

ECOLE NATIONALE SUPÉRIEURE EN GÉNIE DES SYSTÈMES ET DE L'INNOVATION NATIONAL GRADUATE SCHOOL OF SYSTEMS ENGINEERING AND INNOVATION

# **Engineering Degree in Systems and Innovation Engineering**

Diplôme d'Ingénieur en Génie des Systèmes et de l'Innovation

At **ENSGSI**, the teaching method combines theoretical knowledge with hands-on practical experience, giving students the skills needed to thrive in the ever-evolving field of **Systems and Innovation Engineering**. Our goal is to nurture **creative thinkers, problem solvers, and change-makers** who can drive innovation and create meaningful impact in the world.

## Where Ingenuity, Science and Engineering Meet Humanity

This comprehensive program provides a strong foundation in Engineering principles while integrating advanced concepts in Systems and Innovation Engineering. Students acquire an in-depth understanding of complex systems, master design thinking methodologies, and explore sustainable development practices. Graduates emerge as well-rounded professionals equipped to tackle real-world challenges in the field of Systems and Innovation Engineering.

The successful completion of the "Engineering Degree in Systems and Innovation Engineering" program leads to earning an Master's Engineering degree ("Diplôme d'Ingénieur").



## **Partnerships**



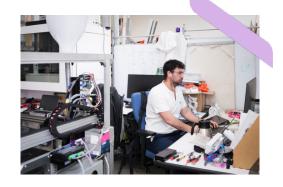
**ENSGSI** encourages a culture of openness and collaboration and values the strength of partnerships. We actively seek opportunities to engage with industry, academia, and research institutions to foster knowledge exchange, drive innovation, and promote multidisciplinary collaboration. Through strategic alliances and joint initiatives, we enhance our educational programs, expand research horizons, and create a dynamic ecosystem of learning and growth. We welcome potential partners to join us in shaping the future of engineering education and research for mutual success and impactful outcomes.

### Careers

**ENSGSI** graduates possess versatile skills and extensive knowledge that position them as valuable assets across all types of companies, sectors, and activities, encompassing a wide array of industries.

Graduates have access to all sectors of industry, due to their versatile profiles.

Their ability to navigate and succeed in various career paths testifies to the comprehensive education they receive.



# Specificity of French "Ecole d'ingénieur"

After completing a **two-year preparatory course** in sciences and mathematics, students join the **program in the first year at ENSGSI** (which corresponds to the last year of a Bachelor's Engineering degree). It provides a solid foundation in fundamental concepts. Following the Bachelor's degree, there is a 2-year **Master's degree program** where students further enhance their skills and knowledge.

The **3**<sup>rd</sup> **year of the Master's degree** includes a full semester internship, which can be completed in France or abroad during the 2nd semester.

Upon successful completion of the Master's program, the student is awarded an Engineering Degree («Diplôme d'Ingénieur»).



| <b>1</b> st <b>Year</b><br>at ENSGSI |            | <b>2<sup>nd</sup> Year</b><br>at ENSGSI |            | <b>3<sup>th</sup>Year</b><br>at ENSGSI |             | Master's |
|--------------------------------------|------------|---|------------|--|-------------|----------|
| Semester 5                           | Semester 6 | Semester 7                              | Semester 8 | Semester 9                             | Semester 10 | Degree   |
| Last year of bachelor                |            | Master 1                                |            | Master 2                               |             |          |
|                                      |            |   |            |  |             |          |

Undergraduate programme

Graduate programme

### **Courses offered at ENSGSI**

Our curriculum encompasses a diverse range of courses designed to provide a comprehensive education in the chosen field of study. Each student attends all the following courses:

- Systems Engineering
- Industrial Engineering
- Project Management
- Mechanical and Energy Engineering
- Chemical and Process Engineering
- Materials Engineering
- Mathematics & Modelling for Engineering

- Management & Human Skills (Soft Skills)
- Sustainable Development
- HSQE Health, Safety, Quality and Environment
- Tutored language courses
- Industrial Projects\*
- Internships (a full semester internship in France or abroad)

<sup>\*</sup> Specificity of the industrial projects course: in the 1st and 2nd year, students actively participate in 2 distinct industrial projects on a weekly basis, working in small groups of 4-5. These projects provide hands-on collaboration with different companies.







