WORKING WITH WOOD

Transformative Learning in Architectural Education

STRUKTUR I LANDSKAP 2009

PHOTO: EIRIK ACKERMANN
MAKING IS THINKING* Hands on introduction to Architecture

LIVE STUDIO Real life experience on Master level

The very first project our students are assigned, is to complete a small scale scenario of the entire design process from idea to construction.

The program and sites vary each year, but have in common that they demand an architectural interpretation of the qualities of a place in making spaces for people to meet.

It ends up as a big outdoor exhibition open for the public.

"WOOD-li- DO"

PHOTO: ANDREAS MAGERØY
They have to consider:

**Tectonics:** How forces act within a construction, and how this can become fully integrated in the architectural expression and the potential of wood as a building material.

**Collaboration:** Essential skills in teamwork, in contrast to the delusion of the architect as architect as a solitary genius.

**Public response:** How people take the construction into use.

And invoke awareness of:

**Place:** The landscape and the intimate space between the constructions of the individual groups.

**Sensory perceptions:** Light & shadows, sounds & stillness, smell, air-movement, texture, places with protection, places with exposure etc.
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This hands on start gives our students a basic understanding of **materiality** and **construction**

They will experience **space** and **scale** and how the structures are taken into use.

They will have to **cooperate** and be aware of the surroundings and how they are changing a place.

In addition they will gain a basic, although modest skills in building.

And they will discover the possibilities of **WOOD**.

PHOTO: 1 and 4: ERIK HOFBRO 2 and 3 GRO RØDNE
The **constructive potential, availability, and easily manageable dimensions** make **wood** a particularly suitable material in this context. It has got a wide range of **possibilities of expressions** it’s **easily workable, easy to change** - and finally to **dismount and reuse**.
This is a demanding way of teaching but has proved to give positive results and a valuable knowledge of wood as a construction material.

It is a result of an intentional priority area on full-scale building, especially on wood as a building material, over the past 12 years.

The national wood-center (TreSenteret) has been a central contributor in this work.

Both the Faculty and the wood industry undoubtedly benefit on the exposure these projects implies.

Remember: Todays Students are tomorrows leaders, byers, builders, inventors….

In order to increase the competence and the use of wood we must start with the students.
“Making is thinking” addresses a much needed re-examination and re-description of how to understand and develop skills connecting the body and mind and is one of five work packages in the new Centre TRANSark

Student work, both in the first year and in the master course “Making is thinking” are targets for this work package.

The assignments used as objectives, span from full-scale building to other “hands-on” experiences, in the overlap between artistic and architectural methods. “Doing” as a source of new knowledge is the common denominator:

**making is thinking**

Making is thinking **seeks to investigate the transformative aspects the students experience through this direct learning by making.**

We will also examine if -, and in which case, **how** this way of learning changes how students understand and practice Architecture. The presumed insight will be used in the redesign and development of the current courses.

Read more: http://www.ntnu.edu/transark
The way we teach
In this assignment
is something in between
Master and Apprentice
and
letting the students
find their own way

"Learning by doing"

«For the things we have to learn before we can do them, we learn by doing them». Aristotle

I hear and I forget
I see and I remember
I do and I understand

Kung Fu Tse

Photos: Gro Rødne
Architecture belongs to the “Making disciplines.” But the traditional design studio cannot mimic the embodied experience that is achieved through a “live” situation of making. The students will gain knowledge that not only covers professional and academic skills, but also contextualizes tacit knowledge.

“We can easily conclude that this assignment is indeed an ancient one”

Rules, regulations and software are constantly changing. But certain factors do not change rapidly: How we experience space is related to our beings as “biological and cultural creatures” (Juhani Pallasmaa). Our students get this embodied experience of their own architectural work from the very beginning of the study.
Literally it is also building their self-confidence to later implement projects on their own.
Our students carry out high quality wood projects around the world
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THE REAL WORLD FACTOR

The Wave /Bølgen Holzbau 2014, Students at AB fac. NTNU, Studio Beta, AB fac. NTNU, Trondheim Kommune

All photos: Students at AB fac. NTNU
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TYIN tegnestue

Safe Haven Library, Thailand, 2009

Cassia Co-op Training Centre, Sumatra, 2011

Boathouse, Aure, 2011

All photos: Pasi Aalto
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RAKE  Show room, Trestykker m/August Schmidt, 2011

The Prettiest House in the World, Einar Bye & Ola Sendstad, Master 2011

Photos: The Architects
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RALLAR architects, Rjukan Town Cabin 2013

Photos: RALLAR

RALLAR architects, Boathouse in Haddal, Sunnmøre 2012

Photos: RALLAR
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FRIrom – a place for emotions, St. Olav, Sunniva Huus Nordbø & Maren Ødegård, Master 2011/2013

All photos: Pasi Aalto
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RINDAL 1  Sauna

Mastercourse: Topology/Typology/Techtonics
Ass. Prof. Finn Hakonsen, dep. BHT
AB fac, NTNU / Rindal kommune, 2011
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RINDAL 2  Birdwatching Tower

Mastercourse: Timber Structures
Prof. Jan Siem, dep. BHT
AB fac, NTNU / Rindal kommune, 2012

All photos: Pasi Aalto
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RINDAL 3 Starwatching Tower

Mastercourse: Timber Structures
Prof. Jan Siem, dep. BHT
AB fac, NTNU / Rindal kommune, 2014/2015

Sleeping Under the Stars
Student project 2014
RINDAL 3  Starwatching Tower
Mastercourse: Timber Structures
Prof. Jan Siem, dep. BHT
AB fac, NTNU / Rindal kommune, 2014/2015

UFO
Student project 2014

Three Cubes
Student project 2014

Balance
Student project 2014
A dual model with a Faculty HUB cooperating closely with the Student HUB, “Studio Beta”, has been developed. The dual approach is to ensure the balance between student independence, professional ownership and the necessary monitoring by the institution.

**NTNU Live Studio HUB** c/o Hans Skotte, Steffen Wellinger, Elena Archipovaite

**Studio BETA** c/o Kristin Solhaug, John Haddal Mork, Kristoffer Olsen Hauge

Live Studio: [http://ntnulivestudio.org/](http://ntnulivestudio.org/)