



Graduate school of  
sustainable engineering for



ENERGY



WATER



ENVIRONMENT

One of the eight schools of Grenoble INP  
Institute of Engineering Univ. Grenoble Alps

# Grenoble Alps



**63 000** STUDENTS

**180** DIFFERENT NATIONALITIES

**1<sup>ST</sup>** CITY IN FRANCE FOR JOB AND R&D

**8** NATIONAL RESEARCH INSTITUTIONS

**3 700** PHD STUDENTS

**7000** RESEARCH PROFESSORS

**5** COMPETITIVENESS CLUSTERS

**5** MAJOR EUROPEAN BODIES

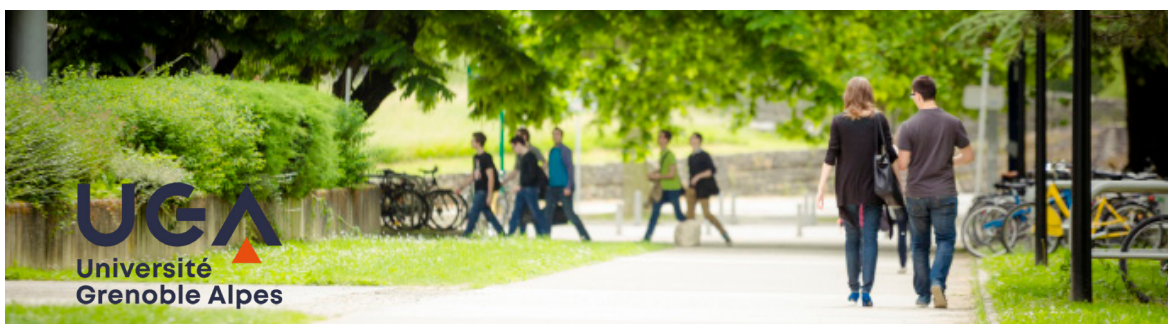
**2<sup>ND</sup>** BIGGEST ECONOMIC REGION

**EUROPEAN GREEN CAPITAL 2022**

## An exceptionnal scientific and natural environment

Considered the capital of the Alps, Grenoble is well known for being a dynamic, innovative, industrial hub . It is surrounded by three mountain ranges, offering infinite possibilities for lovers of high peaks. The city also offers a diverse cultural calendar, and it's no less dynamic when it comes to nightlife, with heaps of spots to have fun and enjoy cultural or leisure activities. Located at the heart of a remarkable scientific environment, Université Grenoble Alpes is ranked among the 150 best universities in the world and the top 5 in France (2021 Shanghai Ranking). The main campus is recognised as one of France's most beautiful campuses.

The engineering and management institute - Grenoble – INP, UGA - brings together eight schools focused on society's major challenges - energy, environment, digital society, microtechnology, nanotechnology, and industry of the future. One of these schools is the Graduate School of Engineering in Energy, Water and Environmental Sciences – Grenoble INP – Ense<sup>3</sup>, UGA, which trains responsible engineers to take action for the energy and environmental transition.



**UGA**  
Université  
Grenoble Alpes

# Training top-level and multidisciplinary engineers



Grenoble INP - Ense<sup>3</sup>, UGA trains high-level engineers, reputed for their scientific and technical skills as well as their knowledge of ecosystems, society, and environmental and climate issues. It belongs to the "Conférence des Grandes Ecoles" (CGE), an association of engineering and management Grandes Ecoles. These schools are recognised by the French government and provide a national diploma that represents at least five years of postsecondary study and is worth the status of Master. The admission process is highly selective.

## A school that values commitment

Grenoble INP – Ense<sup>3</sup>, UGA values extra-curricular involvement from students and offers the possibility of a range of experiences all throughout their degree. Students can also progressively acquire experience in the professional world, by completing a number of internships and participating in projects offered by partner companies.



## Innovative teaching methods

Emphasis is placed on multidisciplinary, with a wide range of optional classes offered to students. Many other unique methods are used to make students active in their own learning: digital tools, serious games, problem-based learning, and projects developed on the school's technological and numerical platforms.

