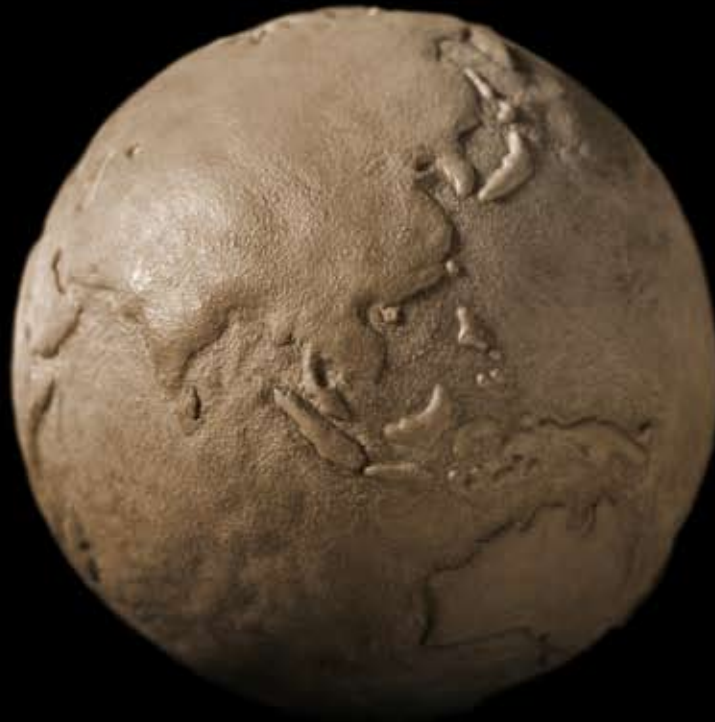


Institut Supérieur d'Ingénierie  
et de Gestion de l'Environnement

**ADVANCED MASTER  
INTERNATIONAL ENVIRONMENTAL  
MANAGEMENT (EnvIM)**



**WE BELIEVE THE ENVIRONMENT  
HAS NO BORDERS.**

# AN INTERNATIONAL ENVIRONMENTAL EXPERIENCE

that is unique in all the world

Today, sustainable development requires a comprehensive approach. The Advanced Master's Degree in International Environmental Management is a training program unlike any other, helping students to gain expertise in the environmental and energy issues of tomorrow, across three cultures: European, Asian and American.

Participants in this training programme, which is based on an innovative and practical pedagogy, will have the rare opportunity to go out and meet local and international players in Europe and Asia thanks to the wealth of available themed travel opportunities. The multiple projects and case studies carried out at MINES ParisTech Graduate School, INSA Lyon and Tsinghua University (Beijing) complete this rich and multicultural programme.

All of the research centres at our partner schools have mobilised to offer students a strategic vision that takes into account the latest scientific and technological advances in every field, including geoscience, energy and process engineering, environmental chemistry, economics, management and society. Resource management (water, minerals) and biodiversity, pollution and its impact on health, energy issues and urban development: Each theme is addressed from a scientific, political, social, ethical and regulatory standpoint.

Researcher-educators, professionals and alumni will help you acquire highly specialised, diverse skills for managing projects at an international level. Designed for future players in sustainable development, the training will also develop your taste for learning and exchanging.

This rich and always innovative six-month training program will serve as an effective launching pad for your professional career.

I hope to welcome you very soon to ISIGE – MINES ParisTech.

**Frédérique VINCENT**

Director of ISIGE - MINES ParisTech

## A unique double-degree program

This program was set up in 2007 in order to offer a high level of education and cooperation, with a professional and managerial aim, between France and China. It is designed for young graduates holding a Master's degree who wish to complete their curriculum with a specialization in the field of environment.

The students undertaking the full program will obtain a double degree:

- **An Advanced Master's Degree from MINES ParisTech Graduate School and INSA Lyon**
- **A Master's Degree from the University of Tsinghua**



Integrated project management

International negotiations

Life cycle approach

Decision making methods



Economic and social stakes

Resource preservation

Urban and industrial development

Energy and climate change

# THE PROGRAM

## CURSUS SCHEDULE



\* For Chinese nationals and non-French students who do not want the double degree with Tsinghua University.

