



Mastering Information Technology

The "Grandes Écoles" Quality Engineering Education

The French "Grandes Écoles" are a system of highly selective public engineering universities authorized to deliver the prestigious "diplôme national d'ingénieur".

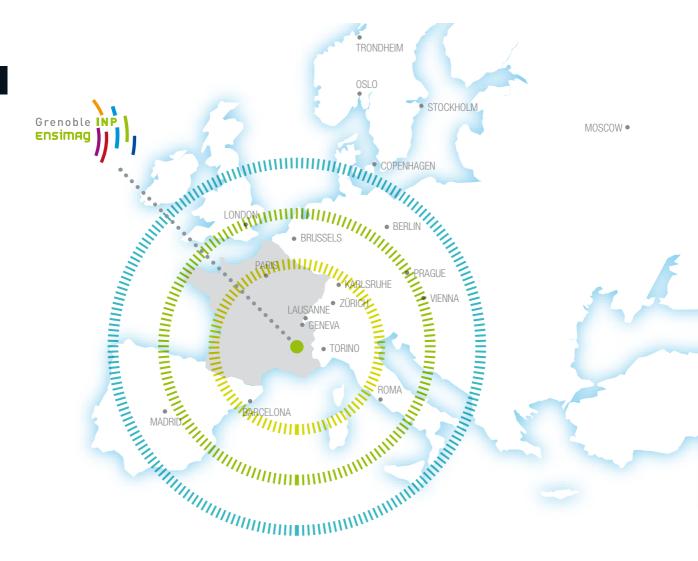
ENSIMAG ranks among the very best French "Grandes Écoles", and trains highly-skilled students in the fields of Applied Mathematics, Informatics and Telecommunications at an undergraduate and graduate level.

The Engineering Degree in France

The "diplôme national d'ingénieur" is awarded after 5 years of study following the obtaining of a secondary school diploma (the Baccalauréat). The first 2 years are spent at preparatory classes and followed by a competitive national examination. The Engineering Degree is therefore comparable in educational advancement to a Master of Science, although it is frequently broader in scope.

The engineering "Grandes Écoles" have common and specific features

- >> Small size: at most 300 to 500 graduates per year
- >> A highly selective admission process
- >> The "Grandes Écoles" attract the highest ranking students
- >> An approach based on fundamentals, with a strong emphasis on mathematics



The highest ranking French engineering school offering degrees in Informatics & Applied Mathematics

In the field of Informatics and Applied Mathematics, ENSIMAG ranks first in France, as measured by the position of our students in the national admission examinations and by the ranking of companies hiring our students.

Grenoble, in the French Alps, has always been a pioneer for high-tech engineering education in France. The first French school of electrical engineering has been created in Grenoble in 1900

(One of the first in the world after MIT). In 1960 the eminent French mathematician Jean Kuntzman founded ENSIMAG. Since that time it has become the highest ranking French engineering school in Informatics and Applied Mathematics.

FACTS & KEY FIGURES

- 250 diplomas awarded each year
- 150 Faculty members and invited speakers
- 5,500 alumni worldwide



/// GRENOBLE INSTITUTE OF TECHNOLOGY ///

For more than 100 years, Grenoble Institute of Technology has trained engineers and doctoral students in key technologies. Grenoble Institute of Technology's scope and influence, due to its excellence in teaching and research as well as its close links to industry, have consistently grown.

We have recently completed an important reorganisation, with 22 fields of engineering study, organised in 6 scientific and technological areas associated with 26 research laboratories.

- /// Ense³ /// Energy, Water and Environmental Sciences
- /// Ensimag /// Informatics, Applied Mathematics, Telecommunications
- /// Esisar /// Advanced Systems and Networks
- /// **Génie Industiel** /// Industrial Engineering
- /// Pagora /// Paper science, Print Media & Biomaterials
- /// Phelma /// Physics, Applied Physics, Electronics & Materials Science



Grenoble

A rich scientific, industrial and technological environment

Grenoble is a modern city at the heart of an exceptional natural site in the middle of the French Alps. Industry, research and teaching go hand in hand in Grenoble, France's first high-tech site after Paris

The presence of many internationally prominent research laboratories in Grenoble is a key feature of the economic fabric of the local Isère region. The majority of the research facilities are located in and around the city, an urban area on a human scale with a total population of 500,000.

The particularly technical, multi-cultural character of the job market in Grenoble makes the city a leading centre for strategic jobs in industry, research or business services (38,000 jobs in information and communication technology, more than 12,000 industrial jobs in computer science).