## A three-year curriculum with eight specializations

- Automatic control and Intelligent Systems
- Hydraulics, Civil & Environmental Engineering
- Electrical Power Engineering
- Nuclear Energy Engineering
- Product Design
- Mechanical & Energy Engineering
- Signal & Image Processing, Communication Systems & Multimedia
- Energy systems and associated markets

## 4 international Master's programs, taught in English

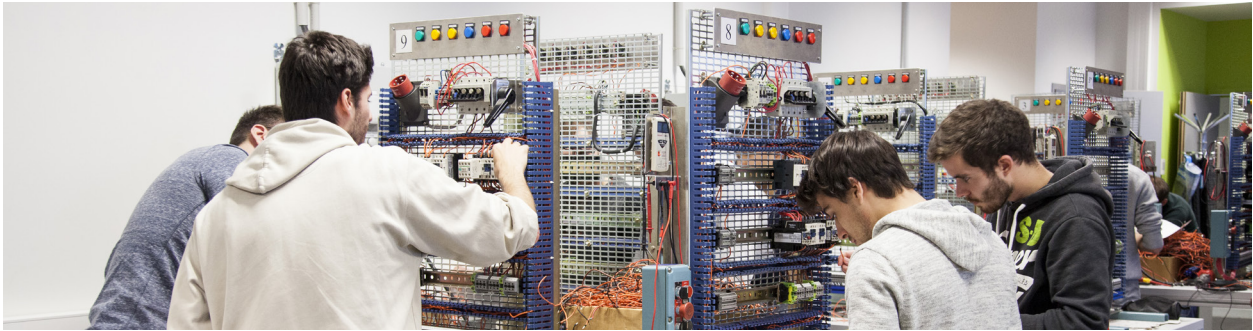
- Hydraulic and Civil Engineering
- Electrical Engineering for Smart Grids and Buildings
- Fluid Mechanics and Energetics
- Mobile, Autonomous and Robotic Systems

## 2 Advanced Master's degrees programs

- Advanced Master in Energy Marketing and Management
- Advanced Master in Territorial Energy and Environmental Transition



## Four areas of expertise



### Four foundational themes

#### Energy

The energy transition will be mainly based on low-emission or renewable resources. Transport, conversion services and energy storage are designed and sized in order to guarantee maximal efficiency, and provide efficient and reliable services to managers. Our school educates future executives and directors about low-tech options and prepares them to find innovative, sustainable solutions for current and future problems.



#### Transport & Construction

The sectors of passenger transport and civil engineering structures for hydraulic storage and distribution play a key role in our use practices. However, it is essential to reduce their environmental impact, as they are among the sectors with the highest energy consumption. Ense<sup>3</sup> graduates are ready to tackle the challenges of decarbonised transport and sustainable constructions.



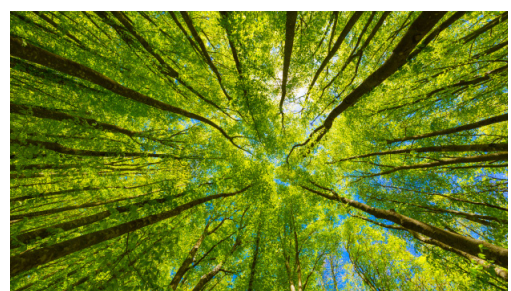
#### Digital

Ever-present and unavoidable, digital technology provides advanced functions for traditional systems, revolutionising new products and services. The physical world is connected, and the cyber-physical is a reality. Ense<sup>3</sup> graduates are prepared to contribute to these areas and ensure the digital security of critical infrastructures used for water and energy production and distribution.

