ESILV
ENGINEERING SCHOOL
DE VINCI PARIS NANTES

Cti
Commission
des Titres d'Ingénieur

DIPLÔME
D'INGÉNIEUR
CONTRÔLÉ
PAR L'ÉTAT

EUR-ACE

GENERAL ENGINEERING
AT THE HEART OF THE DIGITAL WORLD

100
INTERNATIONAL
PARTNERS

12
MAJORS

24
DOUBLE
DEGREES

CONTENTS

ESILV
ENGINEERING SCHOOL
DE VINCI PARIS NANTES

FIVE YEARS
TO BECOME
AN ESILV ENGINEER

A general undergraduate engineering school focused on digital, new technology, hybridisation and innovation

SEVEN
SPECIALISATIONS

Finance, IT, mechanics and robotics, energy, innovation, health, agriculture and food engineering

TWELVE
MAJORS

including 8 available as a work-study track

INTERNSHIPS, WORK-STUDY, PROJECTS...

Strong business ties
↗ **page 51**

INSIDE ESILV

Inside ESILV
with Julia, Romane, Maé, Louis, Taous, Lucas, Romuald and Théo
↗ **page 48**

SIX CROSS-DISCIPLINARY TRACKS

Research, business engineering, UX Design, innovation, startups, quantum

↗ **page 44**

www.esilv.fr

03

A strong digital focus, a global outlook and proven project-based learning."

Pascal Pinot

Dean, ESILV

Welcome to ESILV, the De Vinci Higher Education Engineering School situated in the heart of Paris-La Défense, and in Nantes starting this year. ESILV offers high-level general engineering courses with a strong digital focus. ESILV's programmes incorporate a global outlook and proven project-based learning. Its reputation amongst employers speaks for itself. ESILV graduates excel in an array of sectors with their scientific, managerial and multidisciplinary digital skills, their thirst for innovation and their strong ethics.

Studying at ESILV means taking control of your own learning while surrounded by businesses which take an active role in the school's teaching. The course provides countless opportunities to develop and broaden the scope of your learning: technical projects, majors, tracks, time abroad, double degrees, internships, and more.

The school and its international network and network of corporate partners are here to help each student with their choices and the key moments of their engineering degree. ESILV and the two other De Vinci Higher Education schools – the EMLV business school and the IIM digital school – share a set of common values.

JOBS JUST A CV AWAY

ESILV combines scientific and technological and soft skills development to train innovative, responsible professionals who understand what's at stake in terms of sustainable development and are ready to take on the challenges of the future in a globalised world.

SECTORS HIRING GRADUATES

Sector	%
IT (INDUSTRY AND SERVICES)	43%
BANKING, FINANCE & INSURANCE	26%
AUTOMOTIVE INDUSTRY, AERONAUTICS, ETC.	7%
ENERGY	6%
DESIGN OFFICES	5%
CONSTRUCTION	4%
OTHER	9%
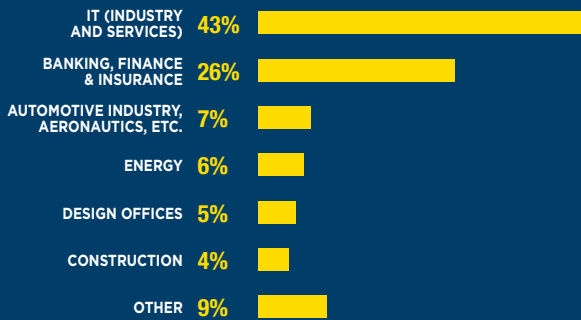
EXAMPLES OF POSITIONS

- **Analyst** / ACCENTURE
- **Junior logistics manager** / Amazon
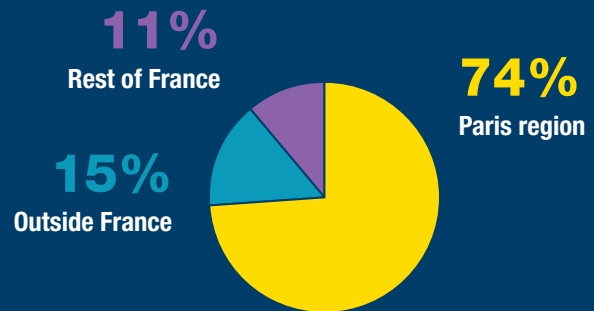- **Data Engineer** / AXA
- **Structurer** / BNP Paribas London, UK
- **Market Capital Analyst** / Deloitte Luxembourg
- **Actuary** / Swisslife Assurances
- **Data Scientist** / ENGIE – AXA
- **Consultant** / EY – KPMG
- **Securities Based Lending Analyst** / JP Morgan, Edinburgh, UK
- **Blockchain developer** / PwC Luxembourg
- **Trader** / Natixis
- **Rail Operations Engineer** / Rail Concept
- **Risk Analyst** / AMUNDI, Ireland
- **Project Management Officer and Operational Management Assistant** / THALES
- **Energy Efficiency Engineer** / TOTAL
- **Aircraft Architect** / DGA
- **Bioinformatics Application Developer** / La Jolla Institute for Immunology, USA
- **Customer Success Account Manager** / Microsoft
- **Cybersecurity Risk Officer** / Bouygues Construction
- **Industry Process Consultant** / Dassault Systems
- **Renewable Energy Engineer** / ADEME

90%
of ESILV graduates are satisfied or very satisfied with their first job

JOB LOCATION

11%
Rest of France

15%
Outside France

74%
Paris region

€44,700
Average gross annual salary (with bonuses)

92%
Hired within two months

90%
Net employment rate

90%
Manager status

41%
International-related job

2022 survey asking recent graduates about their first jobs

10 GREAT REASONS
TO CHOOSE ESILV

ESILV is a general engineering school with an undergraduate and graduate programme that specialises in digital technology in seven broad fields: Finance, IT, Mechanics and Robotics, Energy, Innovation, Health, Agriculture and Food Engineering. ESILV's curriculum is built around science and digital technology.

General engineering training with a focus on digital technology.

12 majors available (including 8 work-study tracks) so you can specialise in cutting-edge fields that are in high demand.

Small class sizes to help every student succeed and hands-on teaching tailored to your goals.

International experiences for everyone at partner universities and with companies.

Companies are central to the ESILV programme for successful professional integration. Graduates are hired within an average of 1 month at an average starting salary of €44,700.

Unique inter-school cooperation between the three schools (ESILV, EMLV and IIM) from Year 1.

Sport is part of the curriculum. All students choose between a beginner level and competitive programme in one of 38 sports.

Access to **a broad palette of French and international double degrees.**

Clubs and societies are promoted and overseen by the school and shared with the other schools on campus: EMLV and IIM. Some sixty student organisations keep campus life busy and give all students the opportunity to get involved in fulfilling projects.

Projects every year.

ESILV's permanent faculty is composed of research professors who offer a blend of academic expertise and professional experience, plus associate professors from the corporate world.

3,600
students

12,000
alumni

400
Research professors, professors, and professional lecturers

24
double degrees

12
Majors
including 8 available as a work-study track

6
cross-disciplinary tracks
in addition to the traditional track

over 100
partner universities
in 47 countries

WHY
CHOOSE ESILV?

How should you choose among all the programmes offered by different engineering schools? Beyond the rankings, you should consider the degree's reputation, the school's mission and commitments, its accreditations, the faculty's recognition, on-campus facilities, and career opportunities and the jobs held by graduates.

LABELS, ACCREDITATIONS, AND NETWORKS

ESILV has French and international accreditation and recognition (EUR-ACE, CTI). It is also a member of recognised organisations that promote engineering schools and higher education, including CGE, UGEI, CDEFI and Campus France.
It participates in the joint entrance exams for students finishing high school (Avenir exam) or a foundation course (e3a-Polytech, Banque PT).

Since 2003, ESILV has been authorised by the French Engineering Accreditation Committee (CTI) to award the title of Engineer Graduate from the Léonard de Vinci Graduate School of Engineering. Its engineering courses are overseen by the CTI, guaranteeing the quality of the training provided as well as the professional abilities of its graduates.

A HIGHLY RANKED SCHOOL

Each media outlet ranks schools using its own set of criteria. However, they all include academic and research excellence, international ties, business relationships, professional integration, and of course entrepreneurship. **ESILV is steadily moving up the rankings.**

1st
undergraduate engineering school in Ile-de-France

2nd
undergraduate engineering school in-France

Le Figaro/L'Étudiant/L'Usine Nouvelle Rankings (2022)

ENGINEERING SCHOOL DE VINCI

A COMMITTED AND RESPONSIBLE SCHOOL

Environmental and social issues are central to the curriculum, research, and activities of the De Vinci Higher Education schools. **We want to prepare our students to take an active role in making crucial changes to the world of business and society as a whole.** We aim to train responsible, civic-minded graduates capable of taking on the challenges of a globalised world.

CREATING INNOVATIVE SOLUTIONS FOR THE FUTURE

Students take part in cross-disciplinary Boot Camp weeks focusing on CSR or sustainable development alongside design students from IIM and management students from EMLV.

ESILV USES BLOCKCHAIN TECHNOLOGY TO CERTIFY ITS DIPLOMAS

The school has partnered with Paymium, the Paris-based European leader in Bitcoin technology, to make its diplomas easy to verify and impossible to counterfeit.

A UNIQUE EXPERIENCE
AT ESILV!

Studying at ESILV means choosing a general engineering school with a focus on the digital world, new technologies, hybridisation and innovation.

ESILV
ENGINEERING SCHOOL
DE VINCI

BUILD YOUR IDENTITY

Studying at ESILV also means taking control of your learning. The course provides countless opportunities to develop and broaden the scope of your learning: 12 majors, 24 double degrees in France and worldwide, including an Engineering-Management degree with EMLV, a minimum of 13 months of internships, and more.

Throughout their studies, **students work on projects that reinforce and structure their learning and develop their skills as future engineers:** Imagination and eXploration Project, General Digital Engineer Project, Industrial Innovation Project, business challenges, etc.

JOIN THE GLOBAL COMMUNITY

Exchange programmes related to the majors taught at ESILV with over **100 partner universities in 47 countries, 6-month academic exchanges or internships abroad from the third year, 24 double degrees (Master's, DESS, Msc)** taken abroad in the final year, and more.
ESILV prioritises an international outlook to nurture students' personal and professional development and train engineers with a multicultural sensibility and extensive experience abroad.

INNOVATION

Innovation is at the heart of teaching and research at ESILV. In addition to the De Vinci Research Center (DVRC), **students enjoy access to modern infrastructure equipped with the latest technology (Bloomberg Suite, FabLab, De Vinci Innovation Center, technology laboratories**, etc.).
They learn by experimenting with innovative technology projects.

SUCCESS

Located in the Paris-la-Défense business district (Europe's top business centre) and in Nantes, ESILV enjoys exceptional economic environments with companies in all sectors in close proximity, encouraging their involvement in our programmes: **career plans, internships, work-study tracks, job talks, forums, etc.** This close partnership is an undeniable asset that helps our graduates find their first job quickly after graduating, with an average starting salary of €44,700.

DEVELOP YOUR NETWORK

ESILV's students' success does not depend solely on the quality of their scientific, technical and vocational training, but also includes a very strong human dimension through inter-school sharing, soft skills training, sports activities, clubs and societies. Each student is provided opportunities to grow as a person, to develop and apply new people skills, and to express their personality and realise their potential.

ONE SCHOOL,
TWO CAMPUSES

IN THE HEART OF PARIS-LA DÉFENSE

Located within minutes of the global business hub of Paris-La Défense, the De Vinci Higher Education campus is a genuine American-style campus that offers students an exceptional learning environment.

MODERN INFRASTRUCTURE

With its cutting-edge labs, a Learning Center, gyms, lounges, and co-working spaces, **the De Vinci Higher Education campus is the ideal setting for ESILV engineering students.** Campus infrastructure and the teams that support the students make it a privileged place to live and learn.

AN INNOVATIVE ECOSYSTEM

ESILV offers 11 lecture halls, 183 classrooms, 25 seminar rooms and laboratories, 40 computer rooms, workspaces at the Learning Center, 5 gyms (weight training, cardio training, fitness, combat sports), a student residence, a music room, two cafeterias, and more.

ESILV also benefits from the presence of a management school (EMLV) and digital school (IIM) at De Vinci Higher Education with which its students share courses, double degrees and joint activities.

CAMPUS CYBER ASSOCIÉ

ESILV has invested in the La Défense Cyber Campus to support its Cybersecurity classes and activities.

A FUTURE GREEN CAMPUS PLANNED FOR 2025

De Vinci Higher Education is preparing to move to a new 25,000 sq. m campus in Nanterre, just minutes away from its current Paris-La Défense campus.

A modern 1,500 sq. m building featuring a workshop, computer rooms, a cafeteria, co-working spaces, and more.

THE NEW ESILV NANTES CAMPUS

ESILV has opened a new campus at the Europarc de la Chantrerie in Nantes, near other top schools (IMT Atlantique, Polytech, École Supérieure du Bois, Oniris, CESI).

A TECHNOLOGY HUB

The La Chantrerie site houses 4,000 students, high-tech companies, the Atlanpol incubator, Hub Créatic and its 50 new digital companies, and flagship companies like Vorwerk in Extenso, Sodexo, and Orange Business.

