

École Nationale Supérieure des Technologies et Industries du Bois

MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR, DE LA RECHERCHE ET DE L'INNOVATION



### **OUR CAMPUS**

The École Nationale Supérieure des Technologies et Industries du Bois is one of 11 engineering schools 🛛 🖬 LORRAINE in the Lorraine – INP (school of engineering) College of the Université de Lorraine. Based in Épinal, in the heart of the Vosges mountains, ENSTIB is the only national public institution to offer an engineering degree accredited by the Commission des Titres, a specialist engineering degree, as well as Bachelor's, Master's and Doctorate degrees.



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ENSTIB is fresh, dynamic, creative and bursting with enthusiasm. It is a real human adventure based on an exciting project: the place of wood-based materials in the future of technology. Now more than ever, wood and bio-based materials are seen as a natural, renewable resource that represents the **future of a circular economy**, benefiting the environment and the ecological transition.

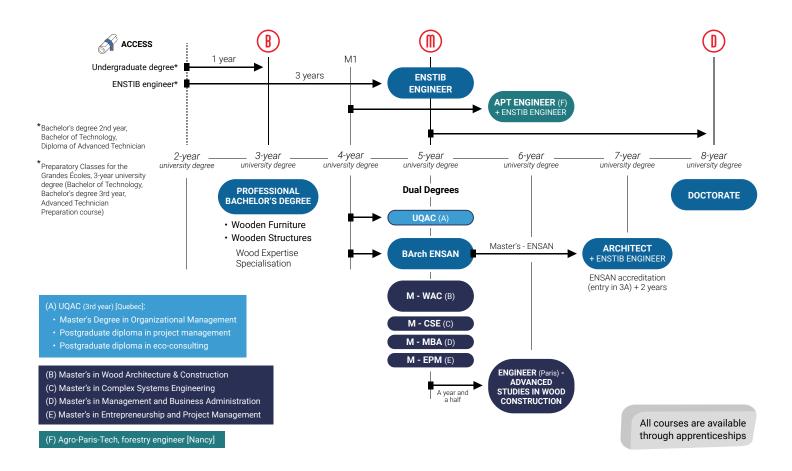
Our vision for ENSTIB is to develop a sustainable and innovative programme, both nationally and internationally, by offering a range of technological courses, opening up new horizons for the research activities carried out by the laboratories and, more generally, in collaboration with the social and economic world. Wood construction, logistics, bioeconomy, biorefinery, robotics, factory 4.0... these projects, which are the school's main objective, are at the heart of companies' concerns.

For over 40 years, ENSTIB has developed a unique institution dedicated to wood and all its applications. It offers a range of Bachelor's, Master's and Doctoral degrees, which are referenced in the European LMD system, research laboratories and industrial support structures. With new teaching methods and training standards tailored to the needs of forestry and wood industry professionals, ENSTIB teams are working to develop student autonomy. "Helping people to learn" is a key focus for our research professors and those involved in the social and economic world, to provide students with the working methods and knowledge they need for their future careers.

> The employability of the school's graduates, whatever their course, is well established, with a 100% employment rate three months after graduation.

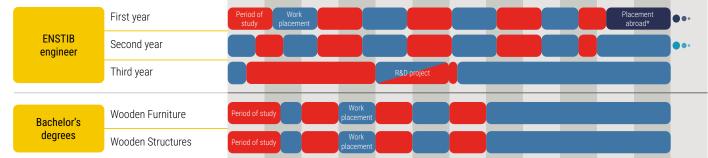
#### In a university with 60,000 students

- 1 of the 11 Lorraine INP engineering schools
- 4,000 graduates in employment
- 400 students and 40 doctoral students
- 15,000 m<sup>2</sup> of fully-equipped premises
- 3 research laboratories
- 2 resource and technology centres
- 60 staff members (30 research professors)
- 12 degrees to choose from



