COGNITION AND DESIGN

DTM1
DESIGN PROCESS ANALYSIS

COMPETITION

DTM3
PROFESSIONAL STRATEGY

FOCUS 2019
FORM-WORKS
CONCRETE & WOOD

DTM 2019-20
ARCH-P-7107
ARCH-P-7108

DTM-Design Thinking & Building Materials

Focuses on the designer and more precisely on the architect's thinking and skills during his design. These design studies are applied in the frame of links with building material federations.

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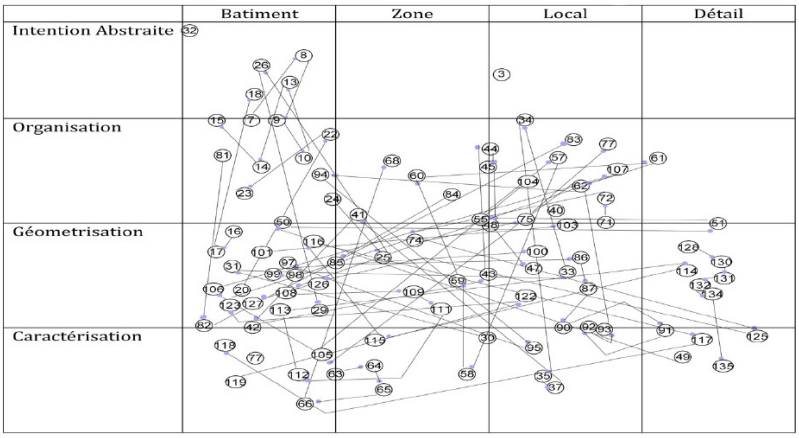
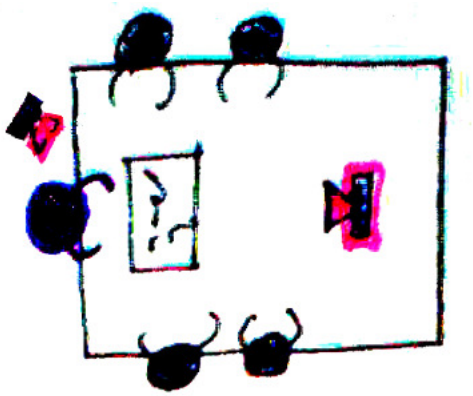
First Term
Thursdays 9-12 am & 2-6 pm

Objectives of this teaching unit

- This unit "Design Thinking & Building Materials" aims to highlight the **elements of the design process,** to underline the multiple implications on the designer's architectural production. This one enlarges the approach of the architectural program and thus the designer's creative potential, firstly by developing cognitive knowledge, and secondly, by approaching the experimental research focused on the study of the design process (DTM1) **or** by developing his professional strategy (DTM3).





Our contribution to the educational profile

- Design a project to experiment and be innovative with a proposal including the integration of human, technical and economic constraints of the design project.
- Develop a reflexive attitude enriching the theories and practices of architecture: master and integrate the technical and human sciences of architectural design, manufacture, and transmit a design expertise, problematize a research question around the process.
- Build as an architect ethical and responsible practice: consider architecture as a cultural discipline constantly renewed, in constant touch with developments of artistic and social practices.
- Interact with all the actors involved in the issues of space and architecture: Foster experimentation and creativity; communicate in a clear and structured way for experienced or not public, the architectural design process tracking and its spatial production.