OUTSTANDING APPEAL

More and more companies have been setting up shop in Greater Nantes since 2020. Even more are planning to make the move soon, particularly in the digital and services sectors (banking/ insurance, engineering, telecommunications, logistics, etc.).

ACCELERATING THE DIGITAL TRANSITION

With 27,000 jobs across the region, the digital transition is key for this leading city in Western France. The sector needs 1,600 trained engineers every year including 400 recent graduates.

THE SMART CITY OF WESTERN FRANCE

Nantes is just two hours from Paris by high-speed train. It is a city on a human scale, easy to explore on foot or by bus, tram, and bike. As the economic capital of western France, Nantes has successfully combined that energy with high quality of life, making it particularly appealing for students.

6th most popular city with students

62,000 students

170+ new businesses per year

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THE ESSENCE
OF DE VINCI HIGHER EDUCATION

ESILV is one of the three De Vinci Higher Education schools, alongside EMLV (management school) and IIM (digital school). Students from all three schools build close relationships around innovation, entrepreneurship, and soft skills, as well as sport, clubs and societies.

INNOVATION AND DIGITAL

Innovation and digital are at the heart of teaching and research at all three De Vinci Higher Education schools. Students enjoy access to modern infrastructure featuring the latest technologies, including a FabLab and Learning and Innovation Centers. They take part in competitions that reward their ideas and projects. Students with an entrepreneurial spirit can sign up for a dedicated programme and receive support throughout their digital business creation process.

INTER-SCHOOL COOPERATION

Inter-school cooperation offers students a unique experience that helps them become more open-minded and grow in their personal development. The three schools' close proximity means they can take double degrees through part or all of their studies, like the Engineering-Management programme with EMLV or the Digital Transformation Management and Creative Technology Master's Degrees with IIM.

SOFT SKILLS

Completing projects, developing your personal strengths, using new skills, expressing your personality, revealing your potential. Succeeding in your university studies requires much more than just good technical and professional training. It also involves a strong human dimension. All three De Vinci Higher Education schools offer a full soft skills training programme tailored to changing professional norms and expectations as an integral part of their curriculum.

ACTIVE LEARNING

Soft skills learning is very interactive, involving methods such as role play, exercises, working in project mode, and situation-based learning.

INTER-SCHOOL COOPERATION

Inter-school teams receive soft skills training together during inter-school weeks and hackathons. ESILV students learn to work effectively with creatives and managers.

ESILV ENGINEERING SCHOOL
DE VINCI

DE VINCI

HIGHER EDUCATION

ESILV
ENGINEERING SCHOOL
DE VINCI PARIS NANTES

EMLV
BUSINESS SCHOOL
DE VINCI PARIS

IIM
DIGITAL SCHOOL
DE VINCI PARIS NANTES

+

8,800
ESILV, EMLV and IIM students work together from the first to the fifth year

1,000
double degree students

3
complementary schools
(engineering, management, digital)

2
sites
(Paris, Nantes)

COOPERATION

All students also have the opportunity to grow through sports and there are numerous clubs and societies for students from all three De Vinci Higher Education schools.

FIVE YEARS
TO BECOME AN ESILV ENGINEER

General engineering training with a focus on digital technology. Seven broad fields: Finance, IT, Mechanics and Robotics, Energy, Innovation, Health, Agriculture and Food Engineering.

FOUNDATION CYCLE
(2 YEARS)

The ESILV integrated foundation course offers students solid academics combined with an introduction to the world of business, **laying the groundwork for a comprehensive general course based on tailored teaching that covers both theory and practice.**
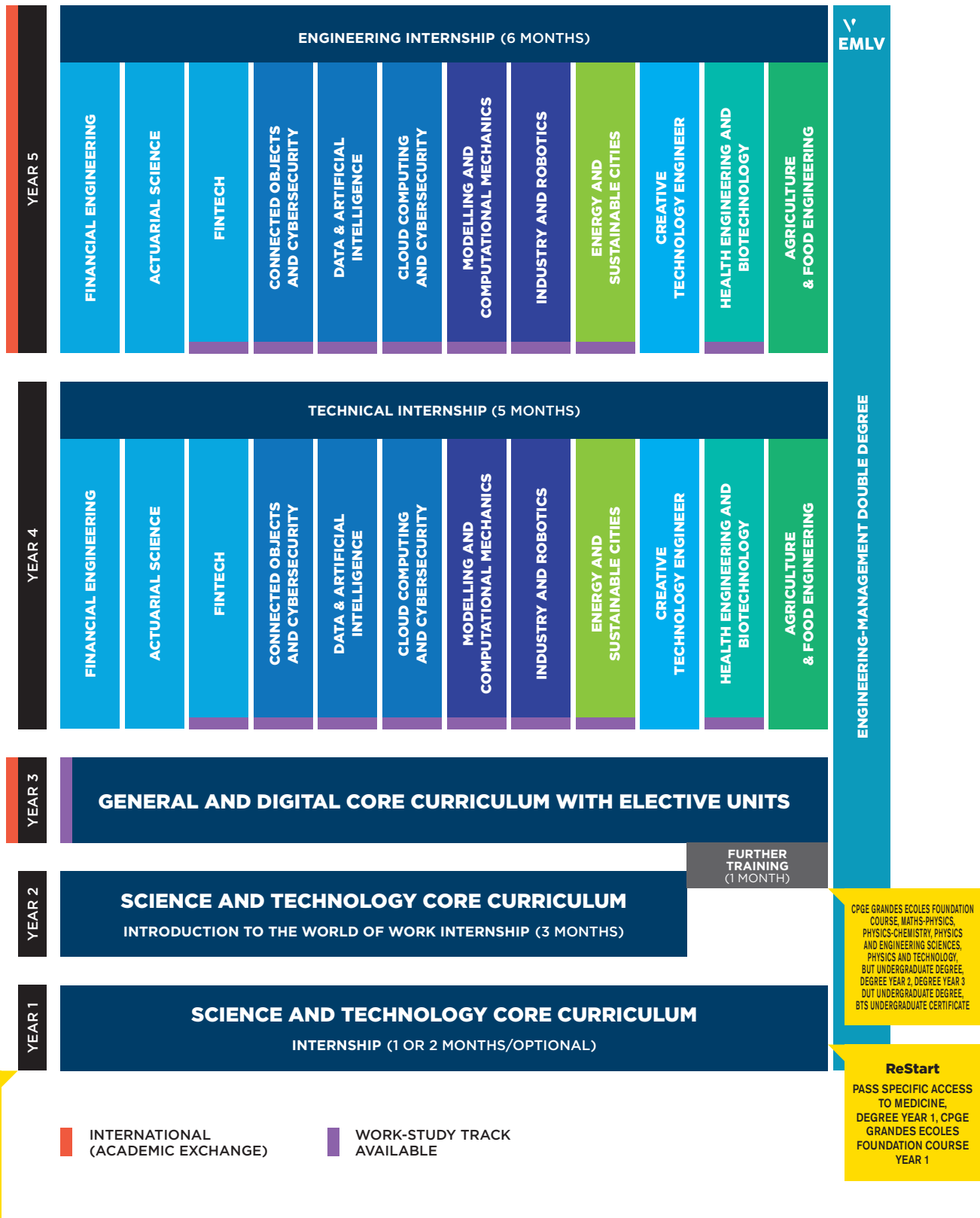
ENGINEERING CYCLE
(3 YEARS)

The ESILV engineering cycle includes one year covering the general core curriculum and two years of specialisation. The first year focuses on consolidating students' scientific and technical skills and beginning to develop their professional skills. The second two years build their choice of skills.

ESILV **ENGINEERING SCHOOL**
DE VINCI

ESILV ENGINEERING
MASTER'S DEGREE

YEAR 5

ENGINEERING INTERNSHIP (6 MONTHS)

- FINANCIAL ENGINEERING
- ACTUARIAL SCIENCE
- FINTECH
- CONNECTED OBJECTS AND CYBERSECURITY
- DATA & ARTIFICIAL INTELLIGENCE
- CLOUD COMPUTING AND CYBERSECURITY
- MODELLING AND COMPUTATIONAL MECHANICS
- INDUSTRY AND ROBOTICS
- ENERGY AND SUSTAINABLE CITIES
- CREATIVE TECHNOLOGY ENGINEER
- HEALTH ENGINEERING AND BIOTECHNOLOGY
- AGRICULTURE & FOOD ENGINEERING

YEAR 4

TECHNICAL INTERNSHIP (5 MONTHS)

- FINANCIAL ENGINEERING
- ACTUARIAL SCIENCE
- FINTECH
- CONNECTED OBJECTS AND CYBERSECURITY
- DATA & ARTIFICIAL INTELLIGENCE
- CLOUD COMPUTING AND CYBERSECURITY
- MODELLING AND COMPUTATIONAL MECHANICS
- INDUSTRY AND ROBOTICS
- ENERGY AND SUSTAINABLE CITIES
- CREATIVE TECHNOLOGY ENGINEER
- HEALTH ENGINEERING AND BIOTECHNOLOGY
- AGRICULTURE & FOOD ENGINEERING

EMLV — ENGINEERING-MANAGEMENT DOUBLE DEGREE

YEAR 3

GENERAL AND DIGITAL CORE CURRICULUM WITH ELECTIVE UNITS

FURTHER TRAINING (1 MONTH)

YEAR 2

SCIENCE AND TECHNOLOGY CORE CURRICULUM

INTRODUCTION TO THE WORLD OF WORK INTERNSHIP (3 MONTHS)

CPGE GRANDES ECOLES FOUNDATION COURSE, MATHS-PHYSICS, PHYSICS-CHEMISTRY, PHYSICS AND ENGINEERING SCIENCES, PHYSICS AND TECHNOLOGY, BUT UNDERGRADUATE DEGREE, DEGREE YEAR 2, DEGREE YEAR 3 DUT UNDERGRADUATE DEGREE, BTS UNDERGRADUATE CERTIFICATE

YEAR 1

SCIENCE AND TECHNOLOGY CORE CURRICULUM

INTERNSHIP (1 OR 2 MONTHS/OPTIONAL)

ReStart

PASS SPECIFIC ACCESS TO MEDICINE, DEGREE YEAR 1, CPGE GRANDES ECOLES FOUNDATION COURSE YEAR 1

GENERAL BACCALAUREATE (SCIENTIFIC SPECIALISMS) INDUSTRIAL AND SUSTAINABLE DEVELOPMENT TECHNOLOGIES AND SCIENCES (STI2D)

- INTERNATIONAL (ACADEMIC EXCHANGE)
- WORK-STUDY TRACK AVAILABLE

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INTEGRATED FOUNDATION COURSE

The foundation course focuses on building a solid knowledge base and discovering the world of work. Its generalist curriculum gives students the firm all-around scientific grounding they will need to succeed in the engineering cycle. From classes, projects, soft skills development and working methodologies to continuous assessment and internships, the wide variety of subjects forms a broad and coherent knowledge base.

A TWO-YEAR INTEGRATED FOUNDATION COURSE

The integrated foundation course offers students a full-time general course that provides all the scientific basics, complementary elective units and project-based learning.

The cycle ends with an initial three-month internship, designed to familiarise students with the corporate world.

The foundation cycle is available on both the Paris-La Défense and Nantes campuses. Both locations offer the same curriculum, classes, teaching styles, and diplomas.

A COLLABORATIVE DYNAMIC

The integrated foundation cycle differs from classic foundation courses in the wide variety of subjects taught:

- **Classes** (algebra, analysis, statistics, algorithmics, system environment, databases, object programming, mechanics, electricity, thermodynamics, materials, etc.).
- **Scientific** and technical projects
- **Cross-disciplinary approaches: soft skills**, personal working methodologies, languages, communication tools, etc.

HYBRID TEAM PROJECT MANAGEMENT

First- and second-year ESILV students carry out joint projects with students from the two other schools (EMLV and IIM) in mixed teams, under the supervision of a permanent professor. Students are encouraged to develop project management skills and talents and the ability to work together and understand how an organisation works.

The projects carried out relate to societal issues (sustainable development, disability, etc.) or personal skills (creativity, communication, etc.).

ESILV ENGINEERING SCHOOL DE VINCI

WHY CHOOSE THE ESILV FOUNDATION COURSE?

+ **Scientific and technical grounding**

+ **Complementary elective modules**

+ **Teamwork**

+ **Project-based learning** (scientific and technical)

+ **Cross-disciplinary classes with future managers (EMLV) and creatives (IIM): joint projects and languages**

+ **Mandatory sport**

+ **Curriculum tailored for high-level athletes and musicians**

+ **Introduction to the world of work internship**

ReStart

AN ACCELERATED PROGRAMME FOR A LATER START DATE

ESILV offers an accelerated programme that lasts just one semester for first-year students who want to change course without losing a year of study. The 18 weeks of intensive classes run from February to mid-July.

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A COMMON CORE CURRICULUM

The third year is a crucial time as students dig deeper to develop their scientific knowledge through the wide range of engineering classes that are essential for general engineers. Students can opt to fill part of their schedule with classes that correspond to their career aims.