### STUDENTS AND ENGINEERING STUDENTS WORKING ALL YEAR ROUND

			SEPT	OCT	NOV	DEC	JAN	FEV	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT
initial training courses	Bachelor's degrees	Wooden Furniture					Tutored projects 150h/student			Internship 11 weeks					
		Wooden Structures					Tutored pro 150h/stuo				Interi 11 w	nship eeks			
	Master	Master WAC				projects - engineers						nship nonths			
	ENSTIB engineer	First year	_											internship s abroad	
		Second year											Assistant 6 to 10	engineer weeks	•••
		Third year	••			D project oups - 600 l	nours	•••	•••		eering inter 5 to 24 weel				
	After a 5-year university degree	Specialist engineer (6-year university degree)												Internship 16 weeks	
		Doctorate (8-year university degree)						Possibi	ility of CIFR	E thesis					



initial training courses

apprenticeships

\* 7 weeks minimum

# ENSTIB, A VITAL RESOURCE FOR THE FORESTRY AND WOOD INDUSTRY

ENSTIB, the École Nationale Supérieure des Technologies et Industries du Bois, is a general school specialising in wood-based materials that opens the door to a wide range of career opportunities. It is the only public Grande École (top-level specialised institution) in France to train graduates to take on and lead projects in a wide range of disciplines, in all the social, economic and industrial sectors of the wood industry: 🔊 CONSTRUCTION

ENERGY

LOGISTICS 🗲

NFUELOPMENT

Today's environmental objectives are largely based on the crucial contribution of the forestry and wood industry. This industry is an exemplary model of sustainable development and circular economy, promoting the ecological transition. From the upstream sources in the forest to the downstream industries, the forestry and wood industry, which provides approximately 400,000 jobs in France, creates environmental, economic and social value at every stage.

Wood has become a strategic material thanks to its renewable and recyclable nature and its contribution to the fight against climate change. With its low energy consumption and high insulating properties, wood is one of the most important materials when it comes to designing and constructing buildings with high energy performance and zero environmental impact. Every day, contemporary architecture, design and interior design are rediscovering the virtues of this surprisingly modern material.

Wood also plays a key role in the renewable energy sector, far ahead of all the others. Not only does wood reduce France's oil bill, it also makes a significant contribution to the ecological transition.

ENVIRONMENT

PRODUCTION

Limiting dependence on oil and reducing the negative impacts associated with the development of sustainable alternatives is opening up new prospects for the chemical industry: the chemistry of bio-based materials, by incorporating the recovery of waste and related materials.

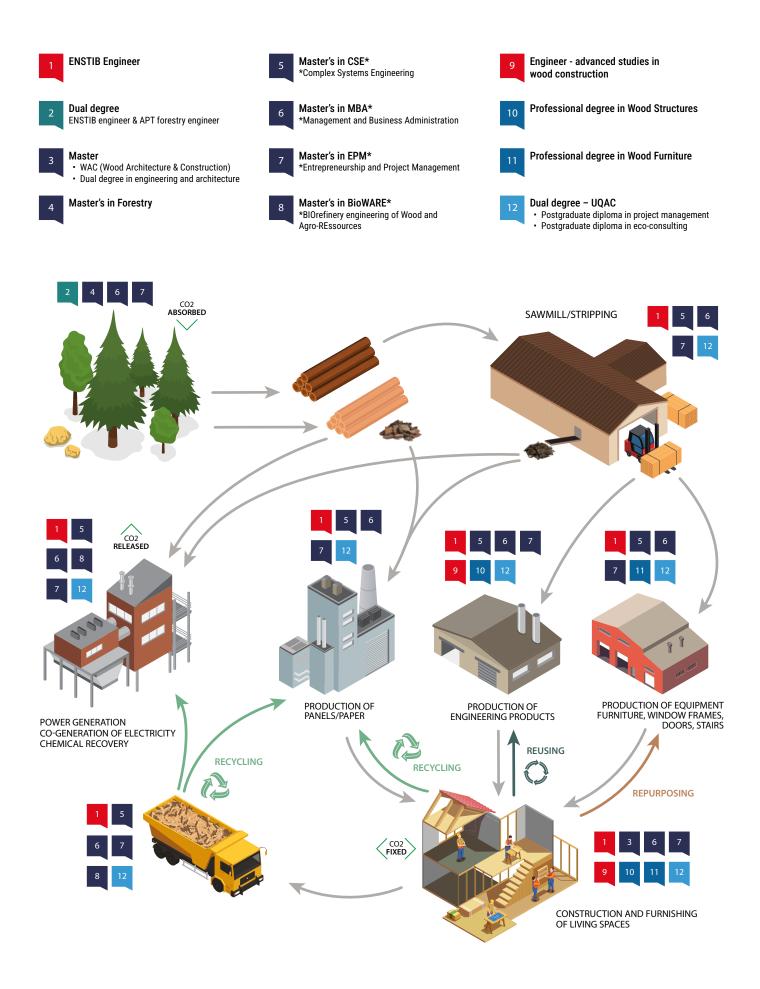
Our students are also trained to analyse global assessments, particularly life cycle, carbon footprint and forest certification, to give them a better understanding of the challenges facing the wood industry in an environmentally responsible framework.