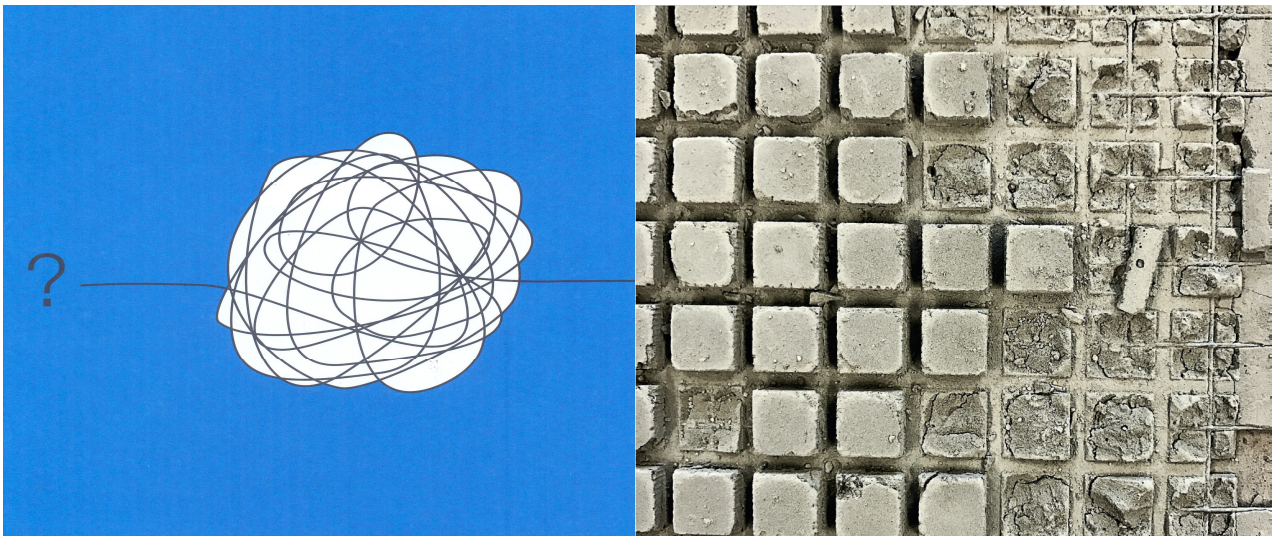
Course Outline > Learning Objective

DTM1
Observe, analyse and assess the design process;
Assess the potential of a material and a design element;
Understanding the stakes of the architectural design process;
Present a design process and its production orally and in writing (book, article).