### **International**

#### **INCOMING:**

International students can apply for an exchange semester, an international double degree or as a regular student.

#### **OUR INTERNATIONAL DOUBLE DEGREES:**

- · Germany, RPTU Kaiserslautern
- Spain, Universidad Politécnica de Catalunya Barcelona
- Brazil, Universidade Federal de São Carlos
- Brazil, Universidad Federal de Viçosa
- Chile, Universidad Santiago de Chile
- · Colombia, Universidad Nacional de Bogotá
- · Morocco, Ecole des Mines de Rabat



#### **OUTGOING:**

international mobility is a requirement of the curriculum, all students have to spend a semester studying or working in a foreign country.

#### **SOME PARTNERS IN EUROPE:**

- Austria: Carinthia University of Applied Sciences
- Czech Republic: Czech Technical University in Prague
- Denmark: South Denmark University
- Finland: Lappeenranta University of Technology
- · Germany:
  - · RPTU Kaiserslautern
  - · KIT Karlsruhe
  - · Hochschule Mannheim
- Italy:
  - · Politecnico di Milano
  - · Politecnico di Torino
  - · Università degli Studi Roma
- · Netherlands: Delft University of Technology
- Portugal:
  - · Instituto Politécnico do Porto
  - · Universidad Nova de Lisboa
- Romania: University Politehnica of Bucharest
- Switzerland: Haute Ecole de Suisse HES- SO Valais
- Spain:
  - · Universidad Del País Vasco
  - · Universidad Politécnica de Catalunya Barcelona
  - Universidad Politécnica Madrid
- Sweden: Luleå University
- ..

#### **SOME PARTNERS OUTSIDE EUROPE:**

- Argentina: Universidad Nacional de Cuyo
- Brazil:
  - · Universidade Federal de São Carlos
  - · Universidade Federal de Viçosa
- Chile: Universidad de Santiago de Chile
- Colombia: Universidad Nacional de Bogotá
- Costa Rica: Instituto Tecnológico de Costa Rica
- Mexico: Instituto Tecnológico de Monterrey
- Morocco: Mines de Rabat
- Tunisia: North American Private University of Sfax
- ...



## Other degrees offered at ENSGSI

#### MASTER'S DEGREE IN DESIGN & INNOVATION (MASTER IDEAS)

The 2<sup>nd</sup> year Master's Degree in Design & Innovation offers a focused curriculum that cultivates expertise in design thinking and innovation. Students engage in user-centered design approaches, prototyping, and market analysis, empowering them to drive innovation and create transformative experiences.

This degree prepares graduates for success in diverse industries where design and innovation intersect.

Upon successful completion of the Master's 1 program in another school, French or international students can complete their studies by applying for the 1-year Master's 2 program at ENSGSI, which includes an internship in France or abroad for the 2nd semester.

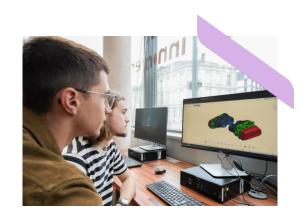


#### MASTER'S DEGREE IN URBAN INNOVATION (MASTER IUVTT)

The specialized **2**<sup>nd</sup> **year Master Degree in Urban Innovation** delves into the **dynamic intersection of technology, sustainability, and urban development**.

Students gain a profound understanding of the complexities of urbanization and acquire strategies for designing smart and resilient cities. Graduates are empowered to contribute to sustainable urban development and shape the future of urban communities.

Upon successful completion of the Master's 1 program in another school, French or international students can complete their studies by applying for the 1-year Master's 2 program at ENSGSI, which includes an internship in France or abroad for the 2nd semester.



#### PhD

The **PhD program at ENSGSI** offers an immersive research experience for aspiring scholars in the field of **Systems and Innovation Engineering in the laboratory ERPI**. Doctoral candidates engage in cutting-edge research projects, collaborating with faculty members to advance knowledge in their chosen area of expertise.

This PhD program is open to international students, holding a Master's degree.

erpi.univ-lorraine.fr



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