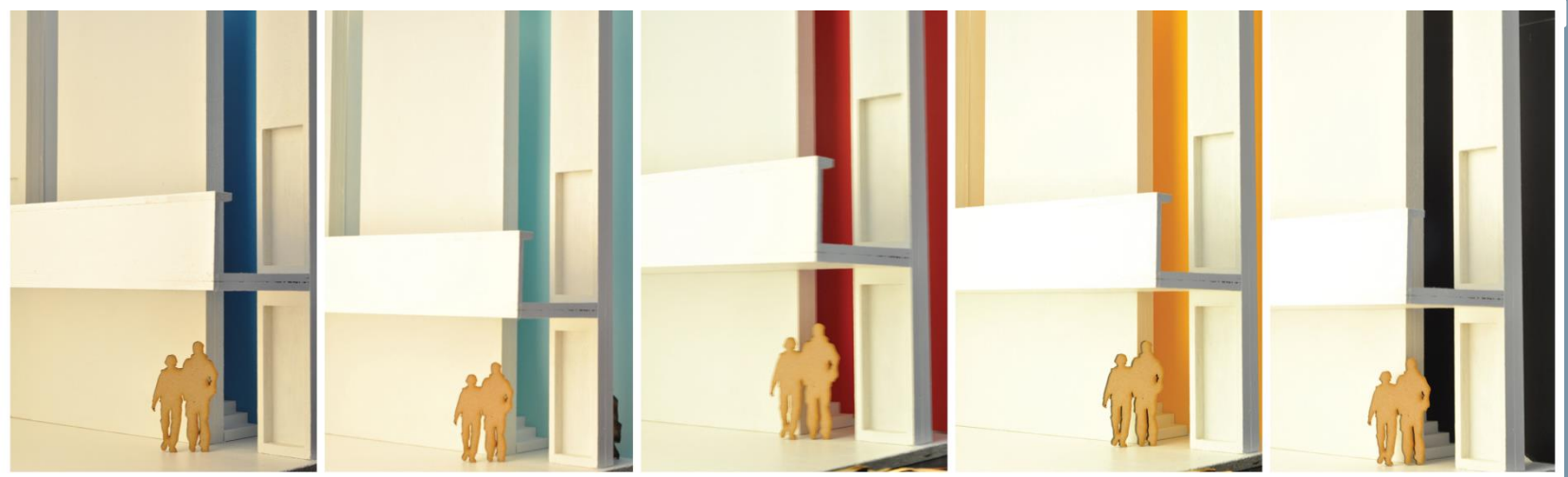
Assignment 2

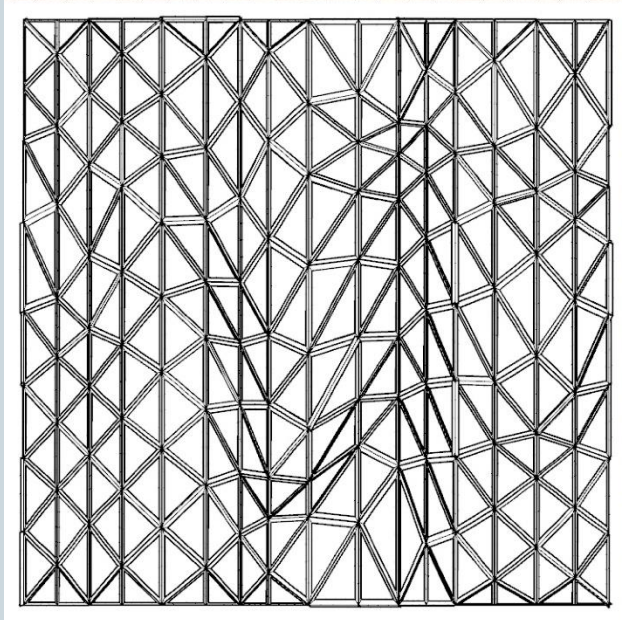
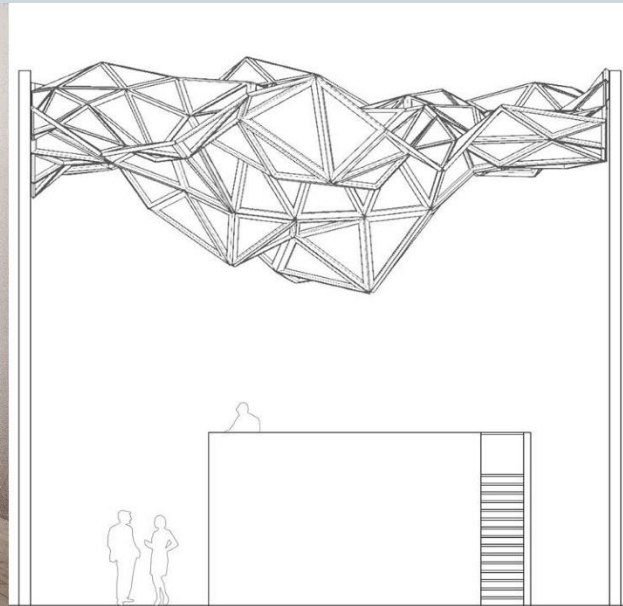
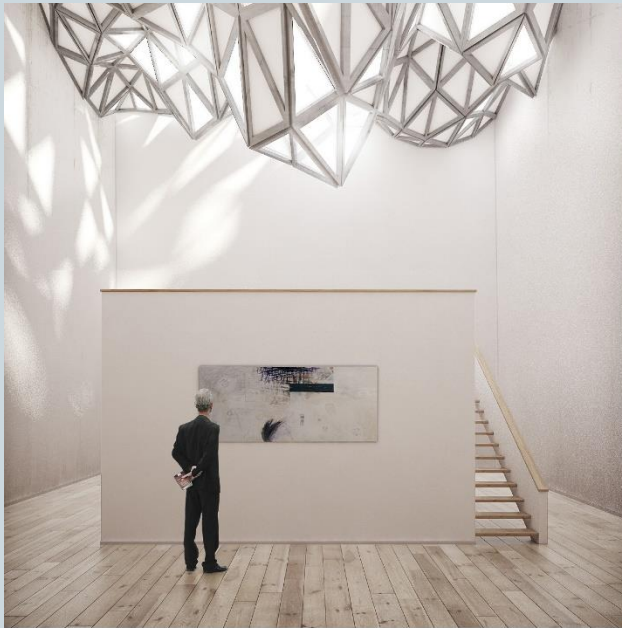
Vertical Transparency

