

STUDY SEMESTER

Our international programs



**IN NANTES,
FRANCE**



**100% TAUGHT
IN ENGLISH**



**5 MONTH
PROGRAMME**



**MASTER 1 & 2 LEVEL
EQUIVALENT**



PRESENTATION

ESB offers programs taught in English, specifically tailored for international students who wish to join our engineering school for one semester.

Exchange students from one of our partner schools, as well as free movers students, can choose between two programs:

- **Wood science and sustainable management**
- **International Timber Trade**

Each semester provides 30 ECTS.

**ÉCOLE
SUPÉRIEURE
DU BOIS**

Sciences et
technologies
des matériaux
biosourcés

**makers
by nature**

INTERNATIONAL TIMBER TRADE

The core objective is to acquire professional skills in the international trade of wood and International Business development.

Students will acquire a good knowledge in terms of wood, worldwide exchanges and international and domestic regulation to comply with.

Topics such as Business Development, Business English and Financial Analysis will be also developed.



**MASTER 2 LEVEL
EQUIVALENT**



**FROM SEPTEMBER
TO FEBRUARY**

COURSES - 30 ECTS

International Sales and Purchases – 2 ECTS

The aim of this course is to understand the several steps of the sales and purchases of wood products and the associated techniques.

At the end of this course you will be able to:

- Define the methods and techniques of wood sales (including e-commerce)
- Use purchasing techniques (definition of the need, analysis of the supplier market and e-commerce) on a simple case

Wood recognition and classification – 1 ECTS

The course aims to describe the wood properties and quality, the traceability and certification, and the use of (tropical) wood species according to their physical and mechanical properties.

At the end of this course you will be able to:

- Apply product certification and traceability rules
- Recognize wood species

Business development – 2 ECTS

The course aims to analyse the business strategies (positions and actions), the risk assessment (environment, constraints, tax...) and the wood product marketing (environment, strategy, functions)

At the end of this course you will be able to:

- Analyze the company's strategy
- Assess the risks assumed by a company in accordance with its strategy.

Digital business – 3 ECTS

The aim of this course is to implement trade techniques, specifically the e-commerce and web-marketing strategies.

At the end of this course you will be able to:

- Identify new forms of e-Commerce
- Describe digital marketing and its fields of action
- Design a simple web-marketing strategy

International trade – 4 ECTS

The course aims to describe the intercultural management by defining the visible and invisible dimensions of culture, and the specificities of the wood trade practices (risks, insurances, customs, payment...).

At the end of this course you will be able to:

- Analyze the economic performance of a company, an activity, a project
- Lead an international negotiation
- Develop a coherent marketing approach
- Use international trade techniques

International wood exchanges – 4 ECTS

The aim of this course is to analyse the certification principle and the process of traceability, and the international market trends and products.

At the end of this course you will be able to:

- Apply product certification and traceability rules
- Describe the situation of the world timber trade

Major's project – 9 ECTS

As part of their major, students are entrusted with a project, regularly proposed by a company, relating to the theme of the cycle in question: improving productivity, improving a building's performance, market research, etc.

French as a Foreign Language – 2 ECTS

Learning the basics in French, in order to cope with everyday life in France

English (advanced) – 2 ECTS

Write and speak an appropriate English in a business context.

English coaching – 1 ECTS

LEARNING OUTCOMES

- Identify and respond to or anticipate market needs and solve problems
- Analyse and implement solutions that are relevant and compliant with regulations for the company
- Contribute to the decision-making process according to a strategy and in particular in the management of a profit center
- Become familiar with the international wood industry environment and understand its complexity
- Manage a project and a team (communication, management)
- Write and speak English confidently in a business context
- Learn the basics in French, in order to cope with everyday life in France

WOOD SCIENCE AND SUSTAINABLE MANAGEMENT

This semester offers students from around the world a diverse and multidisciplinary approach to wood science and sustainable management. It enables participants to contribute to a more sustainable world through the use of engineering tools.

