

ÉCOLE NATIONALE SUPÉRIEURE

DE GÉNIE INDUSTRIEL



**Génie industriel** is the Industrial and Management Engineering School of the Grenoble Institute of Technology, **Grenoble INP**.

**Grenoble INP** is ranked at the top of the French engineering Universities for its research, education and industrial collaborations.

**Génie industriel** offers a large variety of study opportunities for undergraduates, graduates, researchers and engineers from all from over the world.

Supported by leading worldwide industrial partners, **Génie industriel** offers a multidisciplinary curriculum in Engineering and Management.

## INTERNATIONAL MASTER IN SUSTAINABLE INDUSTRIAL ENGINEERING

- matching the highest international standards
- fully taught in English.

**Our curriculum is based on the three pillars of sustainable industrial development:**

- environmental impacts,
- economic competitiveness,
- social values.



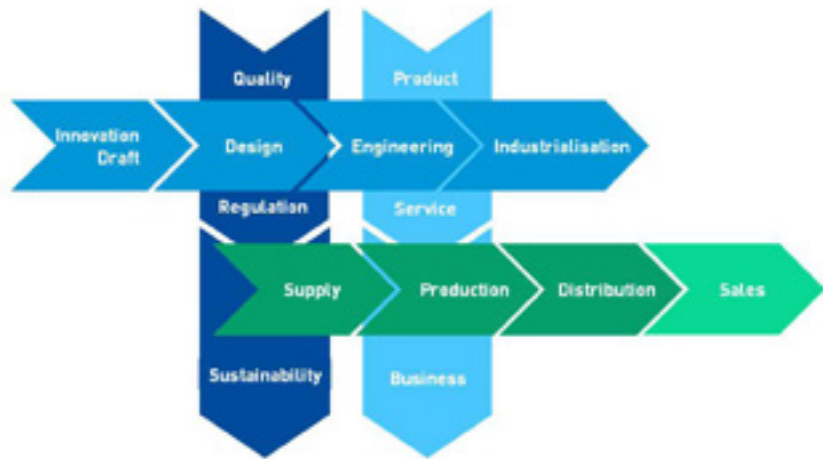
# SUSTAINABLE INDUSTRIAL ENGINEERING MASTER

**The Sustainable Industrial Engineering Master (SIE)** trains tomorrow's industrial engineers in collaborative work in a global world. Their goal is to limit environmental impacts while achieving economic competitiveness and promoting social values.

The SIE programme meets the requirements of the Education-Research-Innovation triangle.

SIE is designed to cover the entire value chain and lifecycle of any product or service, from innovative concept through to distribution in a global context.

SIE students will acquire key competences in Engineering sciences, but also skills in User-Led Design and Industrial Management, both considered as critical tools for our students.



Value chain and lifecycle of product and service

## INDUSTRIAL CONTEXT

Industry is and will remain the main element of the global economy.

SIE addresses the branch of Engineering concerned with production efficiency and the manufacturing of industrial goods. SIE focuses on plant and process design, the provision management of goods and energy as well as the integration of staff within the overall organization.

Sustainable industrial engineering has myriads of application fields, from the development of new and innovative machines, to product-service systems (PSS) and recyclability.

**1 or 2 YEARS** STARTING IN SEPTEMBER

### Admissions criteria:

- Bachelor of Science or Bachelor of Engineering or equivalent in Industrial engineering / Supply Chain / Mechanics / Materials science / Information Systems / Manufacturing science / Electronic engineering / Logistics and transportation / Product design / Product development
- Entry level 1st year if BSc
- Entry level 2nd year if MSc
- English proficiency

<http://genie-industriel.grenoble-inp.fr/master-sie>

## PROGRAMME

Period	Courses	ECTS
Year 1 September - January	<ul style="list-style-type: none"> <li>• Global Industrial Engineering (project) and Seminars</li> <li>• Engineering Design: methods and tools.</li> <li>• Production and Operations Management</li> <li>• Supply Chain Management</li> <li>• Basic Economics for Sustainable Industrial Engineering</li> <li>• Sustainability in Industrial Engineering</li> </ul>	30
Year 1 February - June	<ul style="list-style-type: none"> <li>• Quality and Process Development</li> <li>• Discrete Event Simulation</li> <li>• Creativity and Innovative Design</li> <li>• Industrial Information Systems</li> <li>• Global Firms and Economic Dynamics</li> </ul>	30
Year 2 September - January	<ul style="list-style-type: none"> <li>• Choice between two specialisations:                             <ul style="list-style-type: none"> <li>«Supply Chain»</li> <li>«Product Development»</li> </ul>                             offering a large panel of optional courses                         </li> <li>• Intercultural Management</li> <li>• Introduction to the Master Thesis</li> </ul>	30
Year 2 February - June	Master Thesis based on a mission in an industrial firm or a research laboratory in France or abroad	30
Total		120