START OF THE ENGINEERING CYCLE

ACQUIRING PROFESSIONAL SKILLS

- Managing projects, statistics, digital analysis, object-oriented programming, corporate financial management.
- Individual involvement, project-based learning, active learning in small groups.
- Choice of scientific modules (electives) to personalise your course and help you find your path.

20% OF THE PROGRAMME IS INTER-SCHOOL CLASSES

Soft skills, international experiences mandatory sport

CHOOSING YOUR MAJOR AND BUILDING YOUR CAREER PLAN

LECTURE AND SEMINAR SERIES

- Engineering careers
- Diversity and equality in the workplace
- Building your professional network
- Engineering Ethics

SELECTING A MAJOR

- Presentation of each major: aims, skills, industries, and career opportunities
- Q&A workshops
- Presentations by graduates and fifth-year students

ELECTIVE UNITS

Elective units let students personalise their course to fit their career plan. They give each student the chance to discover or deepen their knowledge of certain subjects, widening the scope of their knowledge and skills. This enables them to make an informed decision when they choose their fourth-year major. It is also an opportunity to meet the faculty members who teach the major-specific classes.

A PERSONALISED WELCOME FOR STUDENTS STARTING IN THE THIRD YEAR

Students who enrol at ESILV in Year 3 receive a special welcome, including several weeks of additional classes on the basics of IT and statistics, an introduction to practical skills like mechatronics, a Makers class using the De Vinci Higher Education resources (including the FabLab), and a class on soft skills applied to oral communication.
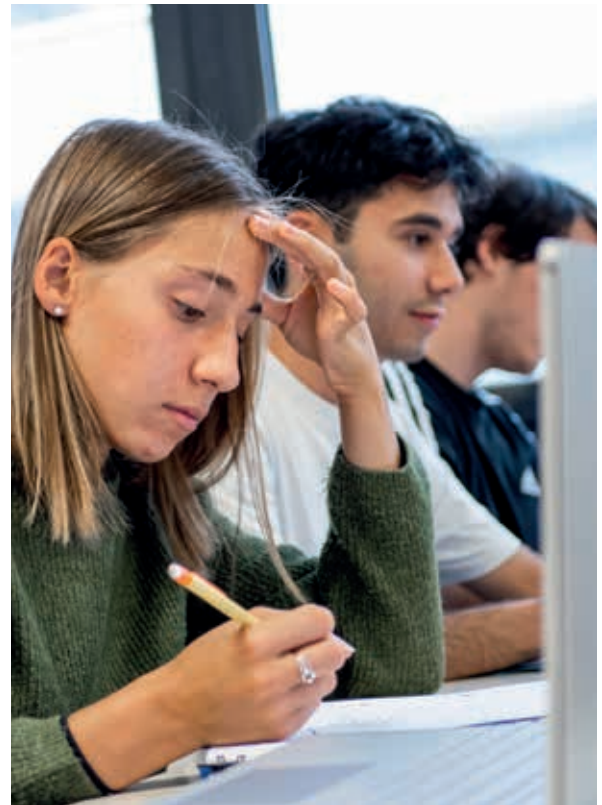
INTERNATIONALISATION FROM THE THIRD YEAR

International experience is a big part of the engineering cycle. From their third year, engineering students have the opportunity to experience life abroad.

STUDY ABROAD SEMESTER

Third-year students can choose from a broad array of destinations: USA, Spain, China, Italy, Ireland, Finland, Latvia, Canada, South Korea, Chile, the Netherlands, and beyond.
To further enhance their international profile, students can choose to do a second international exchange in Year 5, in many cases to earn a double degree.

INTERNATIONAL WEEK

Every spring, the school hosts professors and experts from around the world. Third-year students can attend lectures and seminars on wide-ranging themes. International week is a unique opportunity for dialogue and to explore other knowledge and viewpoints.

GRADUATE CYCLE (YEARS 4&5)

DEVELOPING SKILLS

The final two years of the engineering cycle are a time for engineering students to look ahead to their futures. Each student develops their own path as they choose a major, international experiences, internships, double degrees, and career plan.

TWO YEARS SHAPED BY TEACHING, PROJECTS AND INTERNSHIPS

IN THEIR FOURTH YEAR, STUDENTS EMBARK ON MORE IN-DEPTH STUDIES OF THEIR MAJORS

Taught entirely in English, like the entire Graduate Cycle, this year gives students a solid grounding in the fundamentals of their chosen major and the opportunity to build on what they have learned throughout the year through the PI2 A4 project.

TECHNICAL INTERNSHIP AT THE END OF THE FOURTH YEAR

Students spend 4 to 5 months putting what they have learned into practice on complex, technical assignments.

THE FIFTH-YEAR COURSES DEVELOP TOP-LEVEL EXPERTISE WITH HIGH ADDED VALUE

The fifth year puts the student at the centre of the issues and challenges relating to their major and associated sectors. The PI2 A5 project gives each group of students a comprehensive, ambitious, and innovative project to work on. It is an opportunity to showcase their expertise and their ability to complete a project, from beginning to end.

GRADUATE INTERNSHIP

This internship, which very often leads straight to employment, rounds off students' five years of dedicated hard work and involves a genuine professional engineering project.

ESILV **ENGINEERING SCHOOL**
DE VINCI

DIVERSE LEARNING PATHWAYS

DURING THEIR FOURTH AND FIFTH YEARS, STUDENTS CAN SELECT PATHWAYS THAT LEAD TOWARD INTERDISCIPLINARY CAREERS

Research, business engineering, UX Design, innovation, entrepreneurship, quantum IT.

COMPLEMENTARY ELECTIVES

All students can choose to take modules offered by EMLV or ESILV to explore new fields and the industrial challenges of the future. Electives options include the luxury economy, social responsibility, corporate ethics, risk management, the art market, politics and energy, supply chains, opinion mining, Uberisation and the circular economy, and Theory U.

THE CORPORATE WORLD AND EMPLOYABILITY ARE PRESENT THROUGHOUT THE ENGINEERING CYCLE

CAREER SEMINARS

The fourth-year career seminars are an opportunity for students to interact with alumni, who share their experiences and career paths to help current students plan for their professional future.

LECTURES AND TALKS

Business lectures and talks are held throughout the fifth year to help students as they start their careers. The Career Fair, attended by more than 100 companies every year, is an opportunity to meet directly with companies.

BECOME AN ENGINEER
THROUGH WORK-STUDY

With one foot in school and the other in the business world, ESILV work-study engineers undertake a paid course rooted in real-world experience.

WHY CHOOSE THE WORK-STUDY TRACK AT ESILV?

- **A degree recognised by the Commission des Titres d'Ingénieur (French Engineering Accreditation Committee)**
- **Majors focused on key digital challenges**
- **International experiences for all work-study students**
- **Personalised help in finding a work-study placement**
- **A progressive work-study programme that is suited to both learning and the corporate world**

A 3-YEAR WORK-STUDY CONTRACT

A work-study contract is a fixed-term contract between the company, the student, and the CFA, the agency governing French work-study programmes. It covers the entire duration of the programme (2 or 3 years, depending on when you enrol).
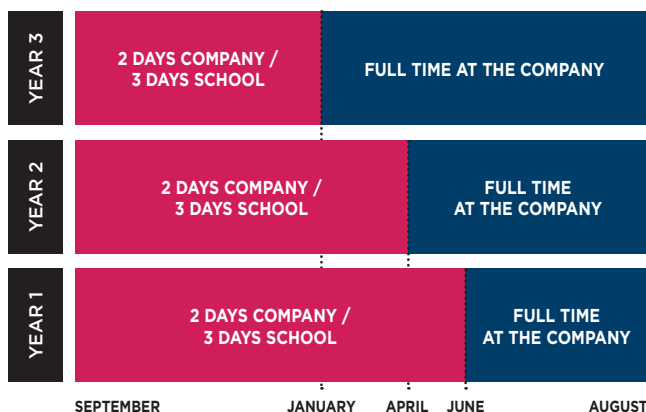
TUITION FUNDING

Work-study students do not pay any tuition: their studies are fully funded by their employer.

WORK-STUDY STUDENTS

Students enrolled in the work-study programme have employee status. They receive a salary calculated based on their age and qualifications (between 41% and 78% of the French minimum wage).

THE BUSINESS RELATIONS DEVELOPMENT DEPARTMENT

The Business Relations team forges genuine links with the corporate world, developing partnerships with businesses in France and abroad. The team helps students with the job-finding process and puts them in contact with companies. It also collates and circulates work-study placement offers.

WORK-STUDY JOB FAIR

Job fairs, held between April and June, are the ideal opportunity for eligible students to meet with partner companies. Close to half of work-study contracts are initiated during these job fairs.

WORK-STUDY SCHEDULE

YEAR 3	2 DAYS COMPANY / 3 DAYS SCHOOL	FULL TIME AT THE COMPANY
YEAR 2	2 DAYS COMPANY / 3 DAYS SCHOOL	FULL TIME AT THE COMPANY
YEAR 1	2 DAYS COMPANY / 3 DAYS SCHOOL	FULL TIME AT THE COMPANY

SEPTEMBER   JANUARY   APRIL   JUNE   AUGUST

ESILV
ENGINEERING SCHOOL
DE VINCI

A MULTIDISCIPLINARY PROGRAMME

- **Acquiring the basics in year 1: mathematics, IT, engineering sciences, languages, general studies, soft skills**
- **Developing professional skills in years 2 and 3**
- **A mandatory 3-month international experience (internship or exchange with an ESILV partner university)**
- **Building a career plan**
- **Teaching based on hands-on projects**

TAILORED TEACHING

- **Inductive teaching (based on case studies)**
- **Teamwork, project management**
- **80% of teaching carried out in the form of seminars, hands-on work, projects**

8
majors with
a work-study track

70+%
of lecturers are from
the corporate world

100
work-study students
per year,
with personalised
monitoring

JOIN THE GLOBAL COMMUNITY

Exchange programmes with over 100 partner universities in 47 countries, a 6-month study abroad exchange or international internship in the third year, 24 international double degrees (Master's DESS, Msc) in the fifth year, the majority of the graduate cycle taught entirely in English. ESILV prioritises international experience to enhance its students' personal and professional futures and train engineers with a multicultural sensibility and multiple international experiences.

You must spend time abroad to obtain an ESILV engineering degree.

INTERNATIONAL DOUBLE DEGREES

During their final year, ESILV students can also pursue a double degree in Australia, Austria, Canada, Ireland, Italy, Sweden, Switzerland, the USA or the UK.

STUDY ABROAD

From the third year, students can choose to spend a semester on an academic exchange in one of De Vinci Higher Education's partner universities or do an internship abroad (in the fourth or fifth year).

In their third year, students study at a partner university that offers a programme that is equivalent to the ESILV programme. Students who start ESILV in the engineering cycle can also choose to go abroad in their third year (in the second semester) and/or in their fifth year for a semester-long academic exchange or a double degree from a partner university.

Time spent abroad in the fifth year aligns with the theme of ESILV's majors, but students are also allowed to personalise their learning with our partners' renowned courses.

Examples: University of Technology Sydney, Australia / Hanyang University, South Korea / California State University, Long Beach, Georgia Tech, USA / Riga Technical University, Latvia, etc.

100 PARTNER UNIVERSITIES*
IN 47 COUNTRIES

Our network of partner universities gives our students the opportunity to study in Europe (ERASMUS agreements), North America, South America, Asia-Pacific, and North Africa thanks to exchange and partnership agreements. We add new, carefully selected partners to our network every year.