Learning by doing is one of the key elements of this semester: workshops, projects and applied research. The student is at the heart of the learning process by experimenting alone, or in a group, under the supervision of professors and experts.



**MASTER 1 LEVEL
EQUIVALENT**



**FROM FEBRUARY
TO JUNE**

COURSES - 30 ECTS

Sustainable management - 1 ECTS

The course aims at providing a critical look at organizational analysis, considering various criteria: strategy, CSR strategy, organizational structure, governance, organizational culture and the organization's environment.

- Identify and characterize different forms of organizational structure
- Describe and analyse organizational culture
- Analyse the organizational environment

Circular economy: implementation - strategy, offer, design - 3 ECTS

The course aims to highlight the link between operational and strategic issues in a circular economy.

- Identify strategic issues to be solved in relation to environmental, social and economic issues
- Describe the environmental, social and economic impacts of the solutions chosen
- Argue a project's performance with regard to the circular economy

Finite elements - 2 ECTS

Students have to run a project on ANSYS modelling software. Lectures in small group of 15 students on mechanical structures will be provided.

Makers PlayLab - 2 ECTS

Experience ESB Makers Playlab and its "learning by doing" approach under the supervision of its Manager in order to:

- Discover the environment of a Fablab
- Develop skills for prototyping, modelling, programming, 3D printing, laser cutting...
- Conduct document research for technical communication
- Create parts and/or an application

Wood based Composite II - 2 ECTS

To provide an understanding of the environmental, economic and technological drivers behind the manufacture and use of commercial wood composites.

- Collect and summarise experimental data
- Apply and adapt standard test methods to composites materials
- Measure physical and mechanical properties of composites
- Optimise a bio-based composite for a particular end-use

Wood sciences (Anatomy, chemistry, physic) - 2 ECTS

The course aims to deepen participant understanding of wood science.

- Communicate orally to effectively transfer information
- Measure a property in a concrete way
- Determine the physical and chemical characteristics of materials
- Understand water-to-wood interactions
- Apply testing standards and protocols
- Use mathematical formulas wisely
- Identify the characteristics of each physical phenomenon

Biorefinery - 2 ECTS

The aim of this course is to understand the value of agro and bio-based products beyond their traditional channels (agriculture/food and forest/wood) and to anticipate the evolution of uses and added values.

- Qualify a bioresource
- Describe a biorefinery facility
- Explain the concept of bio-based platform molecules

Project DEFI - 3 ECTS

The DEFI allows you to realize an idea that is close to your heart, or to respond to the request of a sponsor (company, which can be the host company of an apprentice, association, individual...), while experimenting with project management and developing your ability to work independently.

- Defining and conducting a project
- Managing a project team
- Communicating orally to effectively transfer information
- Communicate your ideas through diagrams and models
- Develop your social outlook

Research and Technology Transfer project - 3 ECTS

The main purpose of this exercise is to find a solution to a problem, using the main stages of research: defining the problem to be solved, collect and analyse appropriate information (state of the art), design and conduct experiments to supplement the information already collected, analyse data, draw conclusions from these data and convey the findings to others.

Internship or research project - 8 ECTS

The Professional Experience in a company or lab allows to:

- Implement the knowledge and know-how learned during the training
- Discover a professional environment and the labour world
- Lead a mission in a professional situation

French as a Foreign Language - 1 ECTS

English advanced - 1 ECTS

LEARNING OUTCOMES

- Describe the different functions of a forest
- Use different processes to transform wood into products
- Select appropriate wood products by their use, supply chain, and recyclability
- Optimize a product or process using a suitable method or tool
- Analyse and implement a sustainable development strategy in a company
- Determine physical and chemical material characteristics
- Understand wood-water interactions
- Analyse results with a scientific approach
- Apply norms and research standards
- Manage a project and a team (communication, management)
- Write and speak English confidently in a business context
- Learn the basics in French, in order to cope with everyday life in France