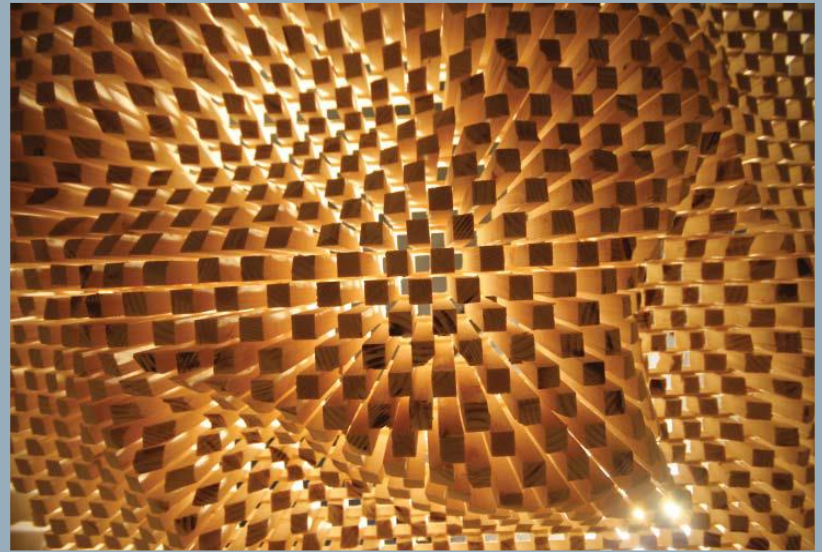
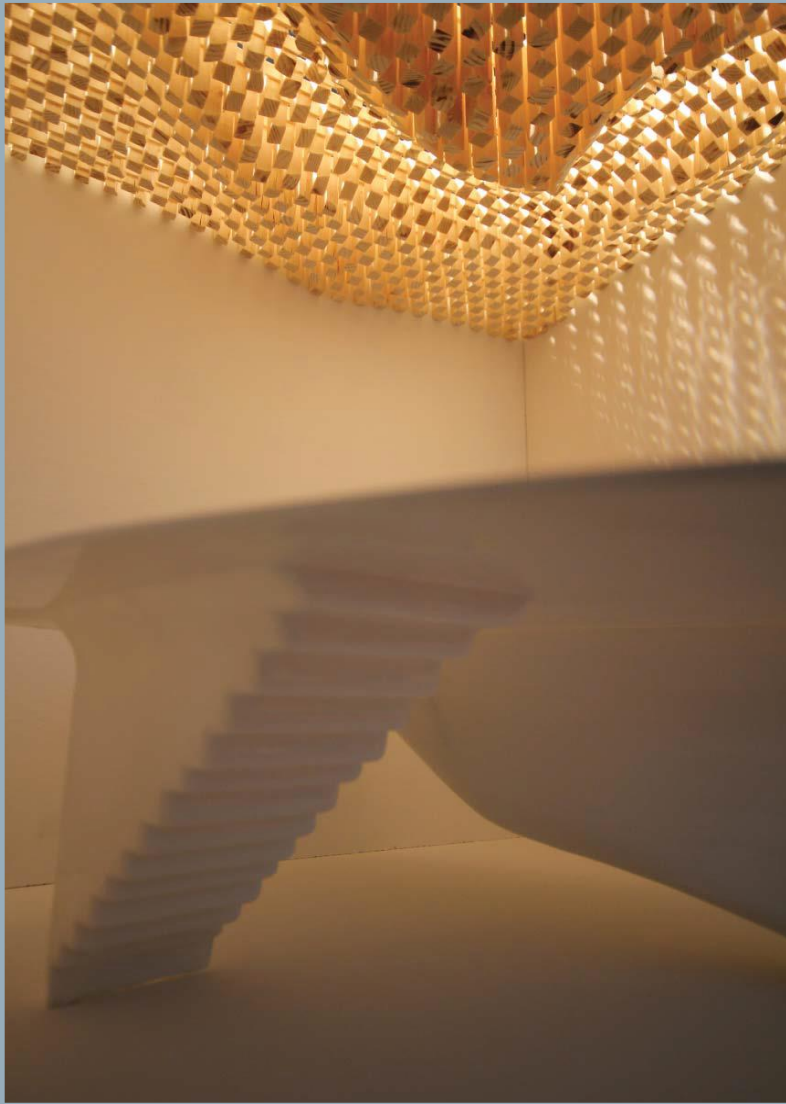
Simple program for workshops
in Daylight Lab
Models in scale 1:20