+

100%
of students spend
at least one
semester
abroad

20%
of fifth-year
students earn
an international
double degree

+ **ALBANIA**
Aleksander Moisiu University

+ **GERMANY**
Hochschule Furtwangen
Hochschule Reutlingen
Tech Hochschule Rosenheim
Otto-Friedrich-Universität
Bamberg

+ **AUSTRALIA**
University of Technology
Sydney
RMIT University Melbourne
Swinburne University
of Technology - Melbourne
Murdoch University (Perth)
Griffith University, Brisbane
University of Newcastle
University of South Australia

+ **AUSTRIA**
MCI - Management Center
Innsbruck

+ **BELGIUM**
Université de Liège

+ **BULGARIA**
Varna University
of Management

+ **CAMEROON**
JFN IT

+ **CANADA**
Université Laval
Université du Québec
à Chicoutimi (UQAC)

+ **CHILE**
Universidad Mayor

+ **CHINA**
Southeast University
Nanjing University
of Aeronautics and
Astronautics (NUAA)
Shanghai Normal University
Tianjin University
Beijing Jiaotong University
(BJTU)
HIT (Harbin Institute
of Technology)

+ **SOUTH KOREA**
Hanyang University
Sungkyunkwan University
(SKKU)
Kumoh National Institute
of Technology
SEOUL TECH University
Kyungpook National
University
Gwangju Institute of Science
and Technology (GIST)
Inha University
Chung-Ang University

+ **CROATIA**
Algebra University College

+ **EGYPT**
American University in Cairo

+ **SPAIN**
Universidad Europea de Madrid
Universitat de Vic - Universitat
Central de Catalunya

+ **ESTONIA**
University of Tartu
TalTech (Tallinn Technical
University)

+ **UNITED STATES**
University of Louisiana
at Lafayette
Louisiana Tech University
University of New Orleans
Pace University
California State University,
Long Beach (CSU-LB)
University of Virginia's
College at Wise
Georgia Tech
Illinois Institute of Technology

+ **FINLAND**
Laurea UAS
University of Vaasa
Savonia UAS

+ **HUNGARY**
Budapest University
of Technology and Economics

+ **INDIA**
National Institute of
Technology Puducherry

+ **IRELAND**
Griffith College Dublin
Dorset College Dublin
Dublin City University

+ **ICELAND**
Reykjavik University

+ **ITALY**
Politecnico di Torino
Università degli Studi
di Padova
Politecnico di Milano
Università degli Studi di Pisa
Politecnico di Bari
Università degli studi di
Trento
Università degli studi
di Messina
Università del Salento

+ **JORDAN**
JUST Jordan University
of Science and Technology

+ **KAZAKHSTAN**
Almaty University

+ **LATVIA**
Riga Technical University

+ **LEBANON**
Saint Joseph University

+ **LUXEMBOURG**
Université du Luxembourg

+ **NORTH MACEDONIA**
South East European
University

+ **MALAYSIA**
Asian Pacific University
of Technology and Innovation
(APU)
University Kuala Lumpur
(UniKL)
Universiti Putra Malaysia
(UPM)

+ **NORWAY**
Norwegian University
of Life Sciences

+ **NEW ZEALAND**
Auckland University
of Technology

+ **POLAND**
Akademia Ekonomiczno-
Humanistyczna
Warszawie (VIZJA)
Politechnika Poznanska

+ **PORTUGAL**
ISCTE and University of Porto

+ **CZECH REPUBLIC**
CTU Czech Technical
University, Prague
Tomas Bata University (Zlin)
VSB Technical University
of Ostrava

+ **ROMANIA**
Babes-Bolyai University (UBB)

+ **UK**
Coventry University
Heriot Watt University
Staffordshire University
University of Sunderland
Cranfield University

+ **SERBIA**
University of Belgrade

+ **SLOVAKIA**
Technical University of Kosice
University of Zilin

+ **SWEDEN**
Linnaeus University
University of Jönköping
Mälardalen University
Skovde

+ **SWITZERLAND**
HEIG-VD Haute Ecole
d'Ingénierie et de Gestion
du Canton de Vaud
FHNW Fachhochschule
Nordwestschweiz
Hochschule Luzern
OST Eastern Switzerland
University of Applied
Sciences, St Gallen

+ **TAIWAN**
National Central University
National Taipei University
Southern Taiwan University
of Science and Technology

+ **THAILAND**
Kasetsart University

+ **TUNISIA**
Ecole Polytechnique
Internationale Privée de Tunis

+ **TURKEY**
Bahcesehir Universitesi

+ **UKRAINE**
National Technical University
of Ukraine 'Kyiv Polytechnic
Institute'
Lviv Polytechnic National
University

+ **URUGUAY**
Universidad de Montevideo

+ **VIETNAM**
University of Science
and Technology of Hanoi
RMIT University Vietnam
VNU University of Science

*Non-exhaustive list

ENGINEERING CYCLE
12 MAJORS
TO BECOME A SPECIALIST

Students choose their own majors
Management, law, innovation, language, and sport classes complete the curriculum. Students can devote their fifth year to starting a business.

ESILV

Finance

Financial Engineering Major
Actuarial Science Major
Fintech Major Ⓐ

IT

Connected Objects and Cybersecurity Major Ⓐ
Data & Artificial Intelligence Major Ⓐ
Cloud Computing & Cybersecurity Major Ⓐ

Mechanics & Robotics

Modelling & Digital Mechanics Major Ⓐ
Industry & Robotics Major Ⓐ

Energy

Energy & Sustainable Cities Major Ⓐ

Innovation

Creative Technology Major

Health

Health Biotech Major Ⓐ

Agriculture & Food Engineering

Agriculture & Food Engineering Major

Ⓐ WORK-STUDY TRACK AVAILABLE

Finance

MAJOR

Financial Engineering

The Financial Engineering major develops all the skills you need to learn about and fully comprehend the complexity of financial markets.

It takes into account major trends in banking, asset management and hedge funds, such as high-frequency trading, combined use of machine learning and the mathematics of randomness, and developments in risk management, which new financial directives have rendered increasingly complex.

CLASSES

+ Mathematics of Randomness
+ Financial Mathematics Modelling
+ Options Theory
+ Portfolio Management
+ Market Risk
+ Credit Risk
+ Stock, Rate, Exchange, and Raw Materials Markets
+ Algorithmic Trading
+ Model Risk
+ Simulation Methods
+ Machine Learning and Data Science
+ Deep Pricing
+ Rules and Regulations (Basel III)

SKILLS

+ Mastering and managing risks relating to financial activities
+ Mastering software and programming languages widely used in the banking industry (Bloomberg, Matlab, R, C++, C#, VBA, Python)
+ Mastering the new post-crisis financial context
+ Mastering new banking regulations
+ Mastering financial mathematics

CAREER OPPORTUNITIES

Risk Manager, Trader, Quantitative Analyst, Structurer, Financial Market Data Scientist, Hedge Fund Analyst, Strategist, Quantitative Portfolio Manager, Financial Engineer, IT Commando, IT Quant

A TRADING ROOM TO TEST INNOVATIVE MODELS

Students can use a real trading room equipped with fifteen Bloomberg terminals, the main financial tool used in trading rooms and management companies as well as large businesses. Projects with our numerous financial industry partners, certain classes and Bloomberg certification will give you the opportunity to learn to use this key tool and enhance your CV. Students who are aiming for highly technical financial positions can enrol in extremely prestigious double degrees in financial mathematics or continue their studies with a PhD in financial mathematics with one of the professors who teaches in this major.

#QuantitativeFinance
#Mathematics
#IT #AI
#RiskManagement
#MarketFinance

Ðauphine | PSL
ISUP
duas
EURIA
Euro-Institut d'Actuariat

MAJOR

Actuarial Science

A career as an actuary often appears on Top 10 Best Careers lists* and offers an excellent outlook.

Actuaries enjoy stimulating and varied careers thanks to their wide range of skills and expertise, particularly in Data Science. As multi-disciplinary experts in financial risk management, they mainly work in insurance but can also be found in banking and asset management, brokerage, consulting and auditing, supervisory authorities and even in some major industrial groups (mergers/acquisitions, employee benefit liabilities, remuneration). Actuaries are in high demand on the job market and are increasingly valued for their ability to evaluate emerging risks (like cyber risks or the risk of a pandemic) and their clear understanding of the challenges of the future (managing retirement plans, estimating the costs of loss of independence, etc.).

CLASSES

+ Big Data and Data Analysis
+ Machine Learning and Deep Learning
+ Financial Models, Market Finance, Portfolio Management
+ Derivatives & Coverage Strategies, Options Theory, Rate Risks
+ Advanced Probability and Stochastic Processes
+ Extreme Value Theory, Natural Disaster Modelling
+ Economics, Accounting, Law
+ Insurance Law and Compliance
+ Solvency 2, IFRS Standards 9 and 17
+ Model Development, Asset-Liability Management
+ Economic Scenario Generators
+ Life Insurance, Non-Life Insurance, Reinsurance, Provisioning
+ Social Commitments, Death and Disability Insurance, Health, Retirement

SKILLS

+ Learning actuarial methods
+ Mastering the legal, accounting and prudential context
+ Mastering the pricing and provisioning of insurance products
+ Mastering data science and big data tools
+ Learning to design and implement tomorrow's insurance-based products
+ Knowing how to use SAS, R, VBA and Python software to solve problems

CAREER OPPORTUNITIES

Data Scientist, Risk Manager, Portfolio Manager, Risk Manager, Statistical Studies Associate, Actuarial Consultant, Underwriter, Actuary (modelling, pricing, provisioning, products, inventory, reinsurance, life insurance, ALM, social commitments, death and disability insurance, health and retirement), Internal Auditor, Asset-liability Management Manager, IFRS17 Consultant, Insurance Controller, Financial Auditor, French Prudential Supervision and Resolution Authority (ACPR) Controller.

TOP-LEVEL TRAINING AND A CRISIS-PROOF CAREER!

- A profession of the future, working for the greater good: Data Science, the digital revolution, regulations, the global context… Actuarial science is constantly adapting to societal changes
- True multidisciplinary teaching for exciting, varied careers with pragmatic, business-oriented classes
- Internships are easy to find thanks to a school career fair attended by some 25 prestigious companies every year
- 4 double degrees to become an Engineer-Actuary with the Dauphine, EURIA, DUAS and ISUP Actuarial Science master's degrees (around twenty students every year). Possibility of obtaining a triple degree with EMLV.
- The curriculum meets the standards of the French Actuarial Institute (Institut des Actuaires).

#Statistics #DataScience #MachineLearning #AI #Simulation #Modelling #RiskManagement #Finance #Insurance #Consulting

* Sources: Forbes and Career Cast

TAUGHT
ENTIRELY
IN ENGLISH

MAJOR

Fintech

A number of major legal and technical developments have radically changed the world of finance.
Fintech companies have created a new industry that deploys technology to improve the financial sector.
This major aims to train future engineers in all the innovative technology that is essential for growing and innovating in businesses that are reinventing financial professions.

CLASSES

+ Machine Learning and Artificial Intelligence
+ Data Analysis - Big Data
+ Market Finance
+ Banking and Insurance Economics
+ Cryptography
+ Blockchain
+ Digital Currencies
+ IT Security
+ Finance App Development
+ Mobile and Web Development

SKILLS

+ Designing, developing and administering blockchain solutions
+ Developing innovative financial apps
+ Mastering economic and financial models for banking and insurance
+ Mastering cryptocurrency challenges and technologies
+ Mastering the algorithms of machine learning and data analysis

CAREER OPPORTUNITIES

Blockchain Developer, Blockchain Architect, Cryptocurrency Trader, Data Analyst, Scientist, Insurtech Project Manager, Cryptocurrency Consultant, R&D Engineer, Banking Application Developer, Security and Cryptocurrency Engineer

A FLAGSHIP BLOCKCHAIN COURSE

Renowned research professor Cyril Grunspan helped ESILV become the first school to offer a comprehensive course on blockchain and bitcoin. The school also initiated the first academic research on the subject and is currently working on partner blockchain projects. ESILV's fintech course has become a benchmark for all economic and institutional players in the field.

#BlockChain
#Finance
#Bitcoin
#IT #Cryptography

ENGINEERING SCHOOL
DE VINCI

SecNumedu
ANSSI

TAUGHT ENTIRELY IN ENGLISH

MAJOR

Connected Objects and Cybersecurity

This major trains IT engineers with a solid grounding in security for systems and objects, from their design phase to their integration into the company ecosystem. With a view to tomorrow's fully connected world, the major positions students as professionals who are entirely capable of rising to the challenges of the future posed by connected services, their longevity and their robustness. The course has been awarded a SecNumedu label by France's Cybersecurity Agency, ANSSI.

MAKER-HACKER CULTURE

The school has fostered a real maker-hacker and DIY culture in its societies and student projects. Students design and innovate around connected objects, AI and security in the FabLab, the DeVinci Innovation Center, the DaVinci Bot and DigiTeam societies, and various technical organisations. For hacker culture aficionados, the DaVinciCode society brings hackers together for challenges, warzones and other CTFs, including the De Vinci Higher Education CTF: DaVinciCTF.

CLASSES

+ Secure Embedded Systems Development
+ Artificial Intelligence and Cybersecurity
+ Forensics
+ Networks and Telecommunications
+ Secure IoT Architecture
+ Secure Virtualisation
+ Reverse Engineering
+ Data Governance, Regulations and GDPR
+ Penetration Tests and Audits
+ Cyber-resilience and Risk Management
+ Cybersecurity Governance
+ Secure App Development

SKILLS

+ Automatically considering security in all innovation processes
+ Designing and deploying IoT services and architectures
+ Defining and implementing a security policy
+ Mastering the design and integration of cybersecurity solutions

CAREER OPPORTUNITIES

Hard & Soft IoT Engineer, Connected Product Project Manager, Security Engineer, Chief Information Security Officer (CISO), Risk Management Consultant, IoT Developer, Security Analyst and Auditor, Mobile Technology Engineer, IoT Security Architect

#CyberSecurity
#RiskManagement
#ConnectedObjects #AI
#Networks&Connectivity
#CyberResilience #GDPR
#SecurityByDesign
#Cybersecurity
 ForIndustrialSystems
#SecurityGovernance

WORK-STUDY TRACK AVAILABLE

TAUGHT ENTIRELY IN ENGLISH

MAJOR

Data & Artificial Intelligence

Engineers who take this major are data and big data specialists, from collection, modelling and storage to analysis and interpretation. They work on artificial intelligence and data valorisation projects that will be central to all economic and industrial sectors in the years to come.

CLASSES

+ Machine learning and mathematics for data science
+ Deep learning
+ Data visualisation
+ Text mining and opinion mining
+ Predictive modelling
+ Relational databases and NoSQL
+ Developing advanced apps
+ Agility and IT project management
+ Cloud computing and data centres

SKILLS

+ Conducting, developing and managing an IT project
+ Designing and deploying big data solutions
+ Mastering big data development technologies and frameworks
+ Mastering data science and data visualisation algorithms and tools
+ Designing and implementing artificial intelligence solutions

CUTTING-EDGE INDUSTRIAL RESEARCH

This major is taught by research professors who are equally renowned in the fields of big data, AI and data analysis. They are involved in research chairs and partner innovation projects with major companies in the sector.
Students benefit from excellent teaching that is aligned with both the current job market and its future evolutions.

