

# **Architectural Design & Construction**

2025-26

**SA1/3 ARCH-P-7115/6**

**Prof. ir. Geneviève Martin**

# Philosophy of SA

This course offers a critical and experimental exploration of **wood** and **concrete** as materials capable of structuring, inhabiting, and narrating architectural space. Through a sensitive approach to materiality, students are invited to question constructive logics, artisanal know-how, and contemporary challenges related to sustainability, reversibility, and resource efficiency.



Villa Domes, Arch. M. Calujac

# Philosophy of SA

The establishment of the **school's woodworking workshop** becomes an active learning environment, where gesture, tool, and material converge.

**Wood** — a living, adaptable material rich in tradition — lies at the heart of the pedagogical project, particularly through the study and implementation of joinery techniques.

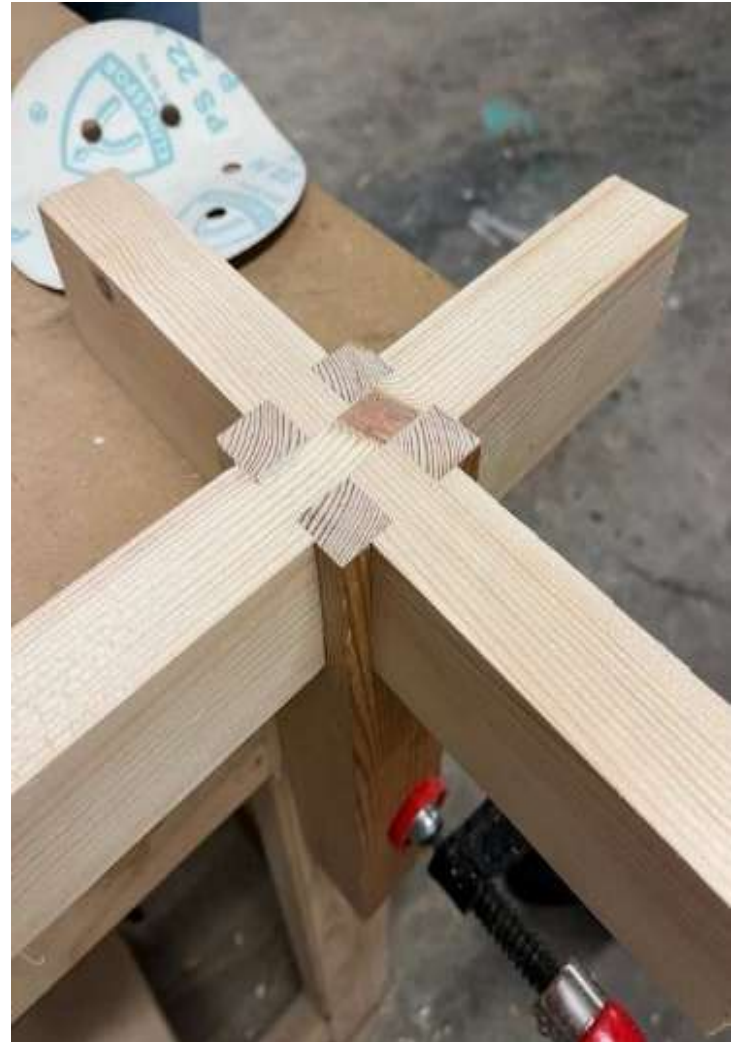
**Concrete**, as a counterpoint or complement, broadens the reflection on contrast, hybridization, and tension between materials.



# Philosophy of SA

The course emphasizes **experimentation, collaboration, and process documentation** as tools for both research and design. It aims to train architects who think with their hands, engage in dialogue with materials, and design projects rooted in a conscious and committed constructive culture.

Chidori Joint



# Course Aspects

- Theoretical Aspect

- **Material Properties:** Studying the behavior of construction materials > wood/concrete,

- Vocabulary Aspect

- Focus on the **specific terminology** used in structural engineering

- Company Visits

- **Site Tours:** Observing ongoing construction projects and understanding the practical application of theoretical knowledge.
- **Expert Talks :** Sessions with industry professionals discussing

- Learning by Construction

- This **hands-on approach** involves students in actual construction projects, allowing them to apply their knowledge practically

- Design

- A **woodworking space**

# Material Properties:

Studying the behavior of construction materials

## **THEORY**









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# Woodworking Workshop

## **KIGUMI LAB**



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# Material Assemblies:

Wood and Concrete in Architectural Practice

**STATEMENT FOR THIS TERM**

# Content

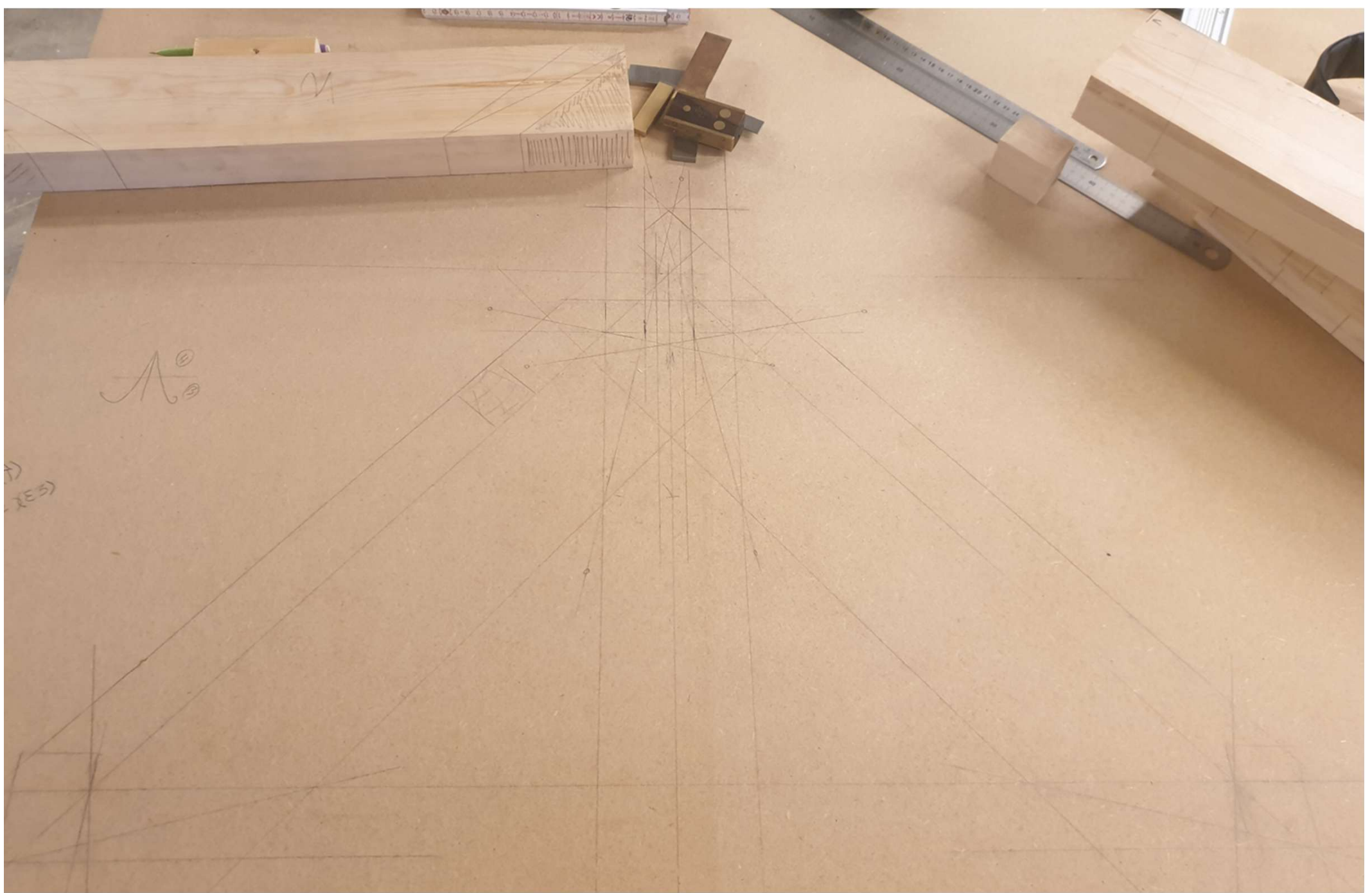
- Typologies of wood joinery
- Architectural case studies
- Construction of joinery
- Techniques and fabrication processes
- Strength testing and structural calculations
- Concrete joinery