Whatever their course of study, ENSTIB students are committed to the innovative, ethical, supportive, economic and socially responsible use of wood and bio-based materials, sharing their values, vision and expertise in an industry that is an exemplary model of sustainable development and the circular economy.

Discover the careers available in the wood industru



### STRATEGIC EMPLOYMENT OPPORTUNITIES IN A SUSTAINABLE, HIGHLY CIRCULAR ECONOMY MODEL



# **SUSTAINABLE CONSTRUCTION**

Future-oriented training that meets environmental challenges

ENSTIB's sustainable construction programme provides training in sustainable architecture and the technical and environmental challenges of modern construction. Designing structurally and energetically efficient buildings is essential in today's world where environmental impact is under constant scrutiny.

ENSTIB offers training in the modelling, dimensioning and optimisation of timber structures, taking into account the latest design codes, thermal and environmental regulations and energy requirements.

Wood, a valuable and sustainable material, offers innovative technical solutions for new buildings and renovations, all while meeting the challenges of energy efficiency and reducing carbon footprints. Our courses teach you how to use this material to design energy efficient, sustainable buildings.





In contemporary architecture, wood is a symbol of bold, environmentally friendly construction. Thanks to technological advances and tools such as robotics, you can immerse yourself in an innovative world that is shaping the future of industry. Our unique training courses combine traditional techniques with cutting-edge technology, preparing you to become a key player in sustainable construction.

With the growing demand for sustainable buildings, this programme offers a wide range of opportunities in engineering, construction supervision and project management. At ENSTIB, you will be part of a community committed to building a future that respects our planet.

#### OVER 50% OF OUR GRADUATES WORK IN THE WOOD CONSTRUCTION INDUSTRY

Over the last ten years, the wood construction industry has experienced remarkable growth both in France and internationally, driven by a growing awareness of environmental issues. This development has been accompanied by a transformation of the trades and a strong demand for specialised skills.

In 2022, approximately **28,315 people** were employed in this sector. In France, around **13,000** were directly involved in wood construction activities. The sector is made up of around **1,888 companies** (source: Fibois France, France Bois Forêt).

Find out more about our former students, their jobs and training courses at <u>www.enstib.univ-lorraine.fr/en/</u>

#### Careers in wood construction

- Wood construction engineer
- Sustainable construction project manager
- Sustainable construction design office technician
- Architect specialising in sustainable construction
- Site manager specialising in wood construction
- Sustainable construction sales technician
- Building thermal engineer
- Wood structure production manager
- Wood construction technical design manager
- Project supervisor

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### BUILDING EXTENSIONS MADE OF WOOD ARE AN INCREASINGLY IMPORTANT PART OF THE SUSTAINABLE CONSTRUCTION MARKET BOTH IN FRANCE AND AROUND THE WORLD.

## **WOOD-ENERGY-ENVIRONMENT** A renewable resource at the heart of the energy transition

Wood in all its forms is now the leading source of renewable energy in France, Europe and the rest of the world. In the face of the major challenges of energy transition and reducing energy consumption, wood energy is emerging as a sustainable and efficient energy alternative.

Thanks to various processing technologies, wood is proving to be both an excellent insulation material and a renewable energy source. What's more, it is available in different forms (logs, pellets, wood chips, etc.) and can therefore be used as rationally and efficiently as fossil fuels. This makes it an essential solution for areas with an abundance of sustainably managed forests.