CAREER OPPORTUNITIES

Data Scientist, Data Engineer, Data Officer, Big Data Project Manager, Big Data Developer, Analytics and Visualisation Consultant, AI Engineer

#AI
#BigData
#MachineLearning
#DataScience
#Cloud
#IT

ESILV
ENGINEERING SCHOOL
DE VINCI

MAJOR

Cloud Computing & Cybersecurity

This major trains IT engineers who have mastered the complete DevSecOps software development cycle and runtime environment. It prepares students for the major cybersecurity and cloud computing issues that all businesses face.

CLASSES

+ Machine learning & data science
+ Cloud computing and data centres
+ Secure system design
+ Secure software design
+ Advanced software development
+ Operating systems management
+ Platform as a service
+ Infrastructure as code

SKILLS

+ Leading, developing and managing an IT project
+ Mastering the design and integration of cybersecurity solutions
+ Monitoring software solution runtime systems
+ Automatically considering security in all innovation processes

CAREER OPPORTUNITIES

Cybersecurity Engineer, Full Stack Developer, DevSecOps Engineer, Cloud Engineer, Security Solutions Integrator

#Cloud
#AI
#Cybersecurity
#DEVSECOPS

Mechanics & Robotics

TAUGHT ENTIRELY IN ENGLISH
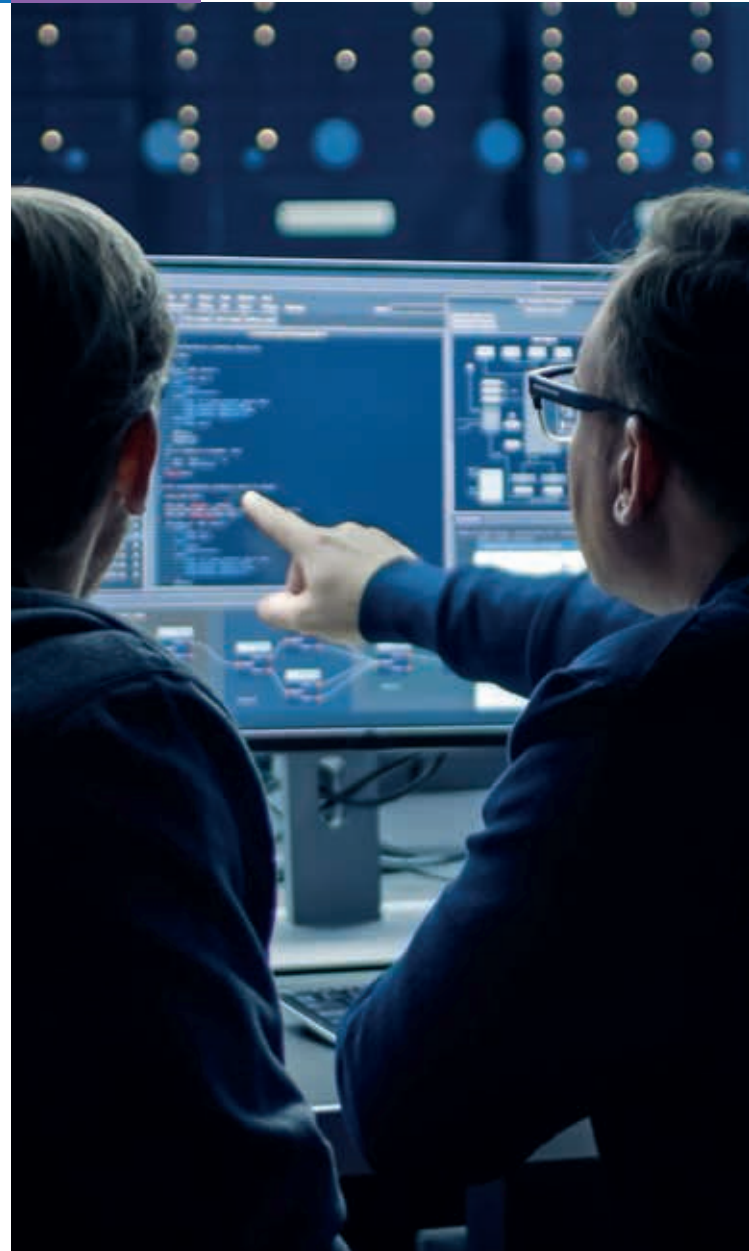
MAJOR

Modelling & Computational Mechanics

The Modelling and Computational Mechanics major trains engineers to devise, develop and design new complex products and systems, particularly in the aeronautical and automotive fields.

It is based on modelling and digital simulation, which helps students to understand the complete digital design chain: interaction with the environment, digital modelling and tools, dynamic optimisation, multiphysics and multiscale approaches.

CLASSES

+ Computational simulation and modelling of structures
+ Composite materials and damage
+ Multidisciplinary and complex systems modelling
+ Turbulence and fluid mechanics
+ Computational aeroelasticity
+ Vehicle dynamics and transmission systems
+ Computer-aided design
+ Computational analysis and simulation
+ Avionics and systems control
+ Design and architecture of self-driving cars

SKILLS

+ Modelling and simulating behaviours of fluids and structures and their interactions
+ Modelling and optimising multiphysics systems
+ Studying and designing complex systems and products
+ Mastering scientific simulation and industrial software

HIGH-TECH LABORATORIES

Computer simulation software: 3Dexperience, CATIA, Abaqus, EnSight, ANSYS software suite, HyperWorks, ALTAIR software suite, Salomé platform, and more. Analysis and production tools for energy, materials, fluid dynamics, composites, production and machining. A teaching chair with ALTAIR on system computer simulation.

CAREER OPPORTUNITIES

Design Engineer, Business Engineer, Measurement/Test Control Engineer, Consulting Engineer, Manufacturing Processes Project Manager, Aeronautical Engineer, Scientific Calculation Engineer, Modelling Engineer, Fluid Mechanics Engineer

#Aeronautics
#Automotive
#Mathematics
#Simulation
#EngineeringConsulting
#Modelling

TAUGHT ENTIRELY IN ENGLISH

MAJOR

Industry & Robotics

The Industry and Robotics major trains engineers to design and implement modern industrial systems with native integration of digital revolution tools and technologies. Students will be able to work on SMI service or production sites or for industrial businesses of all sizes and from all sectors, in France and abroad.
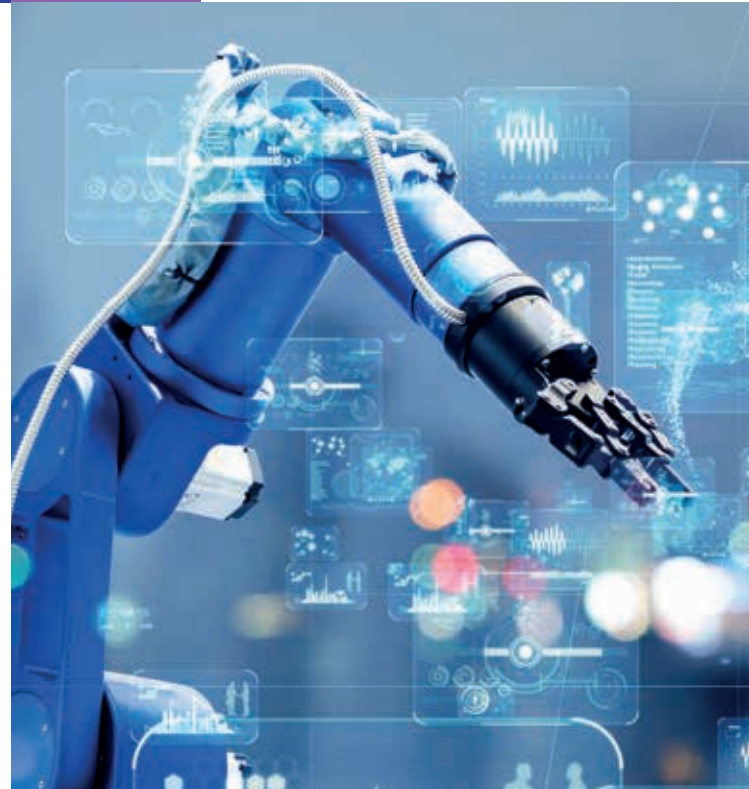

CLASSES
+ Modelling and simulation for production and assembly lines and supply chains
+ Management, control and optimisation of processes and industrial data
+ Product lifecycle management
+ Lean management
+ Digital twins, IoT and connected factories
+ Virtual reality and augmented reality
+ Project management and innovation management
+ Digital technologies and additive manufacturing
+ Mechatronics and robotics
+ Artificial Intelligence and industry 4.0 tools

SKILLS
+ Implementing and managing modern industrial systems
+ Mastering production chain methods (e.g. lean)
+ Devising and designing the overall organisation of an industrial system: knowing how to model and design automated, robotised industrial production systems
+ Mastering digital technologies (using digital models, virtualisation, augmented reality, Internet of Things, AI, 3D printing)

PREPARING THE INDUSTRY OF THE FUTURE

For a number of years, ESILV has been conducting research and development projects on important industry 4.0 themes in partnership with major industrial groups (Dassault Systemes, ArcelorMittal, Altran/Capgemini Engineering): using artificial intelligence for aeronautical and automotive manufacturing, intelligent materials, additive manufacturing and mastering 3D printing technologies.

CAREER OPPORTUNITIES

Production Engineer, Quality and Maintenance Manager, Industrial Risk Engineer, Process and Methods Project Manager, R&D Engineer, 3D Printing Engineer, Cobotics Engineer, Digital Transformation Project Manager, Predictive Maintenance Engineer

#3DPrinting #AI #Agility #Innovation #DigitalTransformation #Robotics #Cobotics #Mechatronics #ConnectedIndustry

MAJOR

Energy & Sustainable Cities

This major trains engineers in the design, development and governance of energy systems, smart buildings and sustainable cities. The course is based on mastering energy issues, sustainable development and on three scientific cornerstones: physics and energy management, digital technologies, and modelling cities and buildings.

CLASSES

+ Computational fluid mechanics
+ Heat transfer
+ Renewable energy
+ Electrical grids
+ Smart grids
+ IoT for smart cities
+ Machine learning and data visualisation
+ Building information modelling (BIM)
+ Energy mix and decarbonisation
+ Energy efficiency of buildings
+ Sustainable project management and change management
+ Geopolitics of Energy

SKILLS

+ Designing and implementing renewable energy solutions
+ Modelling the life cycle of a building and a city
+ Mastering the technical, societal and economic issues related to energy transition
+ Devising, designing and leading production and energy distribution systems

A COURSE FOCUSING ON ENERGY TRANSITION AND SUSTAINABLE DEVELOPMENT

**The Energy and Sustainable Cities major offers a chance to get involved in major sustainable development projects.
By transforming the way we use digital technology, students combine innovation and technology with a view to an ethical career centred on making our society more sustainable.**

CAREER OPPORTUNITIES

Energy Efficiency Engineer, BIM Project Manager, Fluids and Environment Engineer, Renewable Energy Project Coordinator, Renewable Energy Project Manager, Embedded Systems R&D Engineer, Environmental Certifications Project Manager, Photovoltaic Data Analyst, Electromobility Consultant Engineer, CSR Coordinator

#EnergyTransition
#IOT
#RenewableEnergy
#BuildingInformation Modelling(BIM)
#SmartCity
#Sustainable Development

Innovation

MAJOR

Creative Technology Engineer

This major trains students for a career as a Creative Technologist, which involves using cutting-edge technologies and knowledge to invent new products and uses. The cross-disciplinary course is a natural precursor to designing integrative and systemic solutions for various aspects of software or products. These engineer-designers lead teams across a company's research & development, marketing and industrial production departments. They may also produce intellectual contributions such as patents or scientific publications. They develop disruptive technologies and integrate them into new visions of society or a new market. When they graduate, our students already have a sizeable project portfolio bolstered by various articles, scientific papers and, sometimes, patents.

INTERNATIONAL FACULTY

Our researchers and professors come from the world's most prestigious universities, including Massachusetts Institute of Technology (MIT), Royal College of London and the École Polytechnique Fédérale de Lausanne (EPFL), as well as leading firms such as Google and Formlabs.

CLASSES

+ Creating a Kickstarter Campaign
+ Introduction to Scientific Research
+ Developing Disruptive Innovation Projects
+ Designing and Manufacturing in Mechanics, Electronics and New Materials
+ Artificial Intelligence and Mixed Reality (VR/AR/XR)
+ Developing Biology and Life Sciences Technologies
+ IT and Network Architecture
+ Advanced Embedded System Programming
+ Marketing Strategy, UX design and Consumer Behaviour

SKILLS

+ Developing research and development activities
+ Designing and manufacturing products and software
+ Industrial production of products on a large scale
+ Developing complex software and network architecture
+ Product development mediation between R&D, marketing and production

#Innovation #Tech #StartUp #Research #MIT #Projects

CAREER OPPORTUNITIES

Creative Technologist, Startup CEO/CTO, Research and Development Engineer, Product Engineer and Designer, Expert Innovation Consultant, Arts and Sciences Professions

WORK-STUDY TRACK AVAILABLE

TAUGHT ENTIRELY IN ENGLISH

MAJOR

Health Engineering & Biotechnology

This major trains engineers for careers in the multidisciplinary ecosystem of medical technology. It uses teaching that combines life and human sciences, artificial intelligence and technology, medical regulations and biotechnology. Engineers taking this major are positioned at the intersection between people, technology and medical professionals, and are at the heart of the digital transformation of the medical sector and biotechnology.