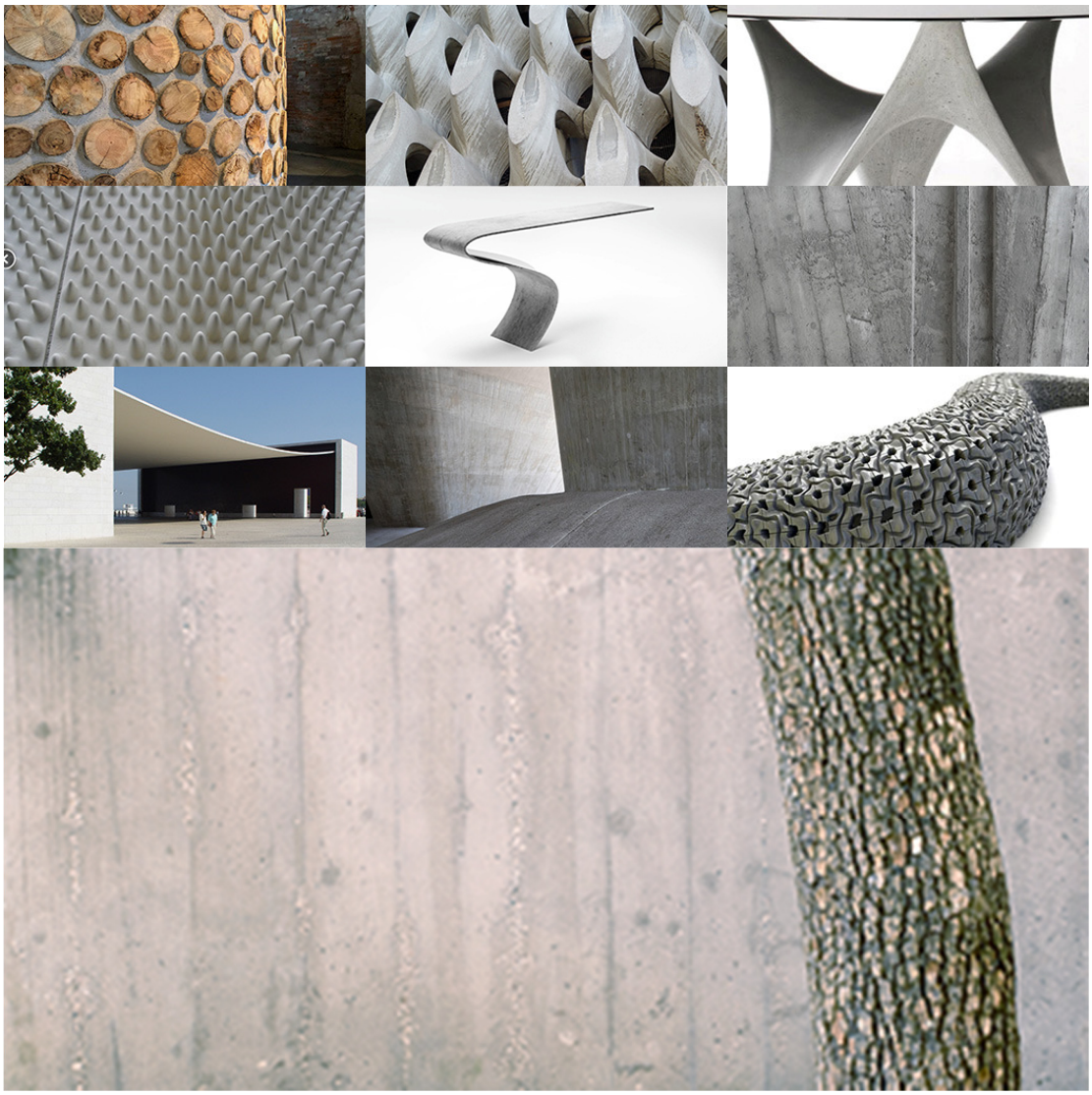
Design Thinking

DTM3
Identify professional skills;
Observe labour market for architects,
Build his toolbox for a professional strategy (report).

DTM1&3
Design an architectural project;
Present in English (posters, book)



Statement for this semester 2019 > FORM-WORKS



This concept intends to identify specific concrete/wood potential in terms of production as well as in terms of expression and presence.

In the past

- 2018 Wood in Europe
- 2017 Concrete & Tactility
- 2016 Paper & Wood in Light

Learning Outcomes

- DTM1 > After **analyzing a design session,** students will be able to find out characteristics of a design process.
- DTM1 > After submitting **an article** about the design process, students will be able to critically assess the design process and understand its stakes.
- DTM1&3 > After making **an architectural proposal with a material and a design element,** students will be able to find references to argue their assessment about it. Students will be also able to design it by taking in to consideration human, financial and technical constraints.
- DTM1&3 > After **producing posters and book about their architectural proposal** and **interacting in class,** students will be able to present a design process and its production orally and writing in English.
- DTM3 > After producing **a report,** students will be able to identify professional skills and observe labour market for architects.
- DTM3 > After building **a toolbox,** students will be able to manage his professional strategy.

Teachers – Lecturers

- **Prof. ir.Geneviève Martin** genevieve.martin@ulb.be
  Teacher in Mechanic, Building's structure and equipment since 1992 at Victor Horta Architecture School
  Researcher in Architectural Design Process
  Cognitive Sciences, Faculty of Psychology and Education Sciences, ULB-ULg
  Civil Engineer in Mechanic and Electricity (Fluid Mechanics), ULB

- **Arch. Phuoc Wil Nguyen,** Food Designer, senior in Design Process Class

- **Prof. Ir. Pierre Leclercq,** Director of Lucid Lab, ULg

- **Prof. Jean Luc De Meulemeester,** Solvay Brussels School, ULB

- **And others…**

References

- Makstutis G., "Design Process in Architecture", Laurence King Publishing, 2018, London
- Heylighen A. & Martin G. "That Elusive Concept of Concept in Architecture", MIT, Cambridge MA, USA - Prix de la meilleure communication de DCC'04 - Design Computing & Cognition.
- Heylighen A. & Martin G., "Chasing Concepts During Design", in AIEDAM - Artificial Intelligence for Engineering Design, Analysis and Manufacturing, Cambridge University Press, 2005, USA.