## CAREER OPPORTUNITIES

Our Master in Sustainable Industrial Engineering targets 2 main profiles:

### Industrial engineers with sustainable engineering jobs

The students will find jobs in:  
Industry / Energy / Mechanics / Aerospace / Production / Automation / Management Engineering

### Researchers in Industrial Engineering

The students will have a good number of opportunities to carry on their studies as PhD students in one of the numerous international laboratories working with our laboratories and the research community in the Sustainable Industrial Engineering domain.

### BECOME A:

- Project engineer
- Development or research engineer
- Business engineer or consultant
- Production and supply chain engineer
- Product architect
- Consultant in Sustainable industrial engineering



# SCHOOL ENVIRONMENT

## GI-NOVA, SIMULATION AND PROTOTYPING FACILITY

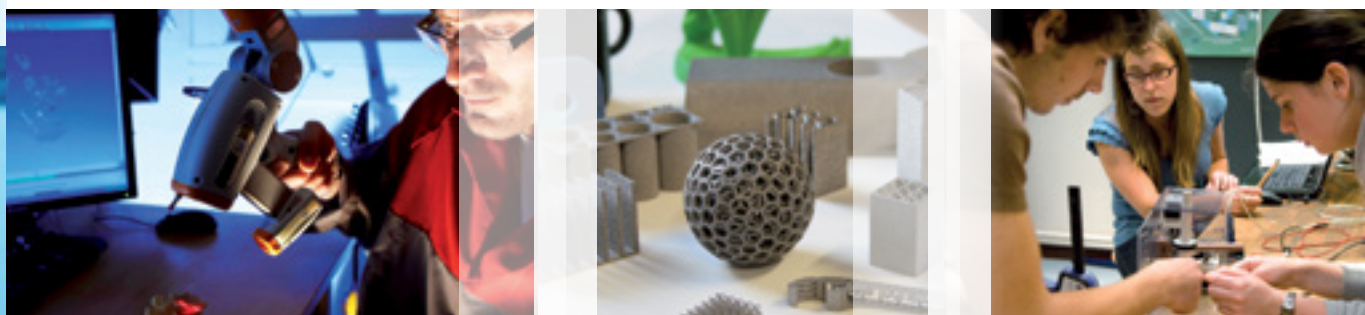
Gi-Nova hosts the most modern equipment dedicated to training, research and projects.

### Gi-Nova, an open platform at the cutting edge of technology

- Equipement for rapid prototyping, additive manufacturing and visualisation: 3D printers, 3D stereoscopic and holographic screens, haptic harm, ...
- The first Electron Beam Melting additive manufacturing machine in a French University: a revolution in design and manufacturing.
- Gi-Nova is a pillar of the training programmes at Génie industriel.

## INDUSTRIALISTS CLUB

- Bausch & Lomb
- BD
- Bull
- Caterpillar
- Chorège
- FM Logistic
- Groupe SEB
- HP
- Renault
- Renault Trucks / Groupe Volvo
- Schneider Electric
- Siemens
- STMicroelectronics
- ZF



## OUR LABORATORIES

Our professors are researchers in our partner laboratories:

- **G-SCOP**, the Grenoble Sciences for Design Optimisation and Production, an interdisciplinary laboratory addressing the scientific challenges of the industrial world's mutations. The laboratory's research domains range from Product Design to Production Systems Management.
- **GAEL**, the Grenoble Applied Economics Laboratory addressing industrial organization, innovation and value.
- **CERAG**, the Centre for Study and Applied Research in Management addressing managerial efficiency.
- **PACTE**, the Research Centre in Socio-Technical Innovation.

## GRENOBLE INSTITUTE OF TECHNOLOGY

**The Grenoble Institute of Technology, as a developer of expertise**, offers 22 different fields of Engineering, 11 joint or double degree programs at Master level, 7 international degrees including 1 Erasmus Mundus Master's degree, and 6 Doctorate curricula.

The excellence of the institute is based on **its research specializing in Engineering Sciences exploring the technologies of the future** in 6 key domains:

- Energy
- Environment
- Information and Communication
- Materials
- Micro and Nanotechnology
- Production Systems.

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**Grenoble INP - Génie industriel**

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