CLASSES

+ Machine learning, artificial intelligence and big data
+ Bioinformatics and neural engineering
+ Information systems and healthcare networks
+ Medical standards and regulations
+ Signal and image processing
+ Optoelectronics and mechatronics
+ IoT and connected health
+ Health economics
+ Life sciences

SKILLS

+ Designing, developing and evaluating complex biomedical solutions
+ Mastering modelling and digital methods in biology and health
+ Managing technology projects in the field of health
+ Understanding medical standards and regulations

CAREER OPPORTUNITIES

Telemedicine and IoT Engineer, Health Information System Project Manager, Biostatistics Engineer, Medical Data Project Manager, R&D Engineer, Quality and Regulations Engineer, Product and Process Development Engineer, Medical Device Design Engineer, Life Sciences Data Scientist

#TECHFORHUMANS PROJECTS THAT HELP PEOPLE

Our students excel working on innovative projects that help people. The multidisciplinary scientific training combined with the available facilities (FabLab, IoT laboratory, deep learning computational server, etc.) help students design and develop prototypes that win recognition in major national competitions and lead to the creation of start-ups: custom orthopaedic supports, connected skin, artificial hands, using AI to help people with disabilities, physiotherapy aids, brain-machine interfaces, etc.

#Data
#ConnectedHealth
#Mechatronics
#AI
#Human

Agriculture & food

MAJOR

Agriculture & Food Engineering

The Agriculture & Food Engineering major aims to train engineers capable of developing digital agriculture solutions throughout the food production chain, from farm to table.

CLASSES

+ Introduction to Biochemistry
+ Principles of Plant Physiology
+ Introduction to Microbiology
+ Soil Science
+ Computational Food Science
+ Waste to Energy Processes
+ Food Process Engineering
+ Biological Production Systems
+ Food Quality and Hygiene
+ Ecotoxicology
+ Precision Agriculture
+ Remote Sensing and GIS software
+ Urban Farming
+ Food Tech
+ Blockchain Traceability
+ Innovative Business and Economics in the Agri-Food Industry
+ Agricultural and Food Policies
+ Agroecology
+ Circular Economy in Agri-Food

SKILLS

+ Meeting the need for new and cross-disciplinary skills (data science, digital tool usage, etc.)
+ Developing new agricultural equipment
+ Supporting the digital transition in the agri-food industry
+ Designing agrosystem management strategies for an agro-environmental transition
+ Controlling the safety and nutritional quality of foods

AGRICULTURAL EQUIPMENT

The agricultural equipment sector covers both agricultural machines (mechanical, smart, and autonomous) and digital technologies applied to agriculture (AI, drones, sensors, software, connected objects, decision-making aids, etc.).

CAREER OPPORTUNITIES

Agricultural Machinery Designer, Eco-Innovation and Sustainable Urban Space Rehabilitation Project Manager, Food Data Analyst, Digital Food Manager, QHSE Engineer, Food Safety Manager, Agricultural IT Specialist, Research & Development Manager

#Sustainable Development
#AgroEcology
#Security
#FoodQuality
#Traceability
#DecisionMakingAids

6 CROSS-DISCIPLINARY
TRACKS

In their fourth and fifth years, each engineering student can choose a track that leads to cross-disciplinary careers and professions in addition to their major classes.

RESEARCH TRACK

Helping our students develop a research mindset and presenting them with scientific challenges.

The Research Track prepares students for academic research and PhDs as well as careers in the Research & Development departments of major businesses and in cutting-edge startups.

During their fourth and/or fifth years, research students work on a research project suggested by DeVinci Research Center research professors. They are immersed in the research team and acquire key research skills: managing an R&D project, compiling a scientific state-of-the-art review, carrying out experimental studies, mastering scientific communication.

BUSINESS ENGINEER TRACK

This track, taught at EMLV, aims to provide fifth-year students with sales and managerial skills.

Students learn about business development strategy, negotiation and key account management. These future business developers implement their learning through business games and projects with partner companies to ground their knowledge in concrete experience.

The graduate internship gives students the chance to immerse themselves in their target professions: Sales Engineer, Business Manager, Business Engineer, Pre-Sales Engineer, Key Account Manager, etc.

UX DESIGN TRACK

This track, in partnership with IIM, puts design at the centre of new technologies to design connected objects, services or apps focusing on the user experience and suitability for new consumer uses.

It aims to give greater consideration to the final user when designing human-machine interfaces or products. Basic principles and standard methodologies are studied during the programme, alongside emotional experience and interaction design, usability engineering, motion design and prototyping methodology, and UX design.

Students develop a project where they put a digital object they have created into practice to showcase and use their learning.

INNOVATION TRACK

The DeVinci Innovation Center Innovation Track teaches students about technology transfers, from academic research to innovative value creation and industrial production of a product.

Students carry out three projects in collaboration with students from the Creative Technology major:

\ TECHNOLOGY EXPEDITION

Each student chooses a cutting-edge technology to experiment with and produce an introductory tutorial on. This work contributes to the development of the DVIC's technology infrastructures, including helping to create new laboratories.

\ INNOVATION PROJECT

Students work on innovation projects that align with the vision of the innovation group they are assigned to. They help write scientific papers, file patents, create startups, and enter competitions and art exhibitions.

\ QUICKSTARTER

Students design and develop a product for a real Kickstarter crowdfunding campaign in the Quickstarter category. They learn to deploy the entire industrial process, including designing the product, negotiating raw materials and factory manufacturing, promotion, logistics and after-sales service.

STARTUP TRACK

Because you aren't born an entrepreneur, students who want to start their own businesses are supported throughout the project creation process and gradually learn to become entrepreneurs.

This programme is offered to fourth- and fifth-year ESILV and EMLV students who already have a startup project under way, whether individually or with others. Students learn about the methodology behind creating a business, as well as its ecosystem, while working on their own entrepreneurial project. Meetings are held throughout the year with startup creators and professionals.

QUANTUM TRACK

The ESILV IT department's new Quantum track for fourth- and fifth-year engineering students is an extension of the Quantum IT master class developed with ATOS and the Quantum IT class taught in the third year using the Microsoft framework.

Engineering students explore the physical and algorithmic aspects of the quantum approach and engage in development using the main market frameworks.

FOSTERING UNIQUE EXPERTISE

Are you intrigued by economics, marketing, management, innovation, and corporate management? Are you aiming for jobs with a strong management component? Are you a budding entrepreneur with dreams of founding a startup? The Engineering-Management double degree is your opportunity to become an ESILV engineer while also building your management skills and earning a Master's in Management from EMLV.

CLASSES

The programme is designed to help students build their skills, step by step. Students learn the fundamentals of management during 2 to 3 hours (on average) of classes a week, in addition to their scientific and technical classes.

- **In the first year:** fundamentals of management, marketing and accounting.
- **In the second year:** business law, fundamentals of HR and management, strategic management.
- **In the third year:** classes in English focus on deepening knowledge of marketing and management fundamentals with an international slant.
- **In the fourth and fifth years:** students concentrate on a theme via a research dissertation and specialisation in one of EMLV's main subject areas: Finance or Marketing – Business development. The graduate internship is jointly approved by both schools and focuses on the work of an engineer-manager.

At the end of their studies, students graduate from ESILV and EMLV (Master's degree equivalent to a French Bac+5 diploma).

CAREER OPPORTUNITIES

Students are trained to direct their careers towards roles with a more managerial dimension, for example heading up a team, a project or a budget.
With the double degree, students enter the world of work with a comprehensive education and a solid understanding of the world of business.

BENEFITS

- A five-year cross-disciplinary course
- A desire to meet the needs of businesses looking for hybrid candidates with a broad range of skills to handle the impact of digital transformation

WHY CHOOSE THE ENGINEERING-MANAGEMENT DOUBLE DEGREE?

- **All classes taught on the same campus.**
- **Faculty with experience in teaching both engineering and management students.**
- **Multiple projects to give students the chance to work on a multidisciplinary team as they will on the job.**
- **Two degrees in 5 years.**
- **Easier access to top specialised Master's programmes.**
- **A major career boost.**
- **An opportunity to stand out and attract recruiters.**

OTHER ESILV DOUBLE DEGREES

BROADEN YOUR HORIZONS WITH TOP-LEVEL TRAINING

The double degrees offered by ESILV, in partnership with other French schools and universities, allow students to add to or widen their initial area of expertise.

POLYTECHNIQUE - IP PARIS
Master's in Data
Science Mathematics
and Applications

CENTRALESUPÉLEC
(various Master's degrees)

**UNIVERSITE DE BRETAGNE
OCCIDENTALE**
Master's in Actuarial Science

SORBONNE UNIVERSITÉ - ISUP
Master's in Actuarial Science

IIM: MTD
Master's in Digital Transformation
Management

GRENOBLE ECOLE DE MANAGEMENT
Higher education degree
in management (Grande École
Programme – Digital Marketing
Factory Track)

UNIVERSITÉ DE STRASBOURG - DUAS
Master's in Actuarial Science

DAUPHINE PSL
Master's in Actuarial Science

IMT ATLANTIQUE
Master's in Process and
Bioprocess Engineering, Project
Management for Environmental
and Energy Engineering Track

ESILV *Inside*

They are the reflection of the 3,600 ESILV students. **Julia, Romane, Maé, Taous, Louis, Lucas, Romuald and Théo have volunteered to be our guides and share a few highlights of their daily lives at De Vinci Higher Education** , with their busy schedule of classes, projects, business experiences, and the on-campus sports and activities they share with EMLV and IIM students. Ready to plunge into life at ESILV?

Throughout their studies, students work on projects that reinforce and structure their learning and develop their skills as future engineers.

Julia and Maé worked on building a Marvel superhero-themed aeroroller during their first year, Taous helped create a nutrition app in her second year, and Théo contributed to developing a neighbourhood app in his third year.

PROJECT-BASED LEARNING

ESILV engineering students carry out a technology project in each year of the course, which strengthens and structures their learning, encourages them to find solutions for technical problems or social issues, and develops their soft skills.

IMAGINATION AND EXPLORATION PROJECT (PIX)

First- and second-year students work on Imagination and eXploration Projects (PIX). The aim of the first-year projects is to create a concrete electrical and mechanical system based on the same precise specifications given to all students: **emergency response robot, wind turbines, mechanical robots,** etc.

In the second year, students **develop an original idea based on current societal issues** (sustainable development, connected objects, smart cities, disability, etc.), with the goal of presenting a prototype at the end of the project. The project teams work in pairs so that each plays two roles: as the Project Manager, they must produce a product based on the specifications provided by the other team, and as the Project Owner, they supervise the other team's creation of the product for which they wrote specifications.

POSITIVE IMPACT INNOVATION PROJECT (P2IP)

Third-year students complete a Positive Impact Innovation Project (P2IP). Each team "founds" a startup and presents it to "an investor panel" at the end of the year. The one constraint: they must find and develop an idea that will have a positive impact. This project is a year-long role play with several objectives including learning to present and defend a project, develop a business model, show tenacity, drive and pragmatism, and more. The project is also intended to raise students' awareness of current social issues.

They must take ethics, CSR, sustainable development, digital sobriety, and other concerns into account. **A series of competitions and challenges provide real-world experiences and challenge their ideas as they present them to professionals.**

INNOVATION AND INDUSTRY PROJECT (PI2)

In their fourth and fifth years, students carry out an Innovation and Industry Project (PI2), adding value through partnerships with businesses and associations, research publications, patents, competitions, contributions to knowledge, etc. They can also develop their own project with a view to creating a startup. **These projects dedicated to innovation require student engineers to utilise their expertise and interpersonal skills: competencies from their major, the skills of a general engineer, and mastering every facet of project management**. Most of the projects are carried out in partnership with large companies like Microsoft France, Veolia, Allianz, AXA, Airbus, Bouygues, Expleo, FDJ, HSBC Asset Management, KPMG, Orange Cyberdefense, CNRS, Sopra Steria, Ostrum Asset Management, INRAE, HP France, Crédit Agricole Assurances, and Avanade. These projects are designed to give students the opportunity to start preparing for their future careers during their fourth year by developing autonomy, responsibility, and project management and partner relationship skills.

PROJECTS & SOFT SKILLS

Working well as a team is one of the most important key performance drivers for a project. During the five-year ESILV course, the soft skills dimension is entirely integrated into the technical dimension. Each project is therefore supervised on two levels. During their second year, students receive support as they manage teams as project owners/project managers. In the fourth and fifth years, students learn the MBTI method, which they use throughout the project to analyse their individual behaviour and the way they work in a team.