## COURSES AND SEMINARS :

Pedagogy with an International Focus  
100% of the courses are in English

- **Resource management:** Ecosystem, biodiversity, fossil and mineral resources
- **Water resources and management:** Hydro systems, international conflict management, water policies
- **Public policies:** Institutional framework in Europe and Asia, stakeholders, regulation and economic tools
- **Pollution prevention and control:** Impact assessment, industrial environmental management and treatment technologies
- **Risk management**
- **Cleaner production and life cycle approach**
- **Climate change:** International negotiation, policies framework, cleaner development and mechanisms, CO2 capture and storage
- **Renewable energies**
- **Sustainable cities and eco buildings:** Urban planning, flux management, energy efficiency in building and transportation systems

French or Chinese language and cultural courses offered

## TWO CAMPUSES TO LIVE AND LEARN

### **MINES ParisTech - Fontainebleau**

Located 60 kilometres south of Paris, the MINES ParisTech de Fontainebleau campus offers its students an excellent environment for living and studying. Close to Paris (40 minutes from the Gare de Lyon), yet in the midst of the forest that shares its name, the city offers many outdoor activities for students to enjoy. France's horse riding centre, Fontainebleau also offers ample opportunities for other athletic activities, including swimming, rock climbing, cycling and more. A year of study on campus often involves lots of sports.



### **Tsinghua University - Beijing**

Founded in 1911, Tsinghua University - one of China's most famous universities - is situated in a former Qing Dynasty imperial garden surrounded by many historical sites in northwest Beijing, in the Haidian district, which was designated for universities and other academic institutes.



On campus, there are more than one hundred student clubs serving diverse interests. Club activities range from community services, music and sports, cinema and theatre, dancing and martial arts to various scientific and academic interests. While their interests vary, these clubs are all organized and run by and for students.

# AN INNOVATIVE EDUCATION BASED ON REAL CASE STUDIES

## The project and the study **trip in Europe**

- Consultancy energy project
- Energy study trip in Poland

## The project and the study **trip in Asia**

- Environment and tourism development study trip
- Urban planning project

## The **international** prospective project

- Water and energy project: Thinking about water in the city of tomorrow (2010 project)

### **Focus on the 2010** urban planning study trip

#### **Cao Lanh, Mekong Delta, Vietnam**

April 2010, Cao Lanh, a fast-growing Vietnamese city in the Mekong Delta. The students are scouting for the organization of the next urban planning workshop taking place in the region at the end of May. Their task: Verify, analyse and synthesise the data provided by the city, meet with local parties, visit sensitive sites (a nature reserve, a water pumping station, landfill, and so on), and talk with citizens about lifestyle habits. Their objective: Draw up an environmental inventory of the region through practical records, bringing together key points to understand sustainable development in construction (water, waste, energy, transport, ecosystems, and biodiversity).

Pedagogically, the students were thereby able to discover and study in concrete terms all the issues tied to the growth of a city, including those that are strategic to the food supply and that pertain to a sensitive ecosystem.



### **Focus on the 2011** consultancy energy project

#### **Feasibility study for the creation of biomass-energy industries. Main case studies:**

- Development of energy plantations as alternative fuels in cement plants, Western Africa
- Integration of waste streams as alternative fuels in cement plants, Western Africa
- Feasibility analysis regarding a biogas project for the Varades community
- Photovoltaic ground-based system offsetting reforestation activities
- Wood Energy supply of Kinshasa - Reducing Emissions from deforestation and forest degradation

More information about projects and study trips: [www.isige.mines-paristech.fr](http://www.isige.mines-paristech.fr)

# THE PROFESSIONAL INTERNSHIP AND THESIS

## The professional **internship**

Students must complete a 6-month internship that can take place anywhere in the world. The subject of this professional internship is proposed by the company to solve current issues they are facing related to the environment, energy or sustainable development.

For the student, this is a chance to further develop his/her previous curriculum and to use recently acquired skills from the Advanced Master's program by successfully carrying out a meaningful task in an international, professional setting.

## The professional **thesis**

Students are required to write a research-oriented thesis. It must call on the student's analytical and global mindset and allow him/her to implement structural and methodological thought. The field is wide open; the subject can be of a scientific, technological, technical-economic, legal, or sociological nature.

In the case of the double degree, students will defend their theses twice at MINES ParisTech graduate School and Tsinghua University.