At ENSTIB, our training courses are designed to support this dynamic by teaching students about the many applications of wood in sustainable energy production. Our training programmes cover topics such as combustion, gasification, biofuels and the production of green hydrogen, while also focusing on reducing environmental impact through waste management, controlling pollution and minimising emissions.

The production of green hydrogen, which is based on electrolysing water using renewable energy sources, helps to limit carbon emissions, thereby contributing to the energy transition. In Golbey, this innovative project is part of a local strategy to reduce carbon emissions and promote the circular economy, utilising natural resources to build a more sustainable future.

Biomass, and wood in particular, has become the leading source of renewable energy in France, in Europe and all over the world.

#### Wood-energy-environment careers

- Biomass and wood energy engineer
- Renewable energy project manager
- Forestry and sustainable management manager
- Maintenance engineer for wood energy installations
- Wood-fired heating and heating network manager
- Wood gasification and combustion systems engineer
- Energy transition and wood energy consultant
- Biomass waste recycling manager

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# **BIO-BASED MATERIALS CHEMISTRY** A promising future for sustainable materials





#### Careers in bio-based materials chemistry

- Bio-based materials chemistry engineer
- Materials biotechnology researcher
- Biorefinery and green chemistry engineer
- Bio-based materials innovation project manager
- Bio-based materials production manager
- Biomass deconstruction process specialist
- Bioprocess and biomass transformation engineer
- Bio-based materials Life Cycle Assessment (LCA) specialist
- Bioeconomy and sustainable materials consultant

Today, the development of high-performance materials derived from forest biomass, as well as the reuse, recycling and repurposing of wood, are an integral part of ENSTIB's activities.

Non-food biomass, especially wood, is playing an increasingly important role in the materials sector. Products derived from plant resources are becoming hugely popular all over the world, a trend that is accelerating with the predicted depletion of fossil fuels.

What's more, the wood industry is emerging as a model for the circular economy, offering a bio-based, renewable and fully biodegradable material. However, there are a number of constraints associated with its use in furniture and construction that make recycling more complex and pose challenges when it comes to recovering the value of this material at the end of its life. Amidst the environmental transition and targets to decarbonise buildings, the use of wood and wood-based materials continues to grow.

ENSTIB has positioned itself at the heart of this transition, offering cutting-edge training and research based on a cross-disciplinary approach between life sciences and chemistry.

At the heart of the bioeconomy, the wood biorefinery breaks down plant resources to extract different components, paving the way for the development of new bio-based materials. These bio-based materials, be they organic, carbon-based or even ceramic, have a wide range of applications in a variety of sectors, including energy, the environment, transport, healthcare and everyday consumer goods.

By training professionals capable of meeting the future challenges associated with these renewable resources, ENSTIB aims to become a key player and catalyst for the future in this promising field.



Find out more about our former students, their jobs and training courses at www.enstib.univ-lorraine.fr/en/

# INDUSTRIAL SYSTEMS ENGINEERING Modernising and optimising the wood industry

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The wood industries are constantly evolving and modernising to remain competitive in a challenging global market. By continuously improving the way they organise themselves, companies can control their costs while guaranteeing the quality of their products and services.

The wood industry is divided into two main categories: primary processing (sawmills) and secondary processing (panels, building materials, furniture, industrial joinery and wood fuels). These different activities mainly serve the construction, home furnishings and energy sectors.

Industrial systems engineers trained at ENSTIB are highly sought after for key positions in production line management, supply chain monitoring and project management both in the methods office and in the field. They are also in demand in service companies linked to the wood industry, on account of their versatility and ability to innovate.





Increasing the competitiveness of companies is based on the use of modern tools and methods such as quality management, digital engineering, collaborative product design processes and the optimisation of industrial and logistics systems.

Automation, robotics and traceability are also essential levers for modernisation. A thorough understanding of wood-based materials and the transformation processes specific to this sector is an essential skill that is developed in all ENSTIB training courses.

Thanks to its training programmes tailored to today's industrial realities, ENSTIB prepares its students for positions of responsibility, both in the management and administration of companies in the wood industry, while incorporating the principles of circular economy and industrial ecology.