FACTS & KEY FIGURES

- 500,000 inhabitants
- 60,000 students
- 14% of foreign students
- 4 universities

The active population of Grenoble-Isère is younger and better trained than the national average.

The relatively high level of qualification is due to the large number of leading international firms operating here, the presence of one of France's top universities and the overall attractiveness of the location.



Grenoble, Excellence in Research

- >> 21,000 jobs among which 11,000 in public research
- >> 90 research laboratories

8 National Research Organizations, including

- >> CEA, Atomic Energy Commission
- >> CNRS. National Centre for Scientific Research
- >> INRIA, National Institute for research in Computer Science and Control

European Research Centres

- >> ESRF, European Synchrotron Radiation Facility
- >> ILL, Institut Laüe-Langevin
- >> IRAM, Millimetric Radio-Astronomy Institute
- >> EMBL, European Molecular Biology Laboratory

GRAIN, Innovation Nursery

Aiding the emergence of corporate start-ups

Numerous industrial research centres

Orange Lab, Orange Business Services, Soitec, Sun Labs, Xerox, STMicroelectronics, Hewlett-Packard, Intel, Schneider Electric, Cap Gemini, Yahoo!, Bull

Research Centres for Excellence in Grenoble

- >> MINALOGIC: world-class research cluster for Micro Electronics, Nanotechnologies and Embedded Software
- >> MINATEC: European Nano technopole
- >> **TENERRDIS**: Research cluster for new energy technologies
- >> CARNOT RESEARCH INSTITUTES for "Software and intelligent systems" and "Energies of the future"

INTERNATIONAL RESEARCH LABORATORIES

Research labs of the "information-communication" pole work in close partnership with the CNRS, INRIA and other Grenoble universities.

- >> GIPSA-LAB, Images, Signal, Speech and Automatic Control
- >> ICA, Informatics and Artistic Creation
- >> LIG, Grenoble Informatics Laboratory
- >> LJK, Jean Kuntzmann Laboratory (Applied Mathematics & Informatics)
- >> **TIMA**, Techniques of Informatics and Microelectronics for Computer Architecture
- >> **TIMC**, Techniques for Biomedical Engineering and Complexity Management
- >> **VERIMAG**, Embedded Systems
- >> LAFMIA, Franco-Mexican Lab in Computer Science & Applied Automatic
- >> MICA, Multimedia, Information, Communication and Applications (Hanoi, Vietnam)
- >> G-SCOP Sciences for Design, Optimization and Production
- >> IMEP, Institute of Microelectronics Electromagnetism and Photonics

New York, February 4, 2008

puting Machinery, has named Joseph Sifakis, founder of the VERIMAG research laboratory, in Grenoble, as winner of the **2007 A. M. TURING AWARD,** widely considered as the most prestigious award in computing. He has been nominated for his original and continuing research in a quality assurance process known as Model Checking.



Master of Science in Engineering

Students are admitted to ENSIMAG after two years of undergraduate studies. Studies at ENSIMAG are of three years' duration and lead to the French degree "Diplôme national d'Ingénieur ENSIMAG" (equivalent to a Master's degree).

The scientific education provided by ENSIMAG is based upon the following concepts

- >> A student may specialize either in Applied Mathematics, in Informatics or in Telecommunications, but all students receive an advanced education in both Informatics and Applied Mathematics.
- >> A good balance between practical training and theoretical concepts is achieved through the diversity of the teaching staff.
- >> ENSIMAG trains engineers who master the concepts and analytic techniques necessary to address problems, and the practical skills necessary to implement and evaluate solutions.

Why study at ENSIMAG?

- >> Become a highly regarded engineer in information technology and receive a competitive degree from a school renowned in France and abroad.
- >> Live in the French "Silicon Valley" with a high density of universities, research laboratories and high-tech companies.
- >> Discover the French culture and learn the French language in a spectacular natural environment renowned for skiing and mountain activities.
- >> A degree from ENSIMAG is your key to a successful career.

ow, when looking back, that was one of the best decisions I have ever made: I actually hold two diplomas in computer science, and I have had the difficult task of choosing between job offers from companies both in France and in my home country! The quality of the courses held at the ENSIMAG is good; the school constantly figures among the top ranked French universities in computer science, and the close link between the school and a number of research labs in the Grenoble area is a clear advantage. And I have not yet mentioned the excellent university sport offered, nor the marvellous countryside with some of the most famous ski resorts in Europe nearby.