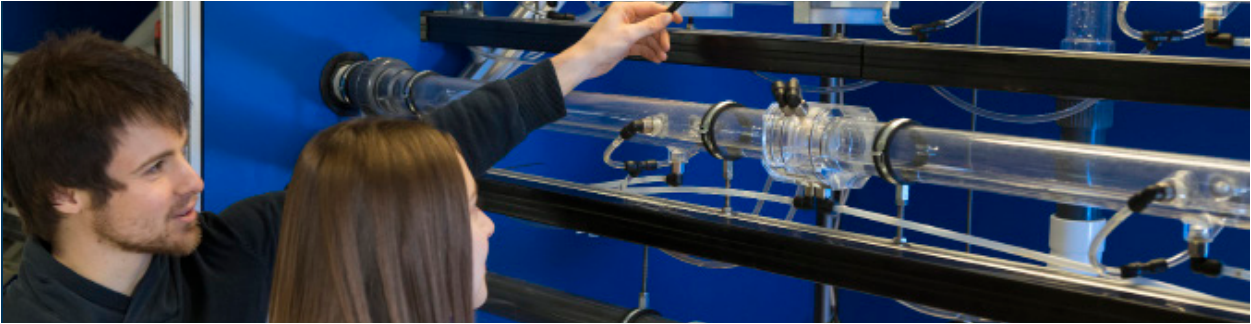


#### Environnement

Students are trained to evaluate the socio-economic and environmental impacts of engineering and technology, and prevent natural and industrial risks associated with designing critical water and energy access structures and infrastructures. They acquire the scientific knowledge that is essential to understanding environmental and climate challenges.



# Strong connections with research and professional world



**80** TEACHERS  
& RESEARCHERS

**7** INDUSTRIAL  
& RESEARCH CHAIRS

**11** RESEARCH  
LABORATORIES

## Links between research and teaching

The school's research professors all work in one of the 11 research laboratories partnered with the school. They support the training of engineers either by proposing subjects for study, projects, internships, research-based training or employment. This dynamic is based on an exceptional research hub in Grenoble :

- **2 national innovation clusters** : Tenerrdis (energy transition) and Minalogic (digital technology)
- **The GIANT (Grenoble Innovation for Advanced New Technologies) campus**, hosting Major French research institutions (CEA and CNRS) as well as leading European laboratories (ESRF, ILL, EMBL)
- **The "Carnot Énergies du futur institute"** gathering multidisciplinary research laboratories in the field of low-carbon energy technologies
- **The "Carnot Water & Environment"** gathering research units in the field of water and aquatic ecosystems management.

## Dynamic corporate relations

The school has built valuable, open partnerships with companies and actors from the socio-economic world. It supports students all throughout their studies to define their professional ambitions, and prepares them to enter employment :

- Professional coaching module
- Mandatory internships in a company or laboratory, in France or abroad, in 1st year (6 weeks), 2nd year (Assistant engineer, 10 to 16 weeks) and 3rd year (End of studies project, 22 to 26 weeks)
- Professional networking events: business forum, practice interviews, alumni day, hackathon, innovation challenge, etc.
- Each cohort sponsored by a company
- Participation in projects offered by companies and laboratories



Students receive support from our Career center, shared by the eight schools of Grenoble Institute of Engineering and Management.

**300** GRADUATES  
EACH YEAR

**95%** EMPLOYED AFTER  
12 MONTHS

**10%** CONTINUING  
THEIR THESIS

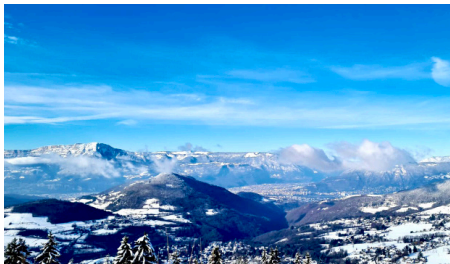
**20 DAYS ON AVERAGE TO FIND THEIR 1ST JOB**



## An intercultural and international school



**Grenoble INP - Ense<sup>3</sup>, UGA** is a school that is open to the world, attracting a significant number of talented students from all over the globe each year and promoting diversity as a source of wealth and development. Its international strategy is based on a large number of partnerships and networks (Cluster, RESCIF, MAGALHAES etc.) with prestigious overseas universities. It is part of the Unite! project (University Network for Innovation, Technology and Engineering), which aims to create a huge university campus from Finland to Portugal.