#### Careers in industrial systems engineering

- Production management engineer
- Industrial wood workshop manager
- Industrial process optimisation technician
- Industrial logistics manager
- Industrial systems engineering project manager
- Continuous improvement and quality manager
- Process automation and robotics engineer
- Business manager in the wood industry
- Methods office manager

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### **10 REASONS TO STUDY FOR A CAREER** AT ENSTIB, IN ÉPINAL

#### Exceptional natural surroundings

Nestling in the heart of the Vosges mountains and crossed by the Moselle River, Épinal offers a unique natural environment, with forests, lakes and rivers. Nature lovers will love the hiking trails, mountain bike routes and breathtaking views.

#### A wide range of sporting activities

Épinal is a real playground for all sports enthusiasts! With an Olympic-size swimming pool, ice rink, skate park, canoe and kayak course and tree climbing trails, there really is something for everyone.

#### A vibrant cultural scene to rival any major city

Cinemas, theatres, festivals, media libraries and even a world famous planetarium. Épinal is a town full of culture for everyone to enjoy, especially students.

#### High quality student facilities

The Student Centre, modern student residences, including the ENSTIB Colloc, and university restaurants - including one right in the heart of the Campus Bois - make studying here both comfortable and enjoyable.



#### A highly attractive range of clubs and associations

ENSTIB stands out for its wide range of dynamic student associations and clubs. Whether you'd like to take part in a humanitarian project, a festive event or a sporting challenge, every student can find a cause or passion they enjoy, all in an exceptional atmosphere.

#### An energetic Student Office

The Student Office is run by a passionate group of students and offers a full calendar of events throughout the year. Theme parties, sports competitions, environmental challenges, you name it - all in a friendly, stimulating atmosphere.

#### A human scale campus

Among the benefits highlighted by former students, ENSTIB enables students to forge close bonds with other students, with staff and teachers they can rely on, while benefiting from a pleasant and peaceful learning environment.

#### An affordable place to live

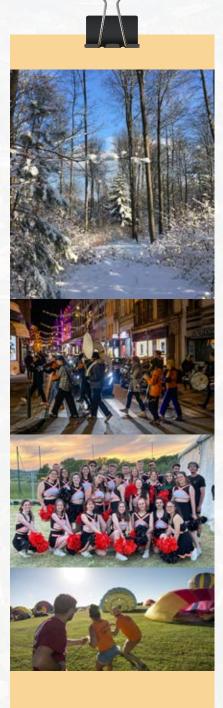
Life in Épinal and at ENSTIB is much more affordable than in big cities, especially when it comes to accommodation and transport.

#### A range of unique events

Both Épinal and ENSTIB host a number of major events that liven up student life with music and festivities. Special moments that reinforce the community spirit.

#### A dynamic university library

On the Campus Bois, the university library provides user-friendly workspaces and expert advice on finding the right books, as well as a range of exhibitions, lectures and events throughout the year.



### **10 REASONS TO STUDY FOR A CAREER** IN THE WOOD INDUSTRY

#### Giving meaning to your studies

By choosing to study for a career in the wood industry, you can combine your studies with your values and make the link between theory and practice. Wood is an extraordinary source of innovation and creation.

#### An industry full of job opportunities

On average, it takes less than 9 days for ENSTIB graduates to find a job, with over 95% of them working in the wood industry. At ENSTIB, you will be in direct contact with manufacturers and local authorities who are looking for wood specialists.

#### An industry that supports the ecological transition

Studying for a career in the wood industry means you can play an active role in the ecological transition, as part of a sustainable circular economy. Today's environmental objectives are largely based on the wood industry.

#### Help shape the world of tomorrow

Wood offers innovative technical solutions for new buildings, renovations and extensions to meet the challenges of energy efficiency and structural performance.

#### To have a choice

Studying in the wood industry gives you the opportunity to choose from a wide range of careers in construction, furniture, project management, research and technological innovation. You can also work in consultancy, teaching or research.

#### To work with an exceptional material

Wood is a sustainable and renewable material for the future. Studying this will enable you to work on sustainable practices and help protect the environment.