Joerg, double-degree program, Universität Karlsruhe.





Abilities and careers

ENSIMAG graduates are engineers in information and communication technology, with abilities to...

- >> Understand and take into account a client's needs in order to provide specifications.
- >> Show capacity for abstraction and formalisation.
- >> Master mathematical methods, software development methods and techniques.
- >> Understand the characteristics of software and hardware components, evaluate and maintain evolutive and robust software systems.
- >> Design solutions offering both quality and security.

ENSIMAG's management and soft skill courses allow our graduates to...

- >> Know the context of their job (ethics, geopolitics, economy, law).
- >> Interact with financial specialists and company administrators.
- >> Work in a cross-cultural environment, master one or several foreign languages.
- >> Manage a project and a team, communicate efficiently.
- >> Build a business network.



/// ENSIMAG LEADS TO A VARIETY OF JOBS, SUCH AS... ///

CÉLINE, conceives and develops statistical analysis with biologists, at Biomérieux, world leader of in-vitro diagnosis.

CÉDRIC, is in charge of a software platform for satellite control system at EADS.

GILLES, develops the functionalities of 3D game engines and software tools used for videogames at Ubisoft.

JULLIAN, is in charge of quantitative research for Asia at lxis-cib Tokyo, Natexis subsidiary (banking).

JÉRÔME, works on integration, implementation and support of mobile networks at Nokia.

Graduate specializations

ENSIMAG's curriculum offers a variety of compulsory and elective advanced courses, making up specific profiles. Most of the common core courses are given during the first year, and during the first semester of the second year, allowing students to aquire the basics in Applied Mathematics and Informatics.

Students then choose a graduate specialization.

FACTS & KEY FIGURES

- 5 specializations
- Main teaching language: French
- English is compulsory, a variety of foreign languages taught
- Management skills
- Each year: 60 ECTS (European standard)
- 2 semesters:
 Early September end of January
 Early February end of June

Financial Engineering

➢ Financial Mathematics
 ➢ Mathematics and Informatics for Finance
 ➢ Computer Systems for Finance

To prepare managers who master both applied mathematics and informatics and who understand finance mechanisms.

Mathematical modeling, Vision, Graphics and Simulation

➤ Modeling, Calculus, Simulation
➤ Images, Virtual Reality and Multimedia
➤ Decision-making
➤ Bio-informatics

For the professions of engineering consultant and research or design engineer in the domains of images and multimedia, of digital modeling, of calculus and scientific vision, of statistical analysis and of decision-making.



Embedded systems and software

- 🖄 Software, hardware and systems for embedded and intelligent applications
- 🔁 High level modeling, virtual prototyping and validation of complex systems
- Control theory and informatics

For the professions of software and hardware systems architect, embedded system project manager, engineering specialist in design, modeling, integration and validation of embedded systems.

Software and Systems Engineering

- ≥ Architecture of Complex Systems
- Security
- Information Systems

For professions such as information systems architect, software project manager, networks administrator and quality and security manager.

Telecommunications

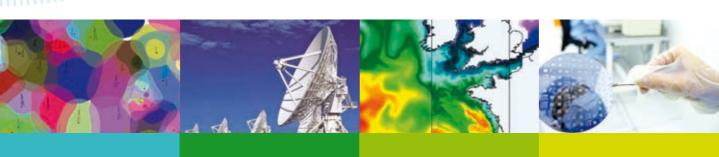
- Architecture and telecommunication services
- Networks transmission systems

For professions linked to telecommunications and large data networks, distributed computer applications and systems, and digital transmission systems.

RESEARCH AT ENSIMAG

Courses at ENSIMAG are enriched by the research experience of our professors and illustrated by current problems tackled by the laboratories. The research themes vary from the use of psychology in the design of mansystems interfaces to the theory of new modes of calculation which will not be implemented before twenty years. Every year, 15% of ENSIMAG students choose to pursue Ph. D. Studies.

perform research work or an internship in a research laboratory in their second year.



Internationalization One of the top priorities of ENSIMAG

Our students evolve in a cross-cultural environment. ENSIMAG trains engineers open to the world, adaptable, and speaking several foreign languages.

ENSIMAG students can spend a part of their studies abroad, at one of ENSIMAG's partner universities, they can also perform their internships or final year projects abroad, in a research laboratory or in a company.

Extensive possibilities are available; most of them go to Europe, and particularly in institutions belonging to the CLUSTER network (Consortium Linking Universities of Science and Technology for Education and Research), but they can also go in Northern, Latin or Central Americas, Asia, Oceania.

ENSIMAG covers the whole world with more than 150 agreements with partner universities.

Conversely ENSIMAG is pleased to welcome foreign students, either in its research laboratories, or for studies at the undergraduate or graduate level.

FACTS & KEY FIGURES

- more than 60% of our students spend at least 3 months abroad
- 40% of the student population is from outside of France
- 150 cooperation agreements
- 11 double-degrees agreements
- 15% of ENSIMAG graduates begin their career abroad
- International master's programs taught in English
- Participation in various networks (CLUSTER, GE4, Magalhães)
- French courses offered to foreign students



INORTH AMERICA II CANADA I CREPUCQ I Rhône-Alpes Ontario Student Exchange Program I University of Waterloo I Mc Master University I University of IGADa I GE4 I Arizona State University Phoenix I Universities of California (Berkeley, Davis, Invine, Los Angeles, San Diego, Santa Barbara, Santa Cruzy I University of Iroda I Clemson University I Illinois Institute of Technology (Chicago) I University of Idaho II SOUTH AMERICA II BRAZII. I Universitäde Catolica of Grande do Sul I purpor Invitores Page Page Invitores Invitores

Internationalization International master's programmes

Master of Science in Informatics at Grenoble

Opening September 2008, a joint degree programme with Université Joseph Fourier.

Highly competitive, two-year graduate program offering training in the areas of:

- Embedded and Distributed Systems
- Mobile and Interactive Computing
- Graphics, Vision and Robotics
- Security and Cryptology of Information Systems

Courses are offered in English.

Deadline for applications for regular admission is 31 May 2008.

Website: http://mosig.imag.fr

DOUBLE DEGREE AGREEMENTS

Politecnico di Torino, UPC Barcelona, UP Madrid, Universität Karlsruhe, TU Darmstadt, KTH Stockholm, NTNU Trondheim, **UFRGS** Porto Alegre

Master in Communication and Systems Engineering

Offered jointly by ENSIMAG and Politecnico di Torino (Italy).

This course aims to train up engineers to specialize in the design and management of communication systems, ranging from simple point-to-point transmissions to diversified telecommunications networks.

A four-semester course:

- First and second semesters taught at Politecnico di Torino
- Third semester taught at Grenoble INP
- Fourth semester: master's thesis

Website: http://cse.ensimag.fr

NSIMAG gave me the chance to do my final year abroad. Among the numerous exchange opportunities offered, I wanted to go to Asia to discover something different and I finally chose KAIST in Korea. This year in Korea was exactly as the two I spent in Grenoble: exceptional and full of experiences. When I came back to France, after a 6-months internship in a bank, a wonderful opportunity was given to me: to work in Singapore in a financial software company. No need to say that my year spent abroad was essential for them, much more than the specialization profile I had. Professionally and of course personally, this extraordinary year abroad brought me a lot and it's mostly due to my school, ENSIMAG, which always encouraged me and helped me in this adventure.

Ugo, ENSIMAG graduate, exchange student at KAIST, Korea



Companies

Major partners for ENSIMAG

Companies have always played a major role in the evolution of ENSIMAG's curriculum. Benefiting from close links with top high-tech companies, ENSIMAG has been able to keep up with the evolution of the job market and its new challenges.

COMPANIES...

... are involved in our curriculum



Join us as invited speaker, give a talk to our students, propose placements and projects in your company.

... meet our students

Present your company's activities, your technical expertise, your job sector, by giving a conference or participating to our yearly forum.

Organize company visits for our students, sponsor their associations.

... hire our graduates

Build a privileged link with our ENSIMAG graduates, and send your job offers to our alumni network "AAE ENSIMAG" (http://wiki.aae-ensimag.com/recruteurs).

... use the expertise of our research laboratories, and finance a PhD

Sign research contracts and agreements with our research laboratories, finance research scholarships.

... support our educational activities

The companies' involvement in the success of ENSIMAG is also achieved through a donation or a support in terms of software and hardware equipment. These resources are essential for the improvement and development of ENSIMAG.



Projects

Summer internships and End of Studies Projects

Practical training is achieved in parallel with the courses, and is an important part of the work required at ENSIMAG.

Students must perform a summer internship before the last year, and an end-of-studies project during their final semester. One of these must be in industry. Either may be in a foreign country. This industrial experience is completed by a series of seminars, and on-site company visits throughout the three-year curriculum.

The summer internship lasts from two to three months, before the fifth and final year of studies. It acquaints the student with industry and with the realities of the engineering profession.

The End of Studies project:

The second semester of the final year of studies is dedicated to this project, which can be performed either in a research laboratory or in a company.

Through this final project, the student, as a full-time member of a working team, is given the opportunity of making the synthesis of the knowledge he acquired, and of showing his ability to put it into practice in a professional context. The student carries out a full-scale project. The results are described in a project report that is defended in front of a committee made up of professionals and ENSIMAG Faculty.



EXAMPLES OF REALIZATIONS: END OF STUDIES PROJECTS

GOOGLE (Mountain View)

Automatic generation of multilingual sites for e-business applications

JP MORGAN (London)

Creation of financial risks management tools for derivatives

SCHNEIDER ELECTRIC (Grenoble)

Modeling of embedded systems

SOCIÉTÉ GÉNÉRALE (Tokyo)

Design and development of a risk management system

SOME OF OUR PARTNERS

Air France | Accenture | Alcatel
Alstom | Amadeus | Apple | Atos Origin
BNP Paribas | Cap Gemini | Calyon
EADS | France Télécom Orange
Hewlett Packard | IBM | JPMorgan
Murex | Microsoft | Natixis | Renault
Schneider Electric | ST Microélectronics
Sun Microsystem | Thalès | Total
Ubisoft | Yahoo!

Grenoble

An attractive location

A university city,

with over 60,000 students. The majority of schools and universities are gathered in a superb campus situated 10 minutes away from downtown.

2 On-campus accommodation,

with a choice of students' residence halls, and university restaurants.

At the crossroads of Europe:

3 hours from Paris or Marseille by TGV high-speed train, 2 hours from Geneva or Torino.

An exceptional natural setting,

in the heart of the French Alps. The city is surrounded by three mountains ranges, providing easy access to a wide range of mountain activities including skiing, hiking and hang-gliding. The area's many lakes allow the practise of water sports popular in spring and summer.

Artistic and Cultural vitality:

cinemas, theatres, Jazz festival, museums, archaeological sites, and castles, and one of France's finest modern art collections at Musée de Grenoble.

GRENOBLE INP'S STUDENTS' INTERNATIONAL DESK

We welcome you and answer your questions, at your arrival in Grenoble. Our objective: to have foreign students discover our country and its features (culture, gastronomy...) during parties or group journeys.

STUDENT LIFE AT ENSIMAG

ENSIMAG presents a rich and dynamic student life: parties, concerts, skiing...the year is marked by numerous school events from poker tornaments to "Lan parties", culminating with the organization of the ENSIMAG Gala every spring.

Lots of activities are also offered at the university-level, or campus-level: 250 students associations, 4 university orchestras with choirs and dance troupes, a student radio broadcasting...

Campus sports facilities

Olympic swimming pool, 36 tennis courts, facilities for rowing and archery, 18 sports grounds and halls, climbing walls... France's top university sports club with training in 24 disciplines.





AS A REGULAR STUDENT FOLLOWING THE 3 YEAR CURRICULUM

Web-based application

Deadline: early June, with notification of results in early July

AS AN EXCHANGE STUDENT COMING FOR ONE OR TWO SEMESTERS

You university must have signed an exchange agreement with Grenoble INP / ENSIMAG.

Deadline: - May 31 for an arrival in September (first semester)

- November 15 for an arrival in February (our second semester)

AS A DOUBLE-DEGREE STUDENT (IN THE FRAMEWORK OF DOUBLE-DEGREE BILATERAL AGREEMENTS)

Exchange sudent application form

Deadline: same as above

AS A RESEARCH INTERN IN A RESEARCH LABORATORY

Exchange student application form

Deadline: at least three months before arrival

AS A MASTER'S STUDENT

Master of Science in Informatics at Grenoble

Deadline for applications May 31, with notification of results in early July

TOEFL requested for non English native speakers

Master's Application form

Master in Communication Systems Engineering

Deadline for applications May 15, with notification of results end of May

TOEFL (or equivalent) requested for non English native speakers

Master's Application form

All application forms at: http://relint.ensimag.fr/MainEn/HomePage





ÉCOLE NATIONALE SUPÉRIEURE D'INFORMATIQUE ET DE MATHÉMATIQUES APPLIQUÉES DE GRENOBLE

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Master of Science in Informatics at Grenoble

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Master Communication Systems Engineering

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