- 175 agreements signed with partner universities
- 7 months on average spent overseas by students during their course
- 25% international students, over 53 nationalities
- 4 Masters taught in English
- 2 summer schools on the theme of energy

### **Welcoming international students, PhD students and researchers through :**

- A well-recognised quality of campus life
- Accommodation options reserved for applicants
- Support from the International Students and Scholars Office (ISSO)
- Courses in French as a Foreign Language
- Specific welcome events
- Involvement from many student associations



The school highly encourages the mobility of its students and staff. It aims to develop the intercultural skills of engineering students, improve their understanding of international issues, and strengthen their employment prospects overseas. Students therefore have many opportunities to go overseas during their studies: internships, exchange semester or year, double degree, leave of absence, etc.

# A great place to study and get involved



**5000** M<sup>2</sup> DEDICATED TO TEACHING  
/ RESEARCH PLATFORMS

**2/3** STUDENTS INVOLVED  
IN ASSOCIATIONS

**500** M<sup>2</sup> OF FABLAB SPACE

## Green-Er energy innovation hub

**Grenoble INP - Ense<sup>3</sup>, UGA** is located on the world-class GIANT (Grenoble Innovation for Advanced New Technologies) campus, home to 30,000 researchers, students and employees. Its 20 000m<sup>2</sup> smart building (GreEn-ER) represents an international-level innovation hub for energy and renewable resources, bringing together training and research actors around new energy technologies. It includes 5000m<sup>2</sup> dedicated to experimentation by students and researchers throughout 2 platforms and 1 FabLab.

## A wide range of student associations

The site is also set up to host many students associations. The vast majority of students belong to a club or association, with a wide variety of themes: entrepreneurship, sustainable development, solidarity, art, sport, etc. Everyone can follow their passion and get involved in initiatives in an area that they care about.

## Sustainability and Social Responsibility

**Grenoble INP - Ense<sup>3</sup>, UGA** trains its students for careers of the future. They are aware of and involved in the ecological and social transition. There is no lack of initiatives around societal and environmental issues:

- The school has developed committed programs and offers creativity seminars, engineering projects and conferences on these issues.
- It offers a rich student life on those topics : bulk grocery store, organic food baskets, environmental awareness, low-tech, awareness of sexist and sexual violence, etc.
- The school is a COP observer with "RINGO" status, which enables roughly ten people to attend each year.
- First-year students automatically take the Sulitest and a carbon quota for student transport has been introduced.





## Grenoble INP - Ense<sup>3</sup>, UGA

21 avenue des Martyrs - CS 90624  
38031 Grenoble Cedex 1  
France



[ense3.grenoble-inp.fr/en](http://ense3.grenoble-inp.fr/en)



### Train

TGV direct link from Paris (in 3 hours, 6 connections daily) or from Lyon (in 1h15, 12 connections daily).

### Plane

Geneva airport (shuttle bus)  
Grenoble airport (shuttle bus)  
Lyon Saint-Exupéry airport (shuttle bus, in 1 hour)

### Public transport

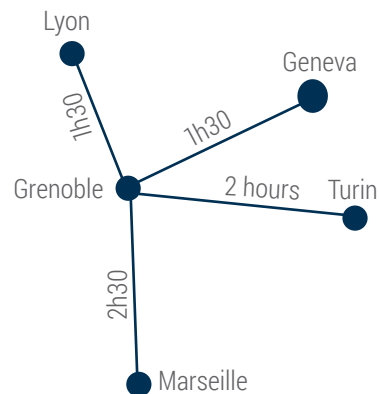
Tramway B, Marie-Louise Paris - CEA stop  
Bus Cars Région, Marie-Louise Paris - CEA stop

### Bike

400 spaces in the bicycle park  
Métrovélo offers short and long term bicycle rental.  
Agencies at Grenoble train station and on campus.

### Road

The Cambridge car park, private and paid, is located opposite the school, W. Churchill Street entrance.



**Grenoble INP**  
Engineering Institute  
Univ. Grenoble Alps



**INP Group**

Diploma 1 engineer out of 7 in France  
+ 30 public engineering schools

**Cti**  
Commission  
des Titres d'Ingénieur