

MASTER'S IN WOOD, CONSTRUCTION, ARCHITECTURE

GENERAL PRESENTATION AND AIMS

The aim of this course, run in collaboration with the National Higher Schools of Architecture in Nancy and Strasbourg, is, logically, 'building in wood'.

Priority is given to engineers, architecture graduates and students (university or engineering school cursus) having followed years 1 or 2 of a Master's in civil engineering. This Master's course focuses on developing the use of wood in construction and national efforts to promote the sector.

The course focuses on the techniques of wood use in construction and enables architects and engineers to acquire dual skills through its original curriculum. Architects learn the primordial technical aspects which will allow them to see a wood construction project through to its end and engineers learn the various characteristics of the material used in the project. Closer collaboration between engineers and architects will enhance project quality by optimizing design and economy.

RECRUITMENT CRITERIA

- 1st year master's in civil engineering
- Graduates in architecture
- Graduate engineers in civil engineering.

REGISTRATION PROCESS

Candidates are pre-selected on file, then invited to an interview at the end of May. Due to the limited number of places, each candidate is requested to include his personal project and his motivations for entering the wood sector in his application.

For further information on applying, please visit www.enstib.univ-lorraine.fr

PROFESSIONAL INTEGRATION

Civil engineering graduates from the 'Wood, construction, architecture' cursus hold membership in the ENSTIB alumni association and so appear in the Alumni Directory as associate members. If they wish, they may use the school's professional recruitment services : help with their CV, job search techniques, subscription to the list of job offers received by the school.

TEACHING

Classes are taught by building professionals, architects, experts and faculty from both ENSTIB and Nancy and Strasbourg Higher National Schools of Architecture.

This Master's accredits a university year (September – end August). It combines theoretical knowledge with hands-on experimentation within a specific technical framework for the implementation of wood and its derivatives. Classes are held on Wednesday afternoons, Thursdays, Fridays and Saturday mornings from September to February in order to free up students for other activities such as work in agencies, design offices, or apprenticeships.

An integral part of the course is a common 'Architect – engineer' project. This takes the form of a competition with precise specifications originating from a public or private contracting authority, followed by an oral presentation of the project before a jury composed of outside members and Master cursus faculty. One example of a project : a city farm for Metropolitan Nancy in collaboration with Nancy Higher National School of Agronomy and Food Industries. Students also participate in 'Les défis du Bois 3.0', an international competition and event held every year in Epinal since January 2005 (www.defisbois.fr)

An internship in an architect's agency, a design office or a laboratory puts the finishing touch to this course. It takes place from March and lasts at least 4 months, validated by a report and oral presentation.

Continuous assessment, the project and the internship marks all combine to validate the course with a national Master's degree. Classes are mainly taught in Epinal.

The curriculum may be enriched by classes offered in other ENSTIB engineering modules (tailored to students' needs).



Audrey CHOULET
Architect, promotion 2015

“ After graduating from Grenoble School of Architecture, I read a magazine article on the ABC Master's degree, which mentioned the technical skills taught by the school and I decided to apply.

I did the course through block release and looking back, I'm really happy I did. When you come out of a School of Architecture, you have no idea technically-speaking. ENSTIB brought me the structural skills but also taught me about thermal performance.

I got my diploma in 2015 and started working straight away in the company where I did my block release. I stayed there for 3 years, then set up my company, 'Le Chat Architecte' near Chambéry in Haute Savoie.

What I learned at ENSTIB is completely linked with what I do now. My course taught me essential technical basics. I even keep my class files on my desk at work !

I mainly work on small projects, for individuals or professionals. I use wood a lot, particularly in vertical extension projects.

When I think back to ENSTIB days, the memory that stands out is the Défis du Bois. What a week !

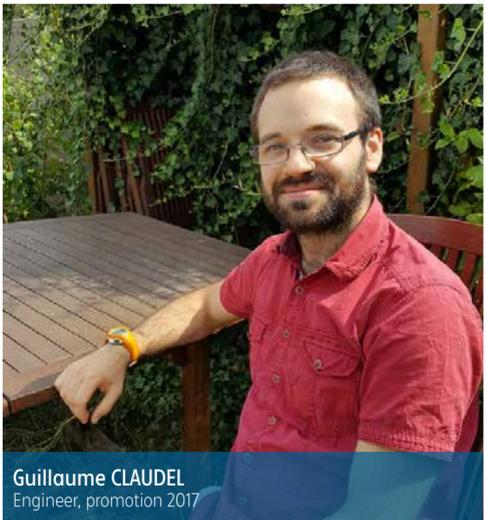
The experience gave me the sense of detail and coordination. Just making pretty drawings isn't enough – you have to get from the lines on paper to the actual technique of physically building it.

“ I enrolled in the Master's Wood, Construction and Architecture at ENSTIB after doing a Master's in civil engineering in the Vandoeuvre science section of the University of Lorraine. Before that, from 2007 to 2009,

I was a carpentry apprentice with the Compagnons du Devoir, then I did a preparatory class for Maths, Physics and Engineering Science. I got a job right away, in the company I did my internship in, CALQ agency in Paris, and I'm still there.