#### Learn about the circular economy

By studying for a career in the wood industry, you will be taking part in a sustainable circular economy, starting with forest harvesting, which sequesters CO2, followed by the primary and secondary processing of wood, including recycled industrial waste, which is used to make panels, generate energy or recover chemicals.

#### Dive into the heart of innovation

The wood industry, whether agricultural, forestry or industrial, is constantly evolving. It opens up opportunities to contribute to the development of new construction, processing and manufacturing techniques.

#### Travel abroad and meet new people

With over 40 international agreements, you can take part in international mobility trips to many countries, both within Europe and on other continents. With a wide range of industrial partnerships, you can find a work placement in all areas of the industry. Build lasting relationships thanks to a programme of festive events and scientific and technical gatherings.

#### Become part of a close-knit, active community

95% of our former students say that ENSTIB is a family. This family, always ready to help each other, has strong links with the entire wood industry, both in France and abroad.













### PROMOTIONAL SPONSORS

2006 – Christian PONCELET President of the French Senate

2005 – Thierry BERGERAULT PBM Import

> 2004 – Pascal NAZARE Dexter

> 2003 – Laurent MAZIES Biesse, France

2002 – Joseph MAESTRI Maestri

> 2001 – Alain LEFEBVRE Lefebvre Frères

> 2000 - Roger LESBATS

1999 – Antonia LENTZGEN Schmitt kitchen designs

1998 – Pr. Julius NATTERER EPFL – Switzerland

> 1997 – Noël ANCIAN The Isoroy Group

1996 – Philippe SEGUIN President of the French National Assembly

> 1995 – Patrick GAY The Lapeyre Group

1994 – Michel SERGENT Scierie Oriel

1993 – Gérard LEMAIGNEN CNDB

> 1992 – Vidar LERSTAD NSI

> > 1991 – Loic BRICIE Pannovosges

1990 – Christian LOUIS VICTOR Houot

> 1989 – Claude WEISROCK Weisrock

1988 – Michel PARISOT The Parisot Group

1986 – Pr. Michel BOULANGER The Université de Lorraine - Nancy

> 1985 – Pierre MALAVAL CTBA

1984 – Philippe LEROY Philippe Leroy, Regional Delegate for the Massif de l'Esterel

> 1983 – Gérard MOULET Croisés Profils

> > 1982 – Jean NANTY CIB

2027 – Olivier CRANCEE France-Larnord & Bichatton

2026 – Yoann QUELLIEN CADWork

2025 – Ernest SCHILLIGER Schilliger Bois

2024 – Lorenz GIANNONI Sanijura

2023 – Pierre PIVETEAU Chairman of Piveteau Bois

2022 – Michel DRUILHE Chairman of France Bois Forêt

2021 – Dominique WEBER Chairman of CODIFAB

2020 – Sylvain LARROUY Chairman of Maître Cube

2019 – Frédéric COIRIER Chairman of the Management Board of the Poujoulat Group

2018 – Dominique GAUZIN-MÜLLER Architect and Editor-in-Chief of the magazine EcologiK

> 2017 – Xavier DEGLISE First director of ENSTIB

2016 – Bertrand BURGER The Burger Group

2015 – Martin BRETTENTHALER Pavatex – Switzerland

2014 – Jean-Pierre FINANCE Université Henri Poincaré and Université de Lorraine

> 2013 - Federico GUIDICEANDREA Microtec - Italy

2012 – Philippe ROUX CEO of Charpente Houot, formerly MSTB

**2011 – André ANTOLINI** Chairman of the Professional Syndicate for Renewable Energies

**2010 – Brad BOSWELL** CEO Independent Stave Company; Merrain International – USA

> 2009 – Paul & Philippe SIAT The Siat-Braun sawmill

> > 2008 – Pascal JACOB The Jacob SA Group

2007 – Rainer HUNDSDÖRFER PDG of the Weinig Group – Germany

# INP Enstib

ÉCOLE NATIONALE SUPÉRIEURE DES TECHNOLOGIES ET INDUSTRIES DU BOIS

27 rue Philippe SEGUIN, 88000 Épinal Cedex Tel.: +33 3 72 74 96 00 enstib-scolarite@univ-lorraine.fr www.enstib.univ-lorraine.fr