Projects to develop the skills and abilities of future engineers: teamwork, project management, communication techniques, leadership, sociability, organisation, autonomy, sense of perspective, critical thinking, adaptability, curiosity, etc.

6:30 PM Taous leaves AXA Assurance, where she has been doing her fourth-year work-study job as a data analyst two days a week since September. This evening, she is attending an alumni forum. It is an opportunity to present her background and talk about career opportunities.

ESILV hosts several discussions and encounters for students and companies throughout the year at its work-study, internship and alumni forums. More than 200 companies come to meet our students at these events.

6:45 PM This evening, Romane and Maé are celebrating Louis's birthday. Before they hop on the RER train to downtown Paris (about ten minutes away), they stroll through the CNIT shopping centre to pick up a present for their classmate. On the way back, they take the metro to their student residence just a short walk from ESILV. Maé won't stay out late.

Tomorrow morning, she will be attending an ESILV Career Centre coaching workshop to help her find her next internship. "Right now, I'm interested in biotechnology and engineering applied to medicine," she says.

STRONG BUSINESS TIES

ESILV's educational programme, designed with and for businesses, as well as the large proportion of time spent in the corporate world during the course (a minimum of 13 months), help explain the ease with which recent ESILV graduates find employment.

AT LEAST 1 YEAR WORKING IN A COMPANY

Three key experiences shape the course and help future engineers to hone their career plans.

- **The introduction to the world of work internship** lasting 3 to 4 months at the end of the second year of the integrated foundation course.
- **The technical internship** lasting 4 to 5 months in the fourth year, to put their initial technical knowledge into practice and prepare to work as an engineer.
- **The graduate engineering internship** lasting 5 to 6 months, to put their professional skills into practice and prepare to enter the world of work.

DEVELOPMENT COMMITTEE

This committee aims to leverage feedback on and expert assessments of ESILV's teaching and its alignment with jobs and technology over the next 3 to 5 years from a representative panel of professionals in the school's main specialisms. The committee helps the school define its priorities and areas of focus for its teaching to make it easier for student engineers to find employment.

Member companies

AXA, BNP Paribas, Capgemini, CEA, Dassault Systèmes, DGA, EY, IBM, the French Ministry of Armed Forces, Orange, PWC, Société Générale, Sopra Steria, Stellantis, and more.

12,000
internship, work-study or graduate job offers per year from our partner businesses

Students work on concrete problems and constantly have to apply their knowledge to real-world situations.

The Talents du Numérique Association brings together over 2,700 companies (including Capgemini, Accenture, Alten, CGI, Sopra Steria, Cisco, IBM, Oracle and SII) from the digital sector through two professional unions and 87 higher education institutions (including ESILV and IIM) which work together to spread digital culture and promote engineering professions in digital technologies.

talentsdunumerique.com

ESILV is a member of the Elles Bougent Association which aims to highlight top engineering professions in all industrial and technology sectors that are lacking in female talent. High school and university students studying scientific and technology subjects meet and talk to female engineers working in partner business throughout the year at events organised by the association.

ellesbougent.com

One of Louis's dreams is to start his own company offering speculative market services. "I'm really into the stock market and cryptocurrency." That passion, which he picked up from his mother and sisters, is leading him towards one of ESILV's three finance majors. And maybe even enrol in the joint ESILV-EMLV startup track, supported by the DeVinci Startup, the De Vinci Higher Education business creation support centre, to start work on his own company.
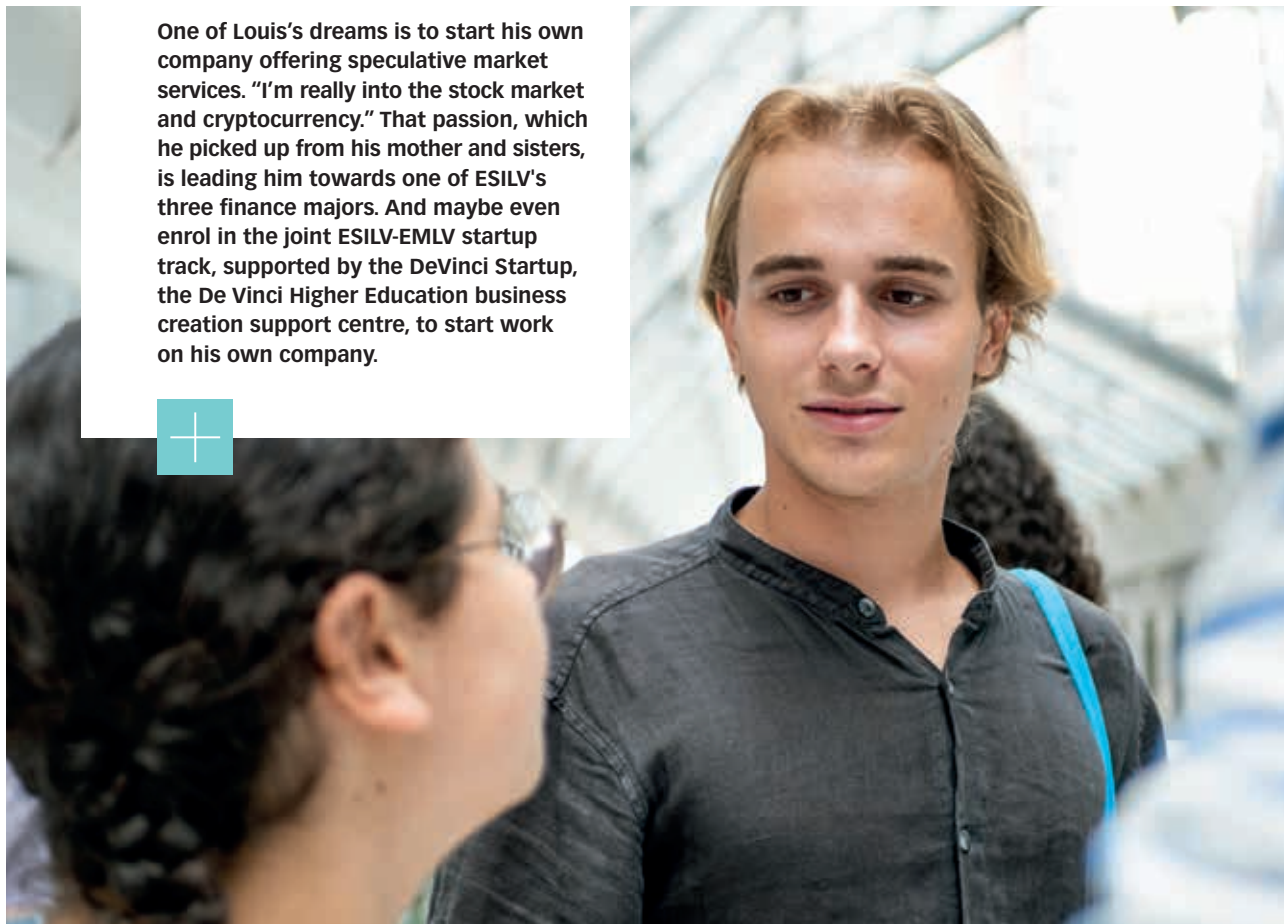
DEVINCI startup

A PRE-INCUBATOR WELCOMING ALL STUDENT PROJECTS

DeVinci Startup provides a co-working space and advice during the early stages of a company's life. Students receive coaching and get to meet with entrepreneurs and experts in a favourable ecosystem thanks to a network of over 500 entrepreneurs from ESILV, EMLV and IIM, and by working with the main incubators in the Paris region.

AN ULTRA-CONNECTED CAMPUS

AN INNOVATIVE ECOSYSTEM A SHORT WALK FROM PARIS-LA DÉFENSE

Located just a few minutes away from the centre of La Défense, Europe's biggest business district, the campus is home to co-working spaces, project rooms designed for modern collaborative learning techniques, a studio and a creative space.

INCREASING INTER-SCHOOL COOPERATION.

In line with the challenges of new forms of learning, the campus will offer an environment designed for new digital teaching techniques and skills hybridisation.

100,000 ONLINE RESOURCES.

ESILV students have access to reference materials including engineering databases like ACM and Les Techniques de l'ingénieur, as well as e-books, mainstream media, statistics, market research, academic journals, and more.

OUR DIGITAL ECOSYSTEM HELPS YOU BUILD ESSENTIAL SKILLS FOR YOUR FUTURE: COLLABORATION, COMMUNICATION, CREATIVITY, CRITICAL THINKING AND AGILITY.

- **A student portal where you can find your course information:** schedule, link to remote courses, attendance, class recordings, etc.
- **DeVinci Online**, our online class platform (class modules, presentations, supplemental resources, quizzes and forums).
- **Zoom** for live class sessions and online events.
- **Teams** for synchronous remote teamworking.
- **ZoomRoom** and state-of-the-art equipment used to record and disseminate hybrid courses (synchronous in-class and distance learning).
- **Wooclap** and **Klaxoon** to boost interaction for both in-class and distance learning.
- **Microsoft Office 365** for collaborative work.
- A social media platform for each school (**Yammer**).

Digital is front and centre in teaching and development at De Vinci Higher Education.

INNOVATION & TRAINING
DIGITAL LEARNING CENTER

Redesigning the pace, learning spaces and interaction level of classes, as well as providing course content and resources that are suited to different learning styles and based on professional expertise.

Learn at your own pace. Access course content and quizzes from your learning platform. Watch course videos on your student portal.

Test your digital language skills. Your assessment levels are used to customise your learning pathway.

An innovative learning experience tailored to your needs. We work with leading Edtech companies and train our faculty on course content digitalisation.

From gamified virtual lab visits, virtual science experiments, and escape games to peer learning, online learning support, MOOCs, digital onboarding and more, every year we road test new tools to stay at the cutting edge of digital learning and the latest trends in higher education.

AN INNOVATION HUB

The DeVinci Innovation Center (DVIC) is De Vinci Higher Education's innovative, cross-disciplinary hub. Inspired by the MIT Media Lab, it uses radical learning methods, antidisciplinarity and collective intelligence to foster learning.

SHAPING THE FUTURE

DVIC's innovation activities are structured around three groups led by researchers from the MIT Media Lab. They inspire Maker culture and a unique vision to help students shape and reinvent the future.

- **ARTIFICIAL LIVES** explores new opportunities in the fields of human-machine interaction, extended intelligence (EI), the Internet of Things (IoT) and beyond.

- **RESILIENT FUTURES** develops sustainable, resilient technologies (alternative materials, Low Tech) based on long-term aspects of climate change.

- **HUMAN LEARNING** develops technologies to support human intellectual development for children, adults, and the elderly through games, interactive art, and new media.

EXPERIMENTING

Students have full access to a FabLab featuring cutting-edge technology (3D printing, electronic manufacturing, immersive and hybrid realities), artificial intelligence, biotech, foodtech, and more.

DEVELOPING INNOVATIVE NEW PRODUCTS

DVIC is developing a complete academic syllabus for the management, engineering and design master's cycle based on Creative Technologies teaching how to develop new innovative products.

Our academic programmes offer a unique educational experience for engineering, digital design and PhD students and aim to boost their autonomy, initiative and sense of responsibility.

LEARNING PARTNER

The DVIC teams contribute to ESILV's academic programmes and are involved in workshops, master classes, and lectures throughout the year. They provide support for student, research, association, and startup projects with high potential.

These qualified lecturers work at Google (Big Tech), MIT (leading American university), FormLabs (unicorn) and Lynxter (a French startup).

formlabs **Lynxter**

mit media lab **G** **CRI**



🌐 http://dvic.devinci.fr

ESILV *Inside*

This afternoon, Julia is meeting with two other students from EMLV (management school) and IIM (digital school) at the FabLab to finalise their sustainable development project. 8,800 ESILV, EMLV and IIM students work on teams together in all five years. Inter-school cooperation is a key part of the De Vinci Higher Education philosophy. It is a unique experience in terms of openness and personal development, which also meets recruiters' expectations.

At the end of their third year, Lucas and Théo chose the Data and Artificial Intelligence major. In addition to engineering, they are also studying the fundamentals of management. Every week, they attend several hours of EMLV classes to supplement their science and engineering classes. So they will naturally graduate with double degrees in Engineering and Management from ESILV and EMLV (Master's degree equivalent to a French Bac+5 diploma).
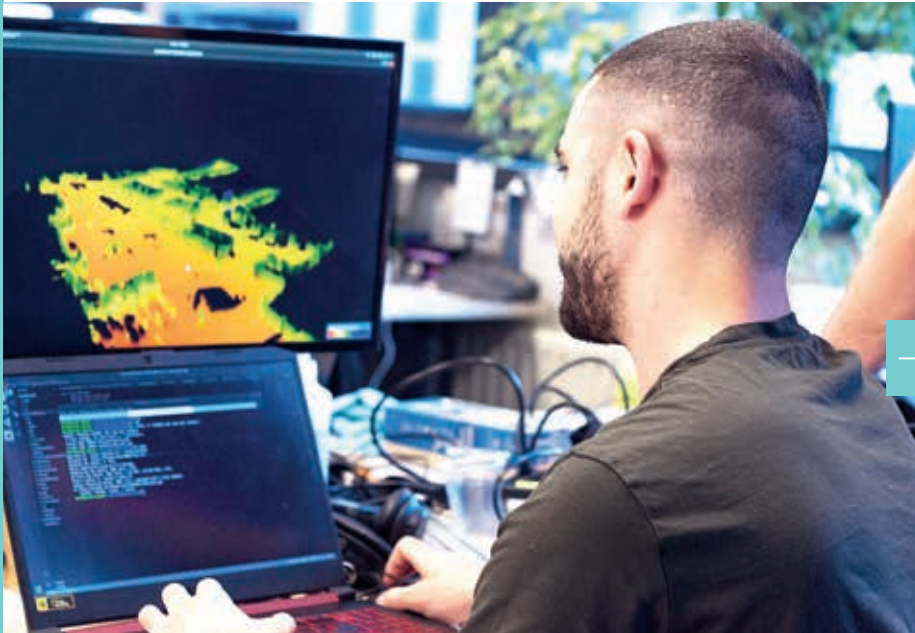
ESILV engineering students learn to develop products and software in a range of fields based on advanced technological and scientific classes. One of the main objectives of these classes is to develop learning methods and strategies to encourage autonomy, particularly in research, industrial production and innovation.