## Examples of past professional theses :

Carbon capture and storage. Application to the lime industry – **LHOIST**

Evaluation methods of CO2 capture technologies in power generation – **EDF**

The development of the recycling activity for the solar photovoltaic industry: a perspective study from 2010 to 2030 for c-Si panels – **CP SOLAR**

Carbon footprint of gases used to manufacture solar photovoltaic modules – **AIR LIQUIDE**

Study of South East Asia biomass fuels for direct combustion – **CLEANTECH**

Development and implementation of Key Performance Indicators. Case study in the Chinese cement – **SCHNEIDER Electric**

Implementing an Environmental Policy in the specific context of the Middle East – **VEOLIA Water**

Water footprint. Assessment and perspectives for the city of Barcelona – **CETaqua**

EU REACH regulation: registration process of intermediates products – **RHODIA**

Corporate sustainability in the entertainment industry – **NBC Universal**

# ADMISSIONS



## Admissions

Admission to the Advanced Master's Degree Program is highly selective. This Advanced Master's Degree Program welcomes applications from graduates of higher education in France or abroad, with at least 5 years of education after high school (master's degree level).

An excellent level in English is required, since all courses, projects, written work and interactions with companies and experts will be in English.

Level of English necessary: TOEFL Paper (620/677), IBT (110/120) or TOIEC (900/990), IELTS (8.0/9.0)

One of these tests is required of French and international students whose native language is not English and who have not earned a university degree where English was the primary language of instruction.

## Typical student profiles

**20** students

**70%** of the students hold degrees in engineering or science

**60%** of the cohort is international

(30% of the students are Chinese from Tsinghua University)

**Strong international backgrounds**

(dual nationality studies or work abroad)

## Admission procedure

**Pre-selection** is based solely on academic prerequisites: Priority is given to graduate students having achieved very good results in top schools or universities.

**Interview** is managed by a panel of professionals and professors. The aim is to get to know the applicant and his/her projects and goals, and to make sure that they are a good match with the aims of the Advanced Master's Degree Program. Interviews can be held by videoconference.

**Written Test.**

Applications on our website from February: [www.isige.mines-paristech.fr/applications](http://www.isige.mines-paristech.fr/applications)

# STUDENTS TESTIMONIALS

## **Born in the United States**

**and growing up in China,** I've had the privilege of being exposed to various academic environments and understanding the global cooperation necessary to tackle large-scale issues such as climate change. The EnVIM program synthesizes both International Environmental Management and Engineering from two leading institutions (MINES Paristech and Tsinghua University) and provides a vital global platform to better address our current problems regarding the environment and global sustainability. My professional plans to further any efforts in sustainable development will undoubtedly benefit from the academic training in such an international setting and from this integrated approach to environmental management and engineering.



**Kevin WU**  
United States

University Of Pennsylvania  
(Philadelphia)



**Beatriz ROCA-CUSACHS  
MAENNICKE**

Spain - Germany

Universitat Politècnica de Catalunya  
(Barcelona)

## **I chose the EnvIM program for several reasons.**

The first and most important one is my desire to switch professionally in order to work in the environmental field. This program offers a multidisciplinary vision of Environmental Management, and includes a broad range of subjects related to the environment, sustainable development and the field of energy. Usually other programs address fewer subjects, and I wanted broader knowledge.

The second reason is the international aspect of this program. And finally the "hands on" part is very important in addition to the academic part. I wanted to have the opportunity to work on real cases and to be in contact with the real world.

## **I am most interested in the field of urban planning and design,**

which is also where I would like to take my career. I applied for this program with the expectation of learning more about environmental management, as I came from an engineering background, as well as fostering my broad vision for environmental improvement. I also wished to be better prepared for future employment through case studies and internship training.



**Shuo GUAN**  
China

Tsinghua University  
(Beijing)

# CAREERS AND ALUMNI

## Alumni positions

- Engineering – consulting: Sustainable urban development - SOGREAH
- Development of water-specific sustainability assessments, indicators and strategies - CETaqua, Spain
- Greenhouse reduction manager - Energy Research Institute, China
- Technical Engineer of a waste water treatment plant - VEOLIA Water
- Eco-design project manager - EcoMundo
- REACH project manager - SAFRAN
- Key account manager - UPSolar
- Environmental consulting – ERNST & YOUNG