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# Technical Language



Mortise

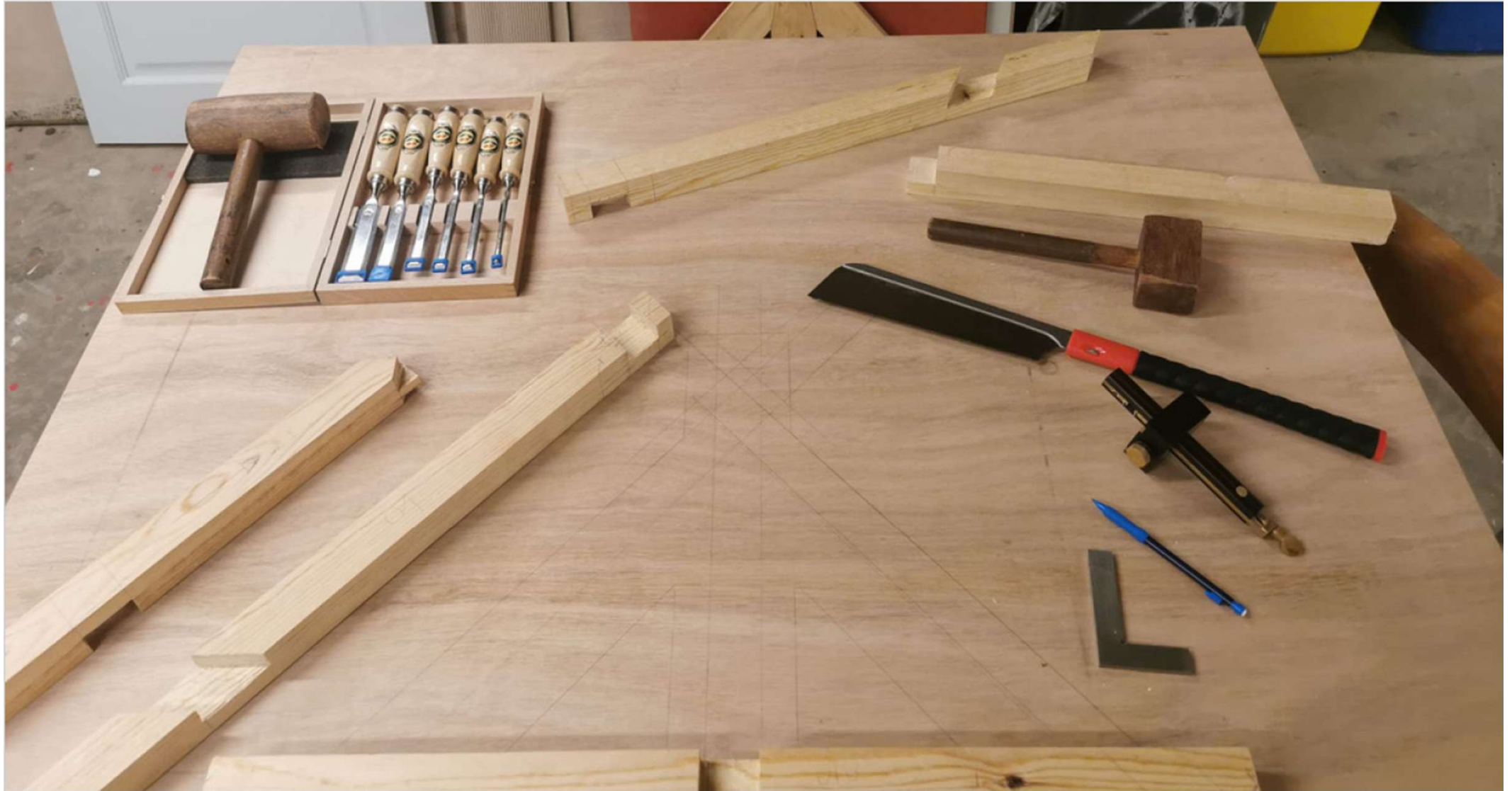


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# METHODOLOGY

- Visits, lectures, articles, interactive pedagogy
- Practice of English with « Content and Language Integrated Learning » Method
- Each Thursday at 9 am
- Presentations and reports (40%), jurys (40%), written exam (20% Theoretical aspects) and oral exam.



## Learning Center, Woluwé-Saint-Lambert

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## Blanche Housing, Ixelles

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CRIC

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Decomo

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# Objectives of this teaching unit and acquired specific learning

- Explore the materiality of wood and concrete in their constructive, aesthetic, and environmental dimensions.
- Understand the typologies of wood joinery, their technical principles, and architectural implications.
- Experiment with joinery techniques in the workshop through the creation of samples and prototypes.
- Develop a critical and sensitive approach to materials within the context of architectural design.
- Promote collaborative work and process documentation as tools for design and research.

# By the end of the course

- Identify and analyze the properties and uses of wood and concrete in architectural projects.
- Master wood joinery techniques, both traditional and contemporary.
- Safely and effectively use woodworking tools, following safety rules and best practices.
- Articulate a critical reflection on constructive choices, materiality, and ecological concerns.
- Document and present a design and fabrication process in a rigorous and creative manner.





- Thanks for your listening

**Prof. ir. Geneviève Martin**

Teacher in Mathematics,  
Mechanic, Building's  
structure and Equipment  
[genevieve.martin@ulb.be](mailto:genevieve.martin@ulb.be)