The ENSTIB course corresponded perfectly to my professional plans, as there's a close collaboration between architects and engineers. This is precisely what I do today as a site supervisor for an architect's agency. Project management is like being a conductor : I make sure the different parties talk to each so that work on the site can go ahead properly – like musicians playing together.

Some of my best memories of ENSTIB are projects in the hall : Felix's pedal-canoe, the customized van, the technical degree in furniture students made – all night till dawn the day before I left...



Guillaume CLAUDEL
Engineer, promotion 2017



WOOD : NATURAL INNOVATION

MASTER'S IN WOOD, CONSTRUCTION, ARCHITECTURE



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MASTER'S WOOD, CONSTRUCTION AND ARCHITECTURE : PARTNERS

NATIONAL HIGHER SCHOOL OF ARCHITECTURE, NANCY



National Higher School of Architecture, Nancy is the only public establishment in Lorraine to deliver architecture diplomas at Degree, Master's and Doctorate levels. It is one of 20 architecture schools in France depending on The French Ministry of Culture and Communication.

Created in 1969, it developed original educative policies, basing architectural and urban design firmly in practical projects. For several years now, the school has collaborated closely with both French and

European universities, creating various profitable links. Its long-standing relationship with ENSTIB endorses a common accreditation with the Master's Wood, Construction and Architecture. It has also been a forerunner since 2000 in the field of sustainable development.

www.nancy.archi.fr



NATIONAL HIGHER SCHOOL OF ARCHITECTURE, STRASBOURG

National Higher School of Architecture, Strasbourg is one of 20 architecture schools in France depending on The French Ministry of Culture. It is situated in the Bas Rhin, in the east of France, at the heart of a pan-European region of 6 million inhabitants. It has been affiliated with the university of Strasbourg since 2012.

Every year the school counts some 800 students and over 100 lecturers and, speakers from all fields plus an administrative team of around 40 staff.



The school offers a 3-year degree cursus and a 2-year Master's cursus. The degree cursus centres on the introduction to architectural and urban projects. Classes include architectural drawing, history and theory of architecture, arts and techniques of applied geometry, construction, fine arts and human and social sciences. The second cycle of Architectural Studies delivers a National Architects' Diploma.

Doctorates are also offered, as well as specialized Master's in collaboration with other higher education courses.

www.strasbourg.archi.fr



CONSTRUCTION TECHNOLOGIES

3 ECTS
50h

WOOD TECHNOLOGIES

- Machining and manufacturing
- Carpentry
- Glueing and finishes
- Conservation
- Physics of wood / drying
- Wood energy

6 ECTS
50h

BUILDINGS AND STRUCTURES TECHNOLOGIES

- Vertical and horizontal load-bearing systems
- Roof load-bearing systems
- Cladding
- Pathology in building structures
- Assembly and stability of structures
- Structural mechanics

3 ECTS
50h

HOME COMFORT

- Thermal
- Acoustic
- Air quality and ventilation
- Environmental quality of buildings
- Fire resistance
- Themed conference / sustainable development
- Sweating walls

WOOD AND ARCHITECTURE

3 ECTS
50h

MATERIALS, CHARACTERISTICS AND CONTEXT

- Forest / wood / derivatives / forestry production
- Sawmilling / wood grading
- Xylogology anatomy
- Wood sector players
- Materials solidity

6 ECTS
50h

WOOD ARCHITECTURE AND RESEARCH

- History of wood in architecture
- Introduction to research (building analysis)
- Company and building site visits

3 ECTS
50h

ENGLISH

INTERNSHIPS AND PROJECTS

6 ECTS
50h

PROJECT REQUIREMENTS

- Project cost management
- Integrative project

3 ECTS
50h

PROJECT AND IMPLEMENTATION

- Défis du Bois

4 à 6
months

INTERNSHIP

- 4 – 6-month internship in industry
- Industry
- Architect's agency

DÉFIS DU BOIS 3.0



In 2005, teaching staff in architecture and wood engineering from Nancy School of Architecture and ENSTIB decided to create a collaborative hands-on experience for young engineers and architects.

Since even the best training doesn't necessarily include the concept of 'working together', they had the idea of setting up a challenge grouping students with various skillsets at the end of their cursus, and who had never experienced working in a team on a big project. The aim was to enable participants to share a creative experience while respecting obligations of deadlines, materials and inventivity. And so the Défis du Bois was born, followed in 2015 by the Défis du Bois 3.0, whose structures are now permanent fixtures. The young architects and engineers are now joined by the Compagnons du Devoir, which has brought a real added value to the completion of the constructions.

Participants are divided into 10 groups of 5 in January and discover the subject, which is only given out to the press and and general public on the opening day of the competition. From the very start of the project, students work together via a collaborative platform, where they can leave their work and get support. A multi-discipline teaching team of wood specialists supervises the project preparation phase with a monthly meeting and 2 working weekends in January and February. The team is also on-site during construction week.

Everyone is given the same tools and materials and little by little, the creations come to life. Some are fanciful, some artistic, sometimes well-balanced, logical, but always creative and highly technical. They reflect the personalities of their creators. At the end of the week, the 10 teams are physically exhausted, but proud and happy to have met the challenge.

Follow the link to check out previous years' creations and to find out more about the Défis du Bois 3.0 :

www.defisbois.fr