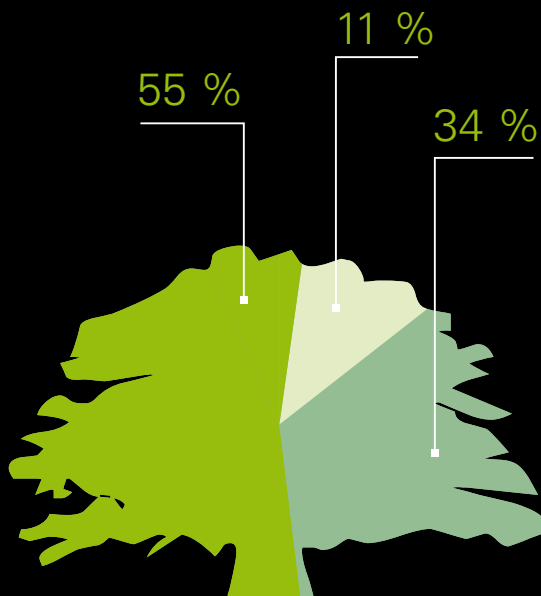


Data: 2009

**78%** of our alumni find their first position prior to graduation.




**100%** of our alumni find their first position within 4 months.

**44%** of the hires result directly from the professional assignment.



## Alumni Distribution by Business Sector

(Figures 2009)

-  Consulting
-  Industry
-  Studies, Research, Education

## Alumni association: a powerful worldwide network

**20 000** members around the world

**11** professional clubs and regional groups

Alumni yearbook and job offers

Conferences, round tables, seminars



## Alumni testimonials

**Charline FROITIER: This Master's degree provides privileged access**

to the new environmental challenges in industrial and urban development, since it keeps evolving and adapting to an ever-changing context. This year has been a rich experience for me in many respects and has helped me to move from the role of engineer to project manager, thanks to the group projects and the diversity of both the lecturers and the students. Most importantly, I learned about urban issues and their links to environmental stakes; this new interest took me to a VIE position in Vietnam for Sogreah, where I participated in energy, water and other projects for city development in a developing country lead by the dynamism of the fast-growing Asian economy.

**Flora BERG: EnvIM was a great opportunity for me**

to become familiar with both the technical aspects of environmental issues and the expectations of industrial companies. It was also a great personal experience, due to the various origins and backgrounds of the students. Beyond knowledge, this advanced Master's degree gives me a real taste of what «environment» means in the real world.



## **A STRONG PARTNERSHIP TO LEAD AN INNOVATIVE ADVANCED MASTER.**

### **MINES ParisTech**

Since its founding in 1783, MINES ParisTech Graduate School has trained high-level engineers able to solve complex problems in varied fields. The premier school in France by volume of contractual research, MINES ParisTech devotes a great deal of its research to industry. Its fields of research extend from energy to materials, applied mathematics to geoscience, and economics to social science. The school is also developing an initiative to create teaching and research posts on emerging themes. MINES ParisTech is a founding member of ParisTech, which unites 12 of the biggest engineering and management schools in Paris.



### **Tsinghua University**

Founded in 1911 in Beijing, Tsinghua University - one of China's most famous universities - subscribes to the education ideal of comprehensive mastery of classic and modern Chinese and foreign knowledge in the sciences and the humanities. Tsinghua is an important centre in China for nurturing talented students and promoting advanced scientific research. A comprehensive, research-oriented, and open university, Tsinghua has also developed an integrated education platform in science, engineering, the humanities, and medicine.

One of the earliest Chinese universities to invite foreign teachers, Tsinghua University in recent years has established sound relations with many world-famous universities. More and more overseas scholars and students come to study and work at Tsinghua, and many important international meetings are held here.



### **INSA Lyon**

INSA Lyon is one of the largest engineering graduate schools in France, and operates a fully integrated Education, Research and Innovation approach. Located on the LyonTech campus, INSA Lyon delivers more than 1400 engineering degrees, master's degrees and PhD degrees each year. Since its creation in 1957, INSA Lyon has developed its international outreach, notably through numerous educational and research partnerships. Organized around 6 competence centres involving 20 laboratories, 500 researchers and professors and 640 PhD students are currently conducting research at INSA Lyon, and the Institute has over a thousand industrial contracts in the socio-economic sector.



### **University of Pennsylvania**

The University of Pennsylvania is one of the oldest universities in America and, as a member of the Ivy League, one of the most prestigious institutions of higher learning in all the world. Penn's historic, beautiful and vibrant Philadelphia campus is home to 12 schools, more than 170 research centers, 4,200 faculty and nearly 20,000 students. At Penn, students enjoy the opportunity to gain knowledge without boundaries while living in one of America's great cities.



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### **MINES ParisTech - ISIGE**

ISIGE, le centre de formation en environnement et développement durable de MINES ParisTech

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