Lucas was born in the Netherlands and lived in Seoul for four years. Taous was born in Algeria. Théo is a French and Lebanese dual citizen. Maé, Julia and Romuald grew up just outside Paris. No matter where they are from, every engineering student at ESILV has the opportunity to spend part of their time in engineering school abroad, through an academic exchange with one of De Vinci Higher Education's partner universities, a corporate internship, or a double degree programme. That is Louis's plan, although he is still trying to decide between Australia and the US. As a second-year engineering student, he still has two years to make up his mind. In the meantime, he is planning to do his next internship in the UK to brush up on his English skills and gain international management experience. Théo took the plunge last year, with an exchange semester at Tomas Bata University in Zlin (Czech Republic).

INNOVATING THROUGH
RESEARCH

The DeVinci Research Center (DVRC) brings together all the research prowess of the De Vinci Higher Education schools.

LABORATORY

The laboratory is structured around three research groups (Digital, Finance, Modelling) and a partnership research unit. The Digital research group works on Machine Learning for digital twins and the IoT, Big Data and Smart Data, and Human-Computer Interaction. The Finance group focuses on financial mathematics and Blockchain. The modelling group works on modelling the energy chain, structures and materials and mathematical models for complex fluids.

The DVRC hosts and co-funds interns and PhD and post-doctoral students.

PARTNERSHIP RESEARCH PROJECTS

The DVRC is an active member of the Systematic, Cap Digital and Finance Innovation business clusters and the TERATEC association on supercomputers. ESILV is also a member of the Cyber Campus.

The centre is also involved in research projects financed by the French government and Europe or co-financed by businesses, like the European project H2020 MAESHA.

TEACHING AND RESEARCH CHAIRS

The DVRC is developing a teaching and research chair creation policy with its industrial partners, including Sinusy - Altair, Energisme, Legalcluster, Lynxter, and Coexel. These chairs help to directly finance research.

CUTTING-EDGE FACILITIES

ESILV boasts a wide range of technical educational facilities designed as tools to help improve the teaching and student project dynamic and is investing in a technological platform dedicated to experimental research.

RESEARCH HELPS STUDENT ENGINEERS

- CIFRE or academic theses at the DVRC, potentially with funding. DVRC/ESILV is a member of the Sciences of the Engineering Professions PhD program.
- Studying on the research track in years four and five, supervised by a DVRC research professor.
- Research internships at the DVRC or in other laboratories.
- PI2 projects on R&D and research subjects with high-tech startups or laboratories.
- Seminars given by external researchers.
- Participation in scientific events organised by ESILV.

INNOVATING THROUGH
PROJECTS

Students learn by experimenting with innovative technology projects and highlight their expertise and interpersonal skills at numerous competitions and events.

PURSUE YOUR PASSIONS WITH TECHNICAL SOCIETIES

Is competing in the French Robotics Cup one of your dreams? How about designing the boats of the future and participating in the Monaco Solar & Energy Boat Challenge? Contributing to aeronautics projects and designing rockets? Designing a 100% electric racing car and competing in races (Shell Eco-Marathon and Formula Student)? Investing your energy in the world of finance, blockchain, Fintech, etc.? **Different De Vinci Higher Education student organisations, including some supported by the DVIC, cover a wide range of engineering-related fields and challenges, giving ESILV engineering students the chance to work on complex and innovative projects.**

De Vinci Higher Education is a partner of Vivatech, Europe's biggest tradeshow for innovation and startups. Some 300 students attend the event every year to explore the technology of the future.

STARTUP MINDSET

Projects provide fertile ground for expanding startup ideas and experimenting using the agile test-and-learn method favoured by entrepreneurs. The DeVinci Startup pre-incubator helps student engineers take their own projects to competitions and investors.

ESILV **ENGINEERING SCHOOL** DE VINCI

ESILV Inside

ESILV's technical student organisations give students additional opportunities to work on complex and innovative projects. Romane is one of them. Along with her fellow LéoFly members, she helped design the Polaris rocket, which was launched successfully at the most recent C'Space gathering, the annual aeronautics event hosted by the French National Centre for Space Studies (CNES).

12:15 PM
Maé joins several other students from her year at their residence before heading over to her weekly judo class. She started judo two years ago, after selecting it from the nearly forty sports offered by the ESILV sport department.

ESILV *Inside*

Close to 1,200 De Vinci Higher Education first-year students teamed up to protect plants and animals by taking part in the Fresque de la Biodiversité workshop. Small groups of ESILV, EMLV and IIM students worked together to raise public awareness of endangered plant and animal species.

Whether or not they are specialised in sustainable development, engineers have a crucial role to play in stopping climate change and applying the principles of sustainable development in their day-to-day work. Romane is keenly aware of that. During her first year, she did a solidarity mission with the non-profit France Nature Environnement, which protects and conserves nature and the environment in the Haute-Savoie department in eastern France.
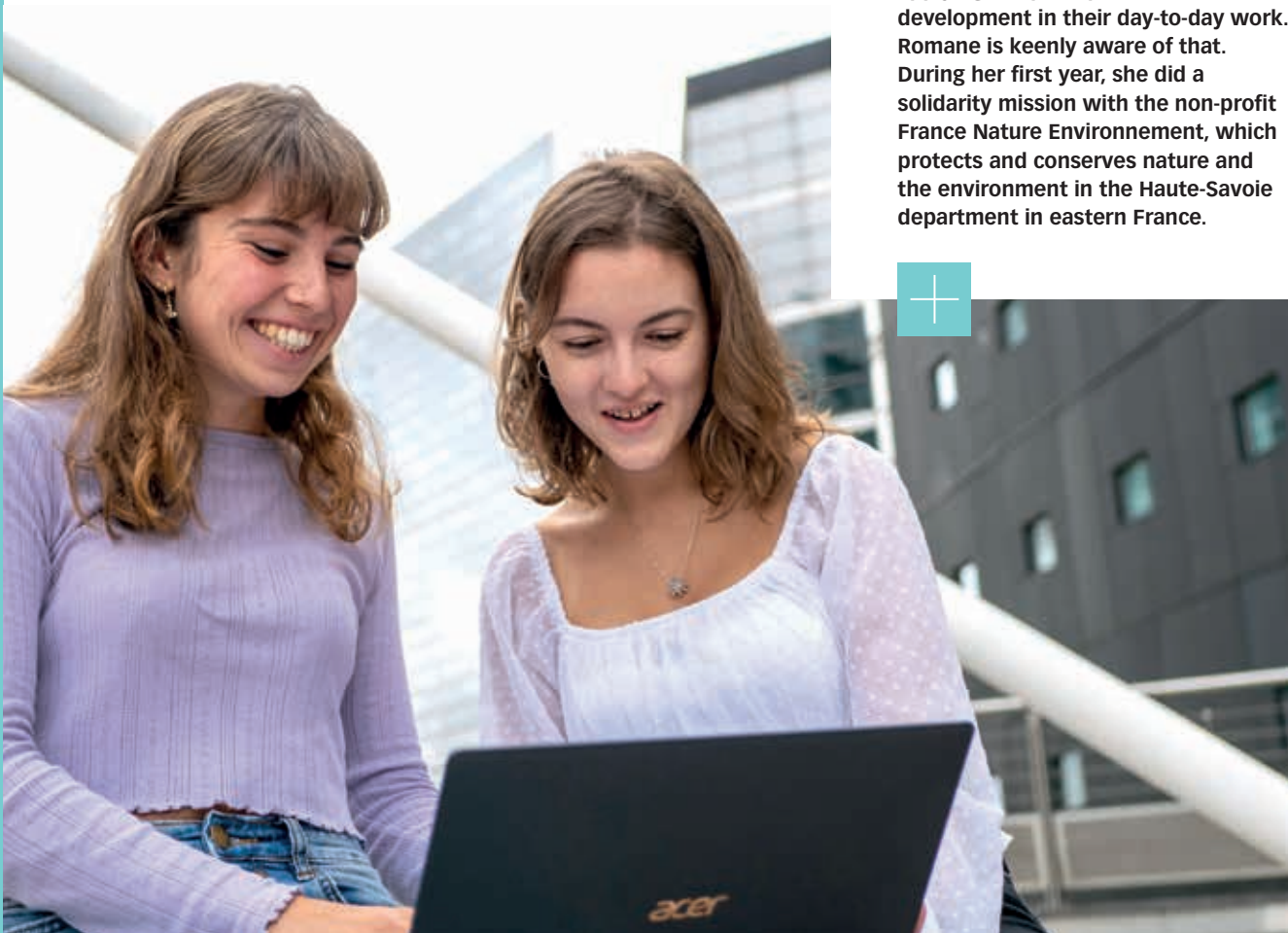
Learn from nature, because it is your future

Leonardo da Vinci

TRAINING RESPONSIBLE STUDENTS

ESILV incorporates ethics, sustainable development, and CSR into its classes throughout all five years. The aim is to train responsible, civic-minded engineers who will be able to align economic, technological, environmental and societal considerations in their future careers. Students are trained in collective intelligence, design thinking and agile project management, which are also used by businesses and organisations to foster societal and environmental innovation.

CREATING INNOVATIVE SOLUTIONS FOR THE FUTURE

IIM, EMLV, and ESILV students take part in cross-disciplinary Boot Camp weeks focusing on CSR or sustainable development. Each project team has five days to design and defend a creative solution to the assigned challenge (digital technology to support diversity, sustainable food and its climate impact, artificial intelligence for the greater good, etc.).

CIVIC ENGAGEMENT AND STUDENT LIFE

Every year, the student organisation DeVinci Durable organises Green Week to raise awareness on campus. Students learn about practical ways to reduce the environmental impact of their day-to-day lives through educational workshops and fun activities.

THE GLOBAL COMPACT

NOUS SOUTENONS
LE PACTE MONDIAL

MEETING THE CHALLENGES OF A GLOBALISED WORLD

ESILV is a member of the Global Compact network. The UN Global Compact label recognises ESILV's commitment to bringing its teaching and research in line with the principles promoted by the United Nations.

LA FRESQUE DU CL!MAT
Vous avez toutes les cartes en main

FIGHTING THE NEGATIVE IMPACT OF CLIMATE CHANGE

The Climate Fresk is a fun, educational, creative workshop in which first-year students and some 60 volunteer leaders explore concrete solutions to counteract the negative impact of climate change.

38

sports

5

gyms
(weight training,
cardio training, fitness,
martial arts, dance)

3,600+

students in mandatory
sport across
the 3 schools

21

years in partnership
with the French
Federation of
University Sports

26

High-level athlete
students at ESILV

ESILV

GROW AND DEVELOP YOUR POTENTIAL
THROUGH SPORT

At ESILV, we believe that sport can reveal talent and foster soft skills such as cooperation, team spirit, independence, initiative, rigour, punctuality, fair play, rising above your limitations, playing by the rules, respect for others, and more. Those essential personal qualities will shine on the job market.

BEGINNER OR COMPETITIVE LEVEL

Sport is mandatory in years 1, 2, and 3. All sports are shared with students from the other two schools, IIM and EMLV. All students, whatever their physical abilities, must choose one of 38 sports at either a beginner or competitive level.

De Vinci Higher Education also offers a recognised track for high-level athletes.

The Génération 2024 label was created by France's Ministry of Higher Education, Research and Innovation in preparation for the 2024 Olympic Games. **ESILV has had the label since 2019 (it was renewed in 2022).** The label aims to strengthen links between the academic world and the sporting movement to encourage students to exercise and play sports.

59
clubs

23
student organisations, including 12 which can meet the mandatory sport requirement (AVSO)

350
events per year

Julia is very organised and a real people person. These two things that motivated her to join ADA, the ESILV charity and humanitarian organisation. She is involved in its charitable projects, awareness-raising and prevention campaigns, and donation and distribution efforts. She shares that commitment with Taous, who does volunteer humanitarian work. Taous is active in the school's organisations and a member of Vinci EcoDrive. The organisation, which just celebrated its tenth anniversary, has 80 members from all three schools who work together to design and build 100% electric race cars for competitions like the Shell Eco-Marathon and Formula Student.

Some students, like Lucas, aren't afraid to get wