

ensil

École
Nationale
Supérieure
d'Ingénieurs
de Limoges

engineer

State school accredited CTI

- Water and Environment
- Electronics
and Telecommunications
- Material Sciences
- Mechatronics

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As an engineering school, building on research excellence, ENSIL provides training that covers the various aspects of engineering, from scientific and technical skills, to international openings, managerial skills and, know-how and self-management. The quality and diversity of its teaching, adapted to business requirements, allows ENSIL to offer you the opportunity to establish a highly-customized curriculum, based on your future professional choices, in a multicultural environment.

EN SIL is entitled to grant engineering degrees for four specializations by the "Commission des Titres d'Ingénieurs" (French Commission for Engineering Degrees): Water and Environment (EAU), Electronics and Telecommunications (ELT), Material Sciences (MAT) and Mechatronics (MIX).

In this short message I would like to highlight some of the aspects that are at the forefront of ENSIL's reputation with companies:

- Emphasis is placed on humanities and management.
- To be able to apply for positions of responsibility, engineers must have strong scientific and technical knowledge, but they must also know how to communicate, listen, assess and take decisions.
- The importance given to practical training provides students with a down-to-business approach for their future jobs.

As a result of our partnerships with companies throughout the curriculum (work placements, industrial projects, conferences, etc.), we are able to offer proactive pedagogy, highly attuned to professional situations, that ensures our engineers enter professional life successfully.

- In the wake of globalization, mastering several foreign languages is fundamental.

Apart from English, which constitutes the basis of our training, ENSIL offers you the opportunity to practice a second language.

- Wishing to privilege students' stays

abroad, for placements and/or academic-type exchange trips, ENSIL is highly active in several international mobility programmes and allocates additional school grants.



So, let me welcome you to a prestigious school that trains women and men to become engineers in a multicultural world; engineers, renowned for their scientific, technical and economic skills as well as their ability to adapt, to communicate, to take initiative and to manage teams.

Patrick LEPRAT, Director of ENSIL.

A Word from the Director

Secure your future: Choose ENSIL

ENSIL is a prestigious school that trains engineers, renowned for their scientific, technical and managerial skills, specialized in business sectors of the future.

As a state engineering school, focusing on multidisciplinary approaches, certified by the CTI (French Commission for Engineering Degrees), under the Ministry for Higher Education and Research, the Ecole Nationale Supérieure d'Ingénieurs de Limoges admits over 150 new students from France and abroad every year.

ENSIL offers 3-year courses, beginning after Preparatory Classes and undergraduate curriculums (DUT (University Technology Diploma), L2 and L3 (2nd and 3rd degree years), BTS (Advanced Technician's Certificate), etc.) for engineers who, in addition to wide-ranging scientific and technical training, have acquired a level of human, economic and linguistic culture that allows them to hold positions of responsibility within companies, in research, development and production.

Located in the Technopole Ester, a scientific and technological cluster, ENSIL occupies 13,000 m² of modern buildings that can accommodate 500 students.

With its network of around 2,000 graduates, the school is able to help ENSILians break into professional life quickly and easily.

The average time required for finding a first job is less than 2 months and the average gross annual starting salary is higher than €2,000 €.

The school's many partnerships with companies provide students with a down-to-business approach to their future jobs at all stages of their training.

As ENSIL works closely with industry, it privileges professionalization in its training by calling upon a wide variety of external participants from the world of business and socio-economics.

Key data ...

- **state-owned** school created in 1991
- 3-year study programmes
- admission after baccalaureate+2 (70% prep. classes + 30% diplomas)
- specializations are chosen **during the admission process**
- first job < to 2 months
- starting salary > 32,000 €
- supervised industrial projects
- **12 months' work placement**
- 1,000 partner companies

ENSIL, an integral part of the University of Limoges, grants engineering degrees in 4 specializations:



ENSIL's teacher-researchers are part of CNRS-certified laboratories, which belong to 5 competitiveness clusters (Elopsys, Innoviandes, European Centre of Ceramics, Viaméca and Ville et Mobilité Durables (City and Sustainable Mobility).

ENSIL also initiates a wide range of international partnerships.

Its international development is emphasized through the compulsory teaching of two foreign languages, including English.

80% of students of every class year spend time abroad (work placement and/or study semesters) for 3 to 12-month periods.

The school also welcomes international students within the framework of bilateral agreements (Erasmus, Campus France).



Key data ...

- 150 professional trainers
- A network of over 2,000 qualified engineers
- 4 research teams
- 5 competitiveness clusters
- International development
 - 60 agreements
 - work placements and/or study semesters abroad
- Over 500 students representing 20 different nationalities
- 160 graduates every year
- 30 Doctoral students
- 50 teacher-researchers
- 3 student bodies (Students' Union, Sports Union, Engineers Without Frontiers, etc.)
- Association of former alumni (AAEE)
- School fees established by the Ministry:
584 € 2011/2012 school fees (without grants) and 457 € (with grants)

eau

water and environment

Its aims:

The Water and Environment department teaches you how to incorporate environmental sciences and technologies into industrial contexts and how to integrate sustainable production management using a reasoned economic development approach.

Our cross-cutting, multidisciplinary training programme, is based on societal demands from competitive and non-competitive areas in the environmental sector (water, ground, air, waste, industrial production).

The professions relating to this sector combine technicity (design, processes, implementation), management (risks, environmental management, quality) and managerial sciences (law, communication, languages, marketing, etc.).

Building on one year of professional experience, acquired during your work placements (national and international) and your industrial projects, you will develop your potential within the socio-economic fabric of an ever-growing sector.

Professional support:

Socio-economic representatives for each theme covered by the training, industry executives, local government officials, design office engineers, and also experts and former students and managers provide their practical views of the profession.

Thanks to their recognized experience and expertise, they provide precise, realistic and pragmatic insight into the techniques and methods used in their fields.



Practical training:

Technical knowledge is acquired through practical workshops held in specially-dedicated rooms (microbiology, (bio)chemistry, IT), through supervised projects implemented in partnership with external third parties and through work placement.

Students are able to develop their autonomy by working in the two technical halls, by studying natural and industrial sites, by visiting a variety of facilities and through constant exchanges with research teams.

Employment opportunities:

Three major sectors, international groups of the field, design offices and public services, propose a wide range of professions (design, construction, management, development, studies, research) in water, waste, environmental management and risk analysis.

Institutional partnerships offer the opportunity to acquire international skills by participating in a V.I.E. (French International Volunteers in Business programme) or by working in a NGO.

Industrial partners:

VÉOLIA ENVIRONNEMENT, SUEZ-LYONNAISE DES EAUX, SAUR, SOURCES, PRIMA INGÉNIERIE, FAURE EQUIPEMENTS, HOSPITALS, LOCAL AND REGIONAL AUTHORITIES, DDASS, DIREN, SITA, IRH ENVIRONNEMENT, CABINET MERLIN, NORISKO AND MANY MORE.



Courses

Core curriculum (600 hrs)

- **Basic scientific subjects**
maths, numerical analysis, statistics, computer science, etc.
- **Engineering sciences**
thermal, fluid mechanics, material resistance, Computer-Assisted Design, physics, sensors-regulation, industrial IT, automation, preparation for the C2I (IT and Internet Certificate), etc.
- **Humanities and managerial sciences**
communication, English, 2nd foreign language, law, etc.

Core curriculum (250 hrs)

- Communication
- English, 2nd foreign language
- Automation
- Quality approach
- Business management and economy
- Financial maths
- Databases
- Industrial ecology

Core curriculum (150 hrs)

- Business management and organizations
- Project steering and management
- Team management
- Commercial law
- Industrial marketing
- Technological intelligence, Innovation
- Quality, occupational health and safety, etc.
- Communication, interview simulations
- English

Preparatory classes,
DUT (University
Technology Diploma),
L2 and L3 (2nd and
3rd degree years), BTS
(Advanced Technician's
Certificate)

Year 1

Core curriculum
Specific training

Master, M1, MST, IUP
n+i, Socrates

Placement discovering the
company

Year 2

Core curriculum
Specific training

Placement Professional
technical

Opportunity to
gain a double
degree with
**a Master
in Business
Administration and
Management (IAE Limoges)**

In conjunction with
years 2 and 3

Opportunity to
gain a double
degree with
**a Research
Master (FST
Limoges)**

In conjunction with
year 3

Opportunity to
gain a double
degree with
**«Politecnico di
Torino»**

Year 3

Core curriculum
Specific training

Placement end of engineer
studies

WORK

Non-exhaustive programmes, detailed description on the school website: <http://www.ensil.unilim.fr>
Opportunity to take a gap year between year 2 and year 3 studies to complete a justifiable personal project

eau

Specific training (300 hrs)

- Thermodynamics
- Wet chemistry
- Chemistry
- Chemical and electrochemical kinetics
- Microbiology
- Biochemistry
- Ecology – Hydrology

Specific training (600 hrs)

- Physico-chemical processes
- Biological and geological processes
- Transfer systems
- Water analysis and balance
- Waste issues

TECHNICAL STUDIES, INDUSTRIAL PROJECTS

Specific training (450 hrs)

- ICPE and environmental law
- Water resource management
- Drinking water production
- Urban sanitation and sludge treatment
- Industrial discharge and waste
- Air pollution and gaseous discharge
- Industrial operation
- Civil engineering and urban hydraulics
- Environmental management and HQ
- Sustainable development

TECHNICAL STUDIES, INDUSTRIAL PROJECTS

Environmental science and technology immersion

Optional training (1 or 2 options to be chosen)

- Simulation and GIS
- Ground pollution
- Waste treatment and recycling
- Local authority rights, service management
- Process water
- Health risks
- Hospital hygiene

CONTINUING STUDIES

elt

electronics and telecommunications

Its aims:

The Electronics and Telecommunications specialization trains skilled and flexible multidisciplinary engineers in the field of Information and Communication Technologies (ICT).

The programme offered enables students to efficiently apprehend developments in this sector, which increasingly integrates electronics and on-board systems as well as multimedia communications systems (data, voice, images).

It provides you with multidisciplinary skills for designing and developing next-generation electronic systems and hardware and/or software for telecommunications and networks.

The school offers students the possibility to specialize in a specific discipline over time.

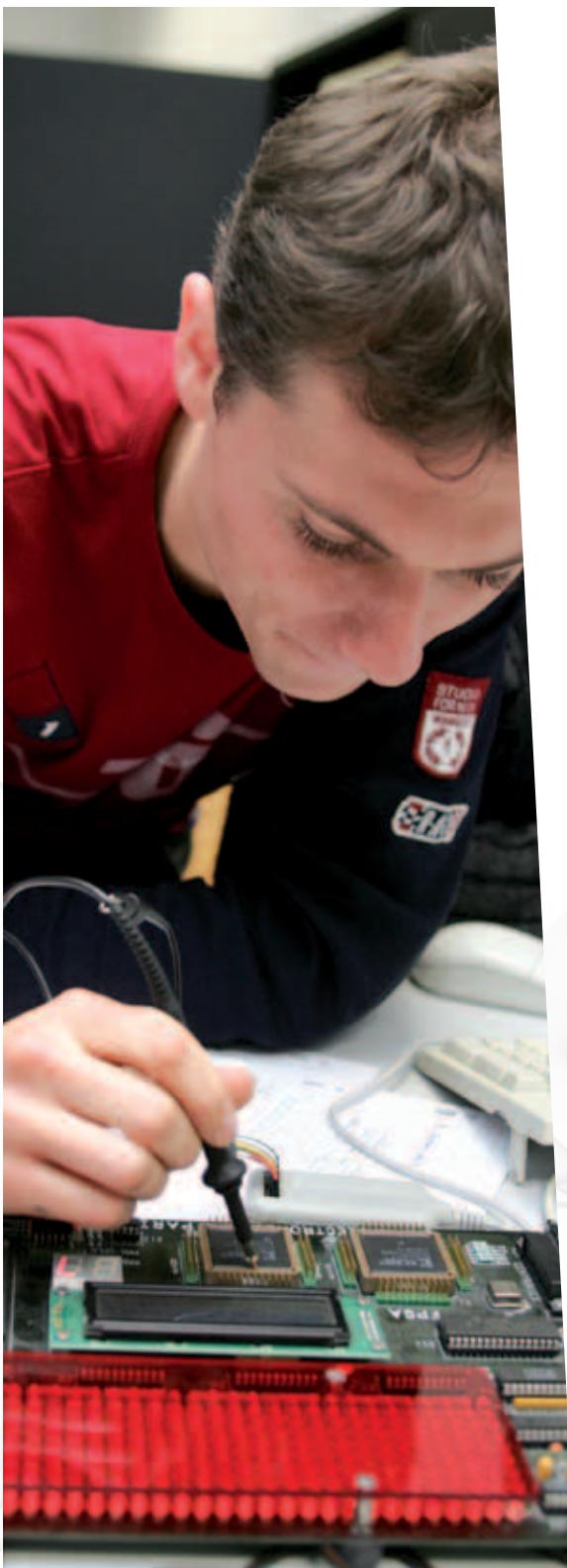
During year 3, modular programmes on telecommunication systems, devices and components as well as on ICT application in the field of healthcare are proposed.

Professional support:

Industry plays a key role in our programmes, in particular through specific classes, conferences, technical studies and work placement.

Partnership agreements, concluded with industrial groups, offer future graduates precise insight into the particularities of "electronics and telecoms" professions.

Through these actions, offers and training or job demands are better aligned; young graduates enter the work market more easily.



Practical training:

Practical work covers a wide range of fields such as signal processing and dedicated circuits, electronics, electromagnetism and microwaves, optoelectronics, networks and IT.

This practical training carried out in tangible situations reinforces the know-how and expertise on more complex, real systems.