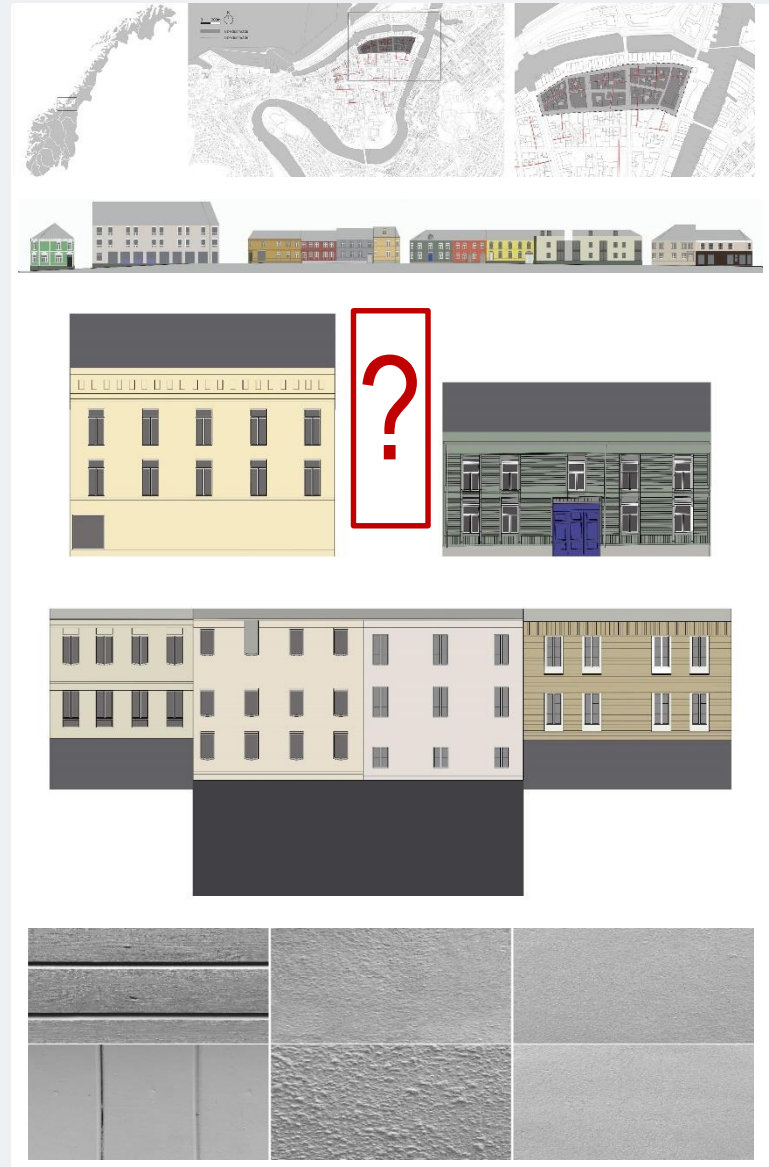
Assignment 3

Materialized Space

Simple room program - infill or transformation project - utilizing light and colour in interiors and exteriors.

The project will contribute to – and be in cooperation with – the Municipality of Trondheim, and the project «Veiter og gårdsrom».

The assignment will have a specific focus on the interaction between light, colour and materiality, and its impact on spatial and aesthetic quality in an urban context.





byrom

istandsetting

aktivisering

infill

ny liv

vitalisering
av **VEITER** og
GÅRDSROM

i Midtbyen
historisk handelssentrum

2016-2018



Example of workshops: facade colour proposal for actual client + paint mixing



KEY WORDS

Natural and artificial light, facade design, visual perception, daylight factor, materials, view, contrast, room sequence, spatial quality, colour reference systemes, texture, registration and analysis methodology.



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Contact info

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