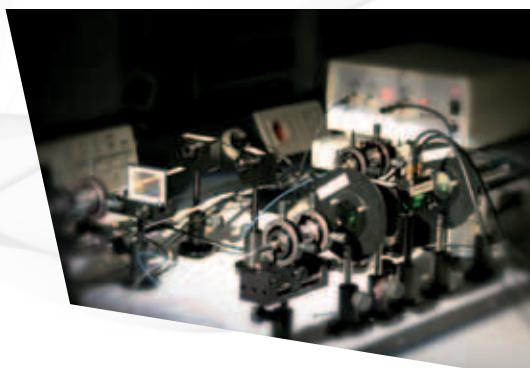
Employment opportunities:

This specialization covers a great variety of fields: electronics industries, electric and domotic equipment, as well as transport (aeronautics, aerospace and automobile) and IT businesses, etc.

As part of our industrial partnerships, work placement, which may be proposed during year 3, may actually lead to employment.

Industrial partners:

We have strong ties with many groups, in particular: GROUPE ACTIELEC, ALCATEL LUCENT, A NOVO, BOUYGUES TÉLÉCOMS, CMM, CNES, GRANIQU, KATHREIN, LEGRAND, LEROY AUTOMATIQUE INDUSTRIELLE, MVD, NEXTER, ORANGE, SCHNEIDER ELECTRIC, SFR, SODILEC, THALÈS ALENIA SPACE, THALÈS COMMUNICATIONS, TDF and many more.



Courses

Core curriculum (600 hrs)

- **Basic scientific subjects**
maths, numerical analysis, statistics, computer science, etc.
- **Engineering sciences**
thermal, fluid mechanics, material resistance, Computer-Assisted Design, physics, sensors-regulation, industrial IT, automation, preparation for the C2I (IT and Internet Certificate), etc.
- **Humanities and managerial sciences**
communication, English, 2nd foreign language, law, etc.

Preparatory classes,
DUT (University
Technology Diploma),
L2 and L3 (2nd and
3rd degree years), BTS
(Advanced Technician's
Certificate)

Core curriculum (250 hrs)

- Communication
- English, 2nd foreign language
- Automation
- Quality approach
- Business management and economy
- Financial maths
- Databases
- Industrial ecology

Core curriculum (150 hrs)

- Business management and organizations
- Project steering and management
- Team management
- Commercial law
- Industrial marketing
- Technological intelligence, Innovation
- Quality, occupational health and safety, etc.
- Communication, interview simulations
- English

Masters, Masters 1, MST (French Master in Science and Technology), IUP (French State University Institute), n+i, Socrates

Year 1

Core curriculum
Specific training

Placement discovering the
company

Year 2

Core curriculum
Specific training

Placement Professional
technical

Opportunity to
gain a double
degree with
a **Master
in Business
Administration
and
Management** (IAE Limoges)

In conjunction with
years 2 and 3

Innovation path
or orientation:
research training

Opportunity to
gain a double
degree with
a **Research
Master (FST
Limoges)**

In conjunction with
year 2 and 3

Opportunity to
gain a double
degree with a
**«Politecnico di
Torino»**

Year 3

Core curriculum
Specific training

Placement end of engineer
studies

WORK

Non-exhaustive programmes, detailed description on the school website: <http://www.ensil.unilim.fr>
Opportunity to take a gap year between year 2 and year 3 studies to complete a justifiable personal project

Specific training (300 hrs)

- Semi-conductor electronics
- Analog electronics
- Digital electronics
- Signal processing
- Electromagnetism
- Microchips

Specific training (600 hrs)

- PCB electronics
- Electromagnetism and waves
- Analog and digital communication systems
- Signal processing (DSP, FPGA)
- Microchips
- Networks
- Telecommunication electronics
- Microelectronics, Photonics and Optics
- IT

TECHNICAL STUDIES, INDUSTRIAL PROJECTS

Specific training (450 hrs)

- Microwave circuits
- Signal processing
- Electronics and IT
- Telecommunication systems and networks
- Electromagnetic compatibility

TECHNICAL STUDIES, INDUSTRIAL PROJECTS

CONTINUING STUDIES

Multidisciplinary
engineers training
in the fields of
Information and
Communication
Technologies

Optional training (2 options to be chosen)

- Advanced digital communications
- Proficiency in telecommunication networks
- Components and devices
- Antennas and networks
- On-board systems, Multimedia
- Electronics, communication and health

mat

material sciences

Its aims:

The main aim of the Materials Sciences and Engineering specialization is to train general yet versatile engineers, who have solid knowledge in physics, chemistry, material sciences and process engineering.

Through exclusive training in Surface Coating and Treatment (SCT), you will master conventional and innovative processes so that you may adapt the properties of the surface of materials and parts optimally to their utilization, whilst respecting the environment.

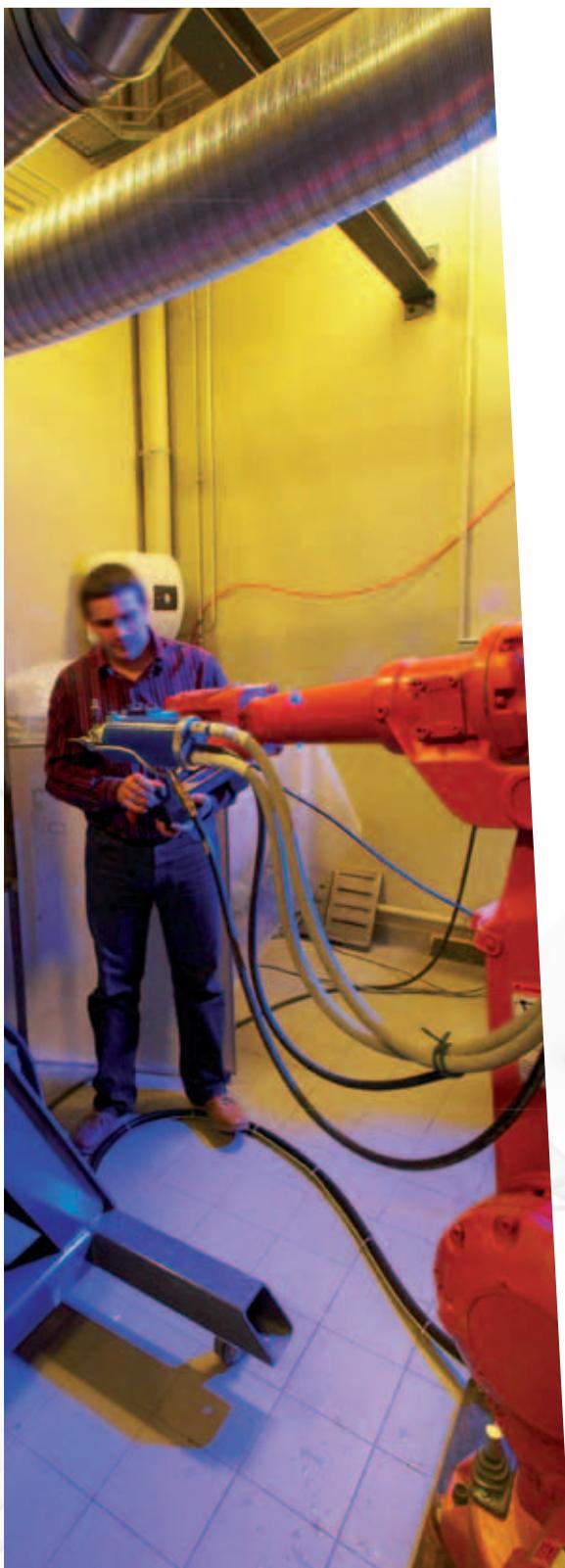
You will know how to:

- assess the performances of various bulk materials and coatings, such as metals alloys, ceramics, polymers and composites,
- develop and optimize sustainable production and transformation processes for these materials.

Professional support:

Industry representatives provide technical and practical expertise to our programmes, through specific classes, conferences, technical studies and industrial projects.

The great many partnerships that we develop enable our engineers to benefit from and integrate industrial realities, on an international scale.



Practical training:

The Material Sciences and Engineering programme uses substantial material resources for producing and characterizing bulk materials, coatings and films.

In addition to materials elaboration and characterization systems available at school, you will have access to industrial pilots and research equipment made available by our partners:

- **CITRA:** Electroplating and Anodizing line, Multi-process thermal spraying booth with a 6-axis robot (flame, HVOF, plasma, electric arc), physical vapor deposition (PVD) reactor.

- **Laboratoire SPCTS** (Sciences of Ceramic and Surface Treatment Processes): Chemical vapour deposition (CVD) reactors, platforms for material characterization (microstructure, physical and mechanical properties of materials).

- **Legrand:** injection moulding machines.

At ENSIL, a computer room is dedicated to training on simulation software (Fluent, Code_saturne, Drop1) and on business software (help for choosing materials - CES Edupack, CATIA, Moldflow, Abaqus, Life Cycle Analysis – SimaPro).

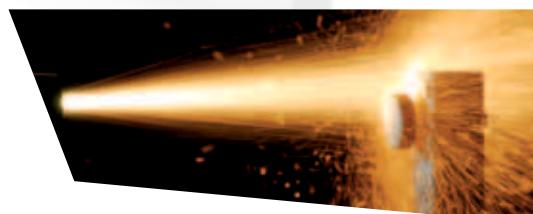
Employment opportunities:

Strategic industrial sectors such as automobile, aeronautics and aerospace, electronics, medical, energy, metallurgy and surface treatment or the environment, provide opportunities for material and surface finishing engineers.

You will have the choice of a wide range of professional options throughout your career: Research & Development, production, maintenance, design engineer, operations manager, project leader, environmental engineer, technical-sales engineers, etc.

Industrial partners :

Our main industrial partners are: LEGRAND, SULZER METCO, BODYCOTE, FINIMÉTAUX, FRÉCHIN, HEF, DUPONT COATINGS POWDERS, EADS, SAFRAN, VOLVO AERO, IMPHY, HOGANAS, COLMADIN, CEA, EDF, CETIM...



Courses

Core curriculum (600 hrs)

- **Basic scientific subjects** maths, numerical analysis, statistics, computer science, etc.
- **Engineering sciences** thermal, fluid mechanics, material resistance, Computer-Assisted Design, physics, sensors-regulation, industrial IT, automation, preparation for the C2I (IT and Internet Certificate), etc.
- **Humanities and managerial sciences** communication, English, 2nd foreign language, law, etc.

Core curriculum (250 hrs)

- Communication
- English, 2nd foreign language
- Automation
- Quality approach
- Business management and economy
- Financial maths
- Databases
- Industrial ecology

Core curriculum (150 hrs)

- Business management and organizations
- Project steering and management
- Team management
- Commercial law
- Industrial marketing
- Technological intelligence, Innovation
- Quality, occupational health and safety, etc.
- Communication, interview simulations
- English

Preparatory classes,
DUT (University
Technology Diploma),
L2 and L3 (2nd and
3rd degree years), BTS
(Advanced Technician's
Certificate)

Year 1

Core curriculum Specific
training

Placement discovering the
company

Masters, Masters 1, MST (French
Master in Science and Technology),
IUP (French State University
Institute), n+i, Socrates

Year 2

Core curriculum Specific
training

Placement Professional
technical

Opportunity to
gain a double
degree with
a **Master
in Business
Administration
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(IAE Limoges)

In conjunction with
years 2 and 3

Opportunity to
gain a double
degree with
a **Research
Master (FST
Limoges)**

In conjunction with
year 3

Opportunity to
gain a double
degree with a
«**Politecnico di
Torino**»

Year 3

Core curriculum Specific
training

Placement end of engineer
studies

WORK

Non-exhaustive programmes, detailed description on the school website: <http://www.ensil.unilim.fr>
Opportunity to take a gap year between year 2 and year 3 studies to complete a justifiable personal project

mat

Specific training (300 hrs)

- Thermodynamics
- Wet chemistry
- Organic chemistry
- Chemical and electrochemical kinetics
- Surface treatment, Materials, Industrial environment
- Thermodynamics applied to materials
- Solid state structure
- Mineral chemistry
- Heterogeneous catalysis and kinetics

Specific training (600 hrs)

- Real solid
- Materials resistance
- Diffusion in solids
- Physical properties
- Plastic processing
- Metallurgy
- Ceramurgy and powder metallurgy
- Surface treatments
- Wear and corrosion
- Liquid waste treatment
- Materials characterization
- Technical studies, industrial projects

TECHNICAL STUDIES, INDUSTRIAL PROJECTS

Specific training (450 hrs)

- Thermal spraying and laser processes
- Physical and chemical vapor deposition
- Thermochemical diffusion coating processes
- Organic coatings
- Clean processes and sustainable materials elaboration
- Composite materials and elastomers
- Multi-materials and assemblies
- Transport phenomena
- Process modelling
- Computer-Assisted Design and Simulation
- Gaseous waste treatment

TECHNICAL STUDIES, INDUSTRIAL PROJECTS

A multidisciplinary course in materials and surface treatment engineering

Optional training (1 option to be chosen)

• Environment

Polymer, metal, alloy recycling
Waste stabilization and inertization
Practical work

• Microelectronics and materials

Semi-conductors and components
Technological processes, channels, infrastructures and environment
Practical work

• Research training

Materials sciences
Process engineering
Materials advanced characterization techniques

CONTINUING STUDIES

mix

mechatronics

Its aims:

Mechatronics is an industrial technique that simultaneously and symbiotically uses Mechanics, Electronics, Automation and IT to design and manufacture innovative products.

Mechatronics plays an integral role in most modern equipment: automobile, aeronautics, aerospace, medical, etc.

Examples of mechatronic systems can be seen, for example, in vehicle stability control systems and in their hybrid engines.

The general and multidisciplinary training for this specialization offers you the opportunity to intervene throughout the development of an industrial product, in an economic, social and human environment.

Professional support:

Industrial groups play an active role in ENSIL's mechatronic specialization training programmes.

They provide their technical and practical expertise, through specific classes, conferences, and also by being involved in the technical studies undertaken by the students.

They set out the technical and scientific issues that their companies deal with.



Practical training:

The practical work for this specialization takes up the major part of the training.

This practical training is also reinforced with industrial projects throughout the year.

The hardware equipment and software, made available to students, are at the forefront of the industry's technological and scientific advancements.

Employment opportunities:

Mechatronic engineers work in a wide range of sectors: defence, automobile, aeronautics, mechanical and electrical equipment industries, industrial IT, Research and Development, etc.

Our engineers work in a variety of positions, from company management to business engineering, as well as holding different levels of responsibility in design offices and in production centres.

Industrial partners:

We maintain privileged relationships with industrial partners for work placement, supervised projects and research work:

BORG WARNER, VALEO, SOFRANCE GROUPE SAFRAN, LMS, SNR, EDF, CEA, FAURE EQUIPEMENTS,, CODECHAMP, DSPACE, RENAULT and many more....



Courses

Core curriculum (600 hrs)

- **Basic scientific subjects**
maths, numerical analysis, statistics, computer science, etc.
- **Engineering sciences**
thermal, fluid mechanics, material resistance, Computer-Assisted Design, physics, sensors-regulation, industrial IT, automation, preparation for the C2I (IT and Internet Certificate), etc.
- **Humanities and managerial sciences**
communication, English, 2nd foreign language, law, etc.

Core curriculum (250 hrs)

- Communication
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Certificate)

Year 1

Core curriculum
Specific training

Masters, Masters 1, MST
(French Master in Science and
Technology), IUP (French State
University Institute), n+i, Socrates

Placement discovering the
company

Year 2

Core curriculum
Specific training

Placement Professional
technical

Opportunity to
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Administration
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(IAE Limoges)

In conjunction with
years 2 and 3

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year 3

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Torino»**

Year 3

Core curriculum
Specific training

Placement end of engineer
studies

WORK

Non-exhaustive programmes, detailed description on the school website: <http://www.ensil.unilim.fr>
Opportunity to take a gap year between year 2 and year 3 studies to complete a justifiable personal project

mix

Specific training (300 hrs)

- Mechanical engineering
- Geometrical specification and manufacturing
- Computer-assisted engineering
- Applied electronics
- Power transmission
- Systems mechanics
- Signal processing

Specific training (600 hrs)

- Mechanics
- Structural calculation
- Materials
- Industrial hydraulics
- Drive systems
- Computer-assisted engineering
- Object-oriented programming
- Process control
- Vibrations and acoustics
- Industrial networks
- Modelling
- Digital signal processing
- DSP programming
- Status observation

▼
TECHNICAL STUDIES, INDUSTRIAL PROJECTS

Specific training (450 hrs)

- Dynamic systems observation
- Non-linear systems
- Hybrid systems
- Vehicle dynamics
- Image processing
- DSP programming
- Real-time system
- Vibrations and acoustics
- Electromagnetic compatibility
- FMEA and experimental designs
- Object-oriented programming
- Systems mechanics

▼
TECHNICAL STUDIES, INDUSTRIAL PROJECTS

From
designing
through to
manufacturing
innovative
products

CONTINUING STUDIES

Entering the Work Market

1st job ►

Internationally-minded, adaptable and readily-operational engineers!

ENSILians are acknowledged engineers who are in high demand in the work market, to fill positions in industrial sector companies and in local and regional authorities.

First job: in less than 1.5 months on average!



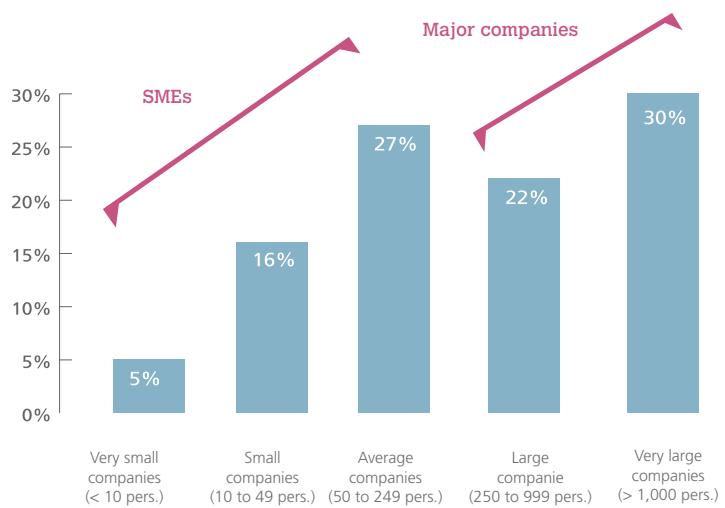
Increase in gross salary ► over time

First job in the company where end-of-course placement was carried out:
approx. 45% of future engineers.



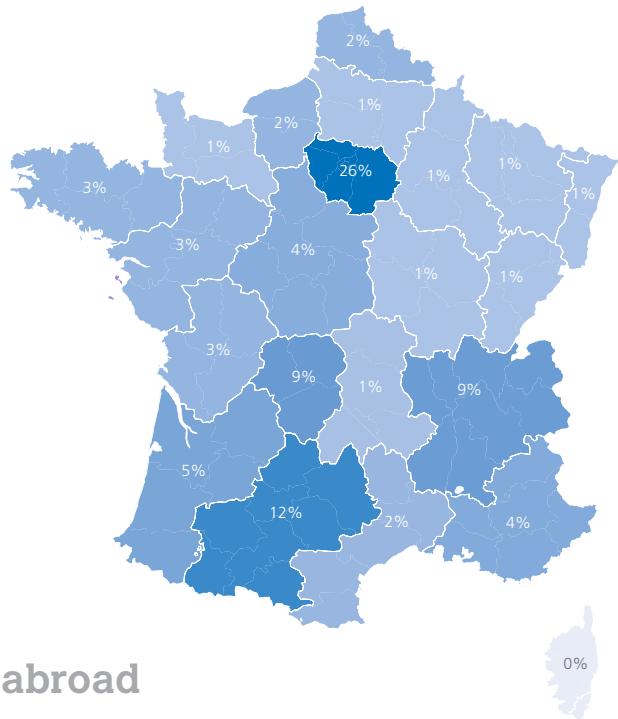
The ENSILian engineer: ►

€
32,000 € gross per year

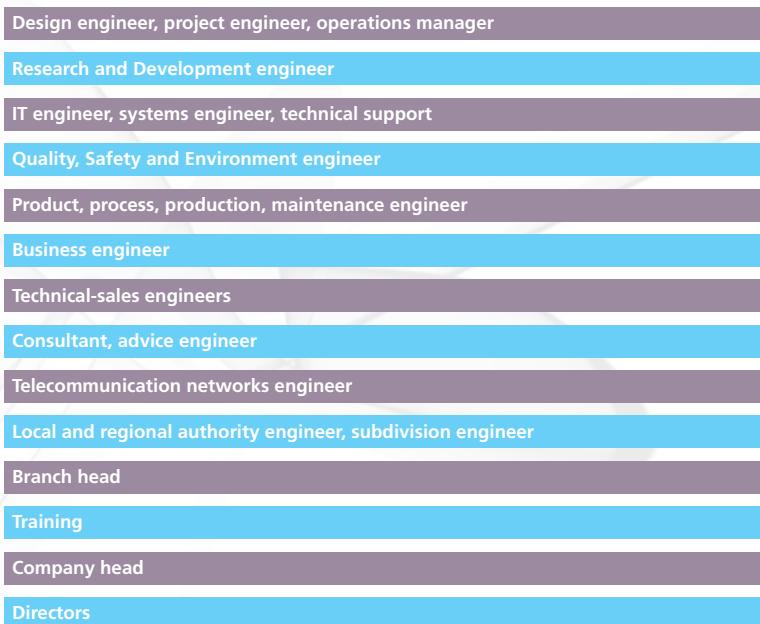


The ENSILian engineer: ► Geographical breakdown

For France and in particular for the Ile de France region (26%) and the south.



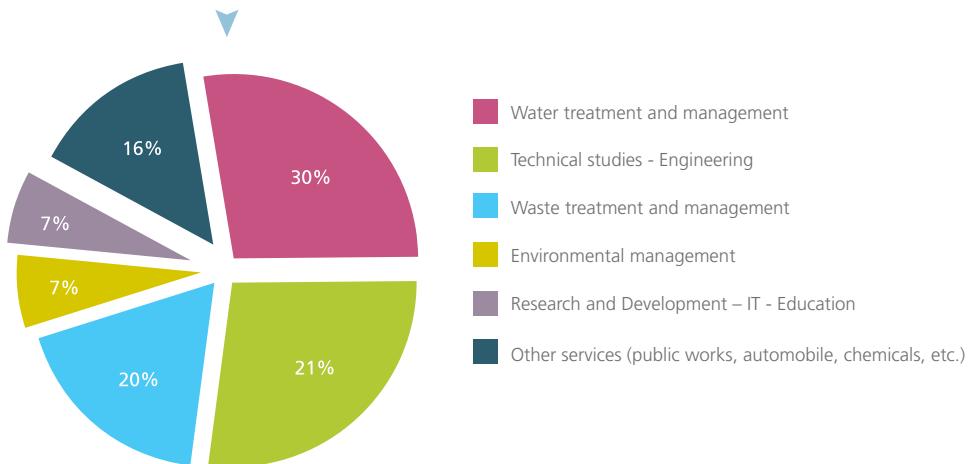
The ENSILian engineer: ► Key job functions



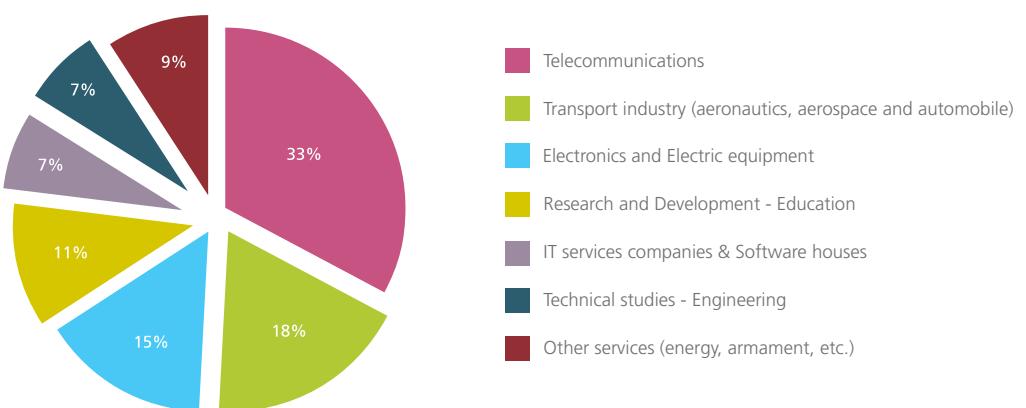
The ENSILian engineer: Fields of activity



Activity sectors for the
Water and Environment
specialization

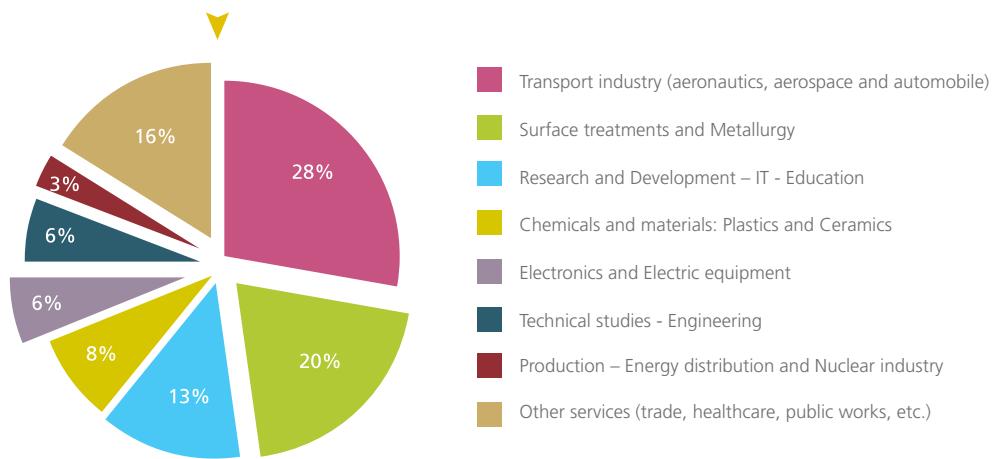


Activity sectors for
the **Electronics and
Telecommunications**
specialization

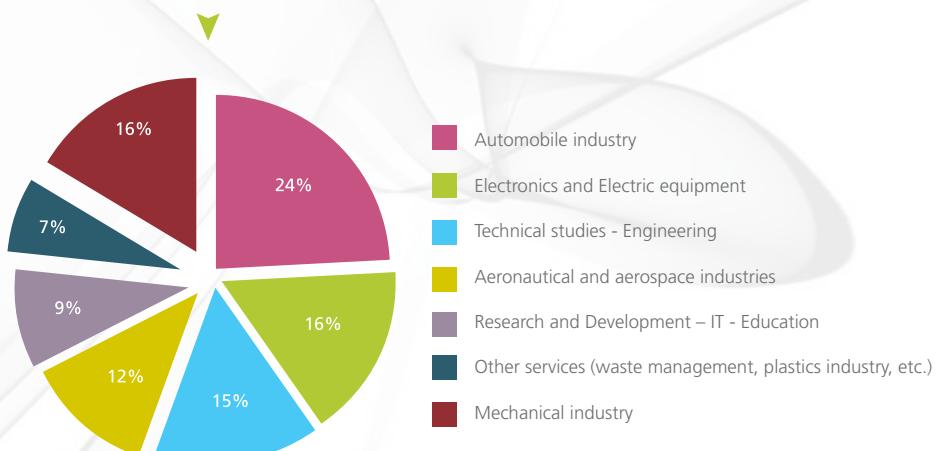




Activity sectors for the Materials Sciences and Engineering specialization



Activity sectors for the Mechatronics specialization



International perspective

Opening doors to the world...

It is indispensable today for engineers to be open to other cultures, other ways of living and of working.

ENSIL strongly encourages its students to spend time abroad.

- Our worldwide university partnership network offers students the opportunity to participate in study semesters that are validated by ECTS credits or by a double degree.
- Our industrial relations network and our network of former students support research and help make our industrial placements abroad a success.

ENSIL's pedagogical organization, which complies with the European LMD model (Bologna Process), makes 3-month to 1-year's mobility possible, at any time during the curriculum.

Engineering students, who participate in exchange studies and/or work placements abroad, benefit from financial aid based on their destination:

- **ERASMUS European Programme-studying** abroad (formerly SOCRATES)
- **ERASMUS European Programme-work** placement (formerly LEONARDO)
- Regional Programme for International Mobility (PRMI); cofinanced by the Limousin region and the University of Limoges
- ENSIL mobility grants
- Industrial grants

ENSIL also accepts international students on its various curricula part of European (ERASMUS) and international exchange programmes.

It participates, in particular, in the n+i programme, a highly-renowned international engineering training course, presented by Campus France and backed by the CDEFI (Conference of Directors of French Engineering Schools) and by the Ministry for Higher Education and Research.



60 partners throughout the world!

Locations of main
bilateral agreements
in Europe and
throughout the
world..



The detailed map specifying the various agreements is available on the ENSIL website: www.ensil.unilim.fr

Close industrial partnerships enabling rapid integration in companies

To establish dynamic and sustainable partnerships with the economic world (private and public), ENSIL identifies and assesses the expectations of companies as regards recruitment, training, and also research, innovation and technological development.

Business relations are deeply rooted in ENSIL's culture and pedagogy. Set against a backdrop of competition and a world that is perpetually changing, it is primordial for engineering students to constantly encounter the realities of the world of work.

The school's industrial relations are, undeniably, one of its key assets (as highlighted in the French Commission for Engineering Degrees report – April 2008). Exchanges with the socio-economic fabric are implemented in several ways:

- **Numerous placements** in France and abroad:
During year 3, our students participate in placements for 10 to 12 months.
- **Expertise projects:**
initiated by a company, an organization or a research laboratory, these projects deal with tangible industrial issues. They are part of a school – company (or organization) – engineering student partnership.
- **Professional participation:**
staff from the company provide evolutive and adaptable teaching that enables the school to develop a pedagogy focusing on management and knowledge for the specific company.
- **Training seminars, scientific symposiums, conferences and round tables:**
initiated and organized by our economic partners and/or the school itself; more than 50 events are held every year on our premises.



- **In-company visits:**

the privileged place for meeting engineers at work.

- **Job search preparation:**

recruitment interview simulations for students are carried out by the HRDs of our partner companies, who are also the future employers of our graduates.

- **Job offers:**

the school and the ENSIL Old Students' Association (AAEE), in direct and permanent contact with graduates, are present in 40 countries and hold positions in more than 600 companies. The AAEE provides another interface with the business economy by transmitting job openings for engineers and executives to the graduates.

- **Research contracts:**

the school's scientific and technological research is based on a wide range of collaborations with industrial groups and plays an active role in national and regional economic development. As partners in 5 competitiveness clusters, our research laboratories have developed a dynamic policy for transferring technologies and for valorizing research in pioneering fields directly with companies.

- **A business incubator:**

in partnership with the University of Limoges and regional bodies that provide help in creating or in taking over a business, ENSIL has established its own structure for supporting business creation projects.

- **Further training in-school or in-company:**

an opportunity for privileging and for transferring ENSIL's teaching and research activities so that company members of staff may benefit from theoretical and practical refresher training, if they wish to retrain for another position or integrate new technological data.

- **Apprenticeship Tax:**

EN SIL is authorized to receive Apprenticeship Tax (TA), pursuant to the scale established, automatically for categories C and by way of accumulation for categories B. Through a privileged and constantly renewed partnership, over 200 companies support our training courses every year..

Innovation and Multidisciplinarity

ENSIL's mission is to train general engineers. This mission is undertaken with a strong commitment to developing multidisciplinary research activities in the engineering science fields that are consistent with the requirements of companies and societal expectations.

Research in the school is part of the overall scientific policy of the University of Limoges.

It brings fundamental studies (currently 75% of the school's members belong to a CNRS UMR (mixed research unit)) and applied studies closely together.

Several research teams, on-site at ENSIL, are part of 3 major University of Limoges laboratories:

- **XLIM, UMR CNRS 6172:**

www.xlim.fr

- **SPCTS, UMR CNRS 6638, Sciences of Ceramics and Surface Treatment Processes:**

www.unilim.fr/spcts

- **Water, Ground, Environment Research Group, GRESE EA 4330:**

www.unilim.fr/filiere-eau

Four key themes are established based on the school's main areas of training:

- **components and systems for telecommunications applications**

- **real and virtual sensors for mechatronic systems**

- **Surface coating and functionalization through vapour deposition and through thermal spraying**

- **Water and waste treatment**

Emphasis is given to applications for high-growth sectors: ICT, transport, energy, health, sustainable development and nanosciences.

Drawing from the multidisciplinarity of its courses, ENSIL has established a policy for facilitating cross-disciplinarity and for privileging (i) work in synergy with the local and regional environment, (ii) teams' involvement in national and international research programmes

Prominence is accorded to valorizing research activities, by developing industrial contacts and by establishing strong bonds between the regional and national socio-economic fabric.

As such, research teams are intensely involved in:

- **2 competitiveness clusters coordinated by the Limousin region :** the **ELOPSYS** cluster (European high-tech microwave, photonics and secured networks cluster) and the European **Centre of Ceramics**,

- **3 inter-regional competitiveness clusters:**

Innoviandes, Viaméca, Ville et mobilité durables (City and Sustainable Mobility).



Specializations are chosen **during the entrance exam..**

When registering for the entrance exam, potential students **may apply for several specializations**, depending on the number of places available..

Preparatory Classes for “Grandes Ecoles” (CPGE)

Year 1 admission

- **MP / PC/ PSI prep. classes** : Archimède Group E3A exam
- **PT prep. classes**: ENSAM scoring bank

Written: Pre-registration on Internet www.scei-concours.org from December to January

Oral : Motivation and communication interview including a test of English
end of June – beg. July at ENSIL in Limoges

- **BCPST prep. classes:** G2E scoring bank

Written : Pre-registration on Internet www.scei-concours.org from December to January

Oral : End of June in Paris

	EAU	ELT	MAT	MIX
BCPST	6			
MP	8	8	4	8
PC	18	6	12	
PSI		12	6	12
PT				4

Places available in 2011

Admission based on written application and interview:

Year 1 admission (42 places available):
DUT, L2, L3, BTS and TSI and ATS Prep. classes

Year 2 admission (8 places available):
Scientific Masters (M1/M2), MST, IUP

Registration on Internet only <http://www.ensil.unilim.fr> from March onwards

Application closing date : end of May

Admission jury : June

Oral : Motivation and communication interview including a test of English
end of June – beg. July at ENSIL in Limoges

National Physics DEUG entrance exam (CCP – Polytechnic Competitive Examinations)

Year 1 admission (6 places available):

Reserved exclusively to holders of a “Science and Technology” DEUG

Written : Pre-registration on Internet <http://ccp.scei-concours.org> from January to March

Oral : mid July in Paris

Holders of foreign diplomas

Year 1 or Year 2 admission (8 places available), with a diploma corresponding to the specialization requested

Application closing date: End of May

Conditions available on the ENSIL website: www.ensil.unilim.fr

For more information on admission conditions: www.ensil.unilim.fr

+33 (0) 555 42 36 70 - concours@ensil.unilim.fr

Convivial, Creative, Dynamic...

ENSIL students' community life is organized around three key associations:

The BDE (Students' Union), the BDS (Sports Union) and the ISF (Engineers Without Frontiers).

Through this community dynamism, ENSILIans can become involved in school life and take part in humanitarian, cultural, sports and social projects, among others.

The BDE (Students' Union)

bde@ensil.unilim.fr

The ENSIL Students' Union is the driving force behind this community life.

Created in 1993, around 80% of ENSIL's engineering students take out annual membership.

The Students' Union organizes a wide range of flagship events, such as the "Prestige Gala", the "Ensil Nature Trophy", the "Ensil Arts Trophy", the "Ensil Cross-Trail", etc. and, as such, promotes the school externally.

It enables everyone to find their place in the school; it offers students a great variety of possibilities as it hosts numerous clubs (music, theatre, networks, rock, comic books, regional specialities, astronomy, etc.) and also 'cells' (such as the Shell Eco Marathon, the 4L Trophy, the Foyer, etc.), which spans further afield than the school itself as the aim of the activities is to promote ENSIL on regional, national and international levels.

The BDS (Sports Union)

bds@ensil.unilim.fr

The Sports Union organizes a wide range of sports activities, such as the "School inter-specialization

tournaments" and the "Annual ENSCI-ENSIL-3IL Tournament".

A great variety of sports are available: from the most common (football, rugby, handball, basketball, etc.) to the most unusual (diving, paragliding, kayaking, polo, etc.) in partnership with the University of Limoges. It coordinates the various ENSIL teams that participate in the different university championships and it also supervises the annual participation of the school in the "Inter-Chemistry Trophy" (TIC), which was held in Limoges in 2005 and organized by the Students' Union and the Sports Union..

ISF (Engineers Without Frontiers)

isf@ensil.unilim.fr

The aim of the Limoges Engineers Without Frontiers is to participate in international solidarity projects and to promote sustainable development and equal rights between populations.

Its two main areas of activity are: Fieldwork missions in developing countries: Limoges ISF is a partner in the decentralized cooperation between the Limousin region and the Province of Oubritenga (Burkina-Faso) in the field of hydraulics.

The association provides support for a drinking water supply project in this province.

Development awareness-raising actions in France:

- The cafeteria created by ENSIL promotes international solidarity and fair trade.
- Awareness campaigns are proposed in schools in the form of role-playing games, conferences, exhibitions, projections, etc.





• ENSIL Association of former alumni (AAEE)

<http://aaee.ensil.unilim.fr>

With its network of over 2,000 qualified engineers, the AAEE :

- **Facilitates contact between students and former students** throughout the year by playing an active role in school life:

- old student day
- conferences on professions
- theme-based round tables
- student project support
- collaboration with the Students Union (various events, sports meetings, etc)

- **Exchange of practical information** (placements, jobs, advice, etc.) between former students on the association's online forum

- **Keeps a regular watch** on the changes in the professional life of ENSIL engineers

The AAEE, helps its members by:

- **Privileging professional insertion** : weekly circulation of targeted job offers from former students who are employed and from recruitment firms

- Constantly developing its network of former students and professionals

- **Editing** the annual directory of graduates

Contact us on

AAEE

Tel : +33 (0) 555 42 36 67

Email : aaee@ensil.unilim.fr



About Limoges

Do you know Limoges ?

A city full of things to discover!

Home to 20,000 students, Limoges is a real student city!

Rentals are reasonably priced and the «Centre Régional des Œuvres Universitaires», which manages 14 university residences and 8 restaurants provides a wide range of services.

Limoges has great appeal as 30% of students are from departments outside the Academy of Limoges (80% for ENSIL).

It is also home to 1,700 foreign students. With its 765 researchers and teacher-researchers, higher education plays a key role.

Limoges makes sport easy.
Initiation, relaxation or competition, the city focuses on diversity and sport as part of everyday life.

Over 30,000 sports licence holders train here (20% of the population), in 310 clubs.

Limoges provides 200 sports facilities where 75 different sports can be practiced.

The open-air areas, glens and woods, as well as the nearby countryside offer real breaths of fresh air.

The city's key facilities include: 5 swimming pools, including an olympic-sized one (1 sports complex - 1 olympic ice rink - 1 base-ball field - 1 18-hole municipal golf course covering 55 hectares (6,222 m circuit) - 1 practice course - 2 putting greens - 40 pitches for major games

- 27 gyms - 50 tennis courts - 1 climbing wall
- 1 skateboard circuit - 1 dojo/fencing hall - 2 bicross tracks - 1 covered bowls pitch, etc.

Limoges is home to the greatest title-holding club in

France, for all collective sports - the Limoges CSP Elite (9 Champion of France titles, 5 European, including European Championship holder in 1993).

Limoges plays host to major sports meetings: Fed Cup in 2007 and 2009, French handball team test matches in 2007 and 2011, Euro basketball qualifications in 2008, Tour de France cycling race stages, etc.

Special events every month and dozens of entertainment opportunities every day! From shows in the Zenith to baroque ensemble concerts, from opera to bandstand music, there's never a dull day. Limoges' 5 cultural centres offer everyone a multitude of activities, at great rates.

24 cinema screens for lovers of the 7th art (brand new cinema complex near ENSIL).

Of course, as far as culture goes, you may prefer to soak up the atmosphere in the exquisite multimedia Francophone library or stroll through the city's charming museums,

On top of the entertainment out on the streets, the city's restaurants, music cafés, piano bars and niteclubs abound everywhere (in the Cité, the Gare, the Boucherie and the Pousses districts) and on city squares (such as République or the Motte).

Something to delight all night owls out there!



Editorial source: www.ville-limoges.fr



Access Map



• CROUS (Centre Régional des Oeuvres Universitaires et Scolaires)

CROUS de Limoges 39 G rue Camille Guérin 87036 Limoges cedex

tél.: +33 (0) 555 43 17 00

<http://www.unilim.fr/crous>

• Carrefour des Etudiants

88 rue du Pont St Martial 87000 LIMOGES

tél.: +33 (0) 555 14 90 70

carrefour-des-etudiants@unilim.fr

• SUFOP (Service Universitaire de Formation Permanente)

83 rue d'Isle 87000 Limoges

tél.: +33 (0) 555 43 69 50

• Service Universitaire de la Médecine Préventive

39 G rue Camille Guérin 87036 Limoges cedex

tél.: +33 (0) 555 43 57 70

sumpps@unilim.fr

Useful addresses



ÉCOLE NATIONALE
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DE LIMOGES

By choosing **EN SIL**, you have decided to
look to tomorrow, to play an active role
in the technological, economical and cultural
advancements of our society.

Become an engineer and choose the **Ecole
Nationale Supérieure d'Ingénieurs de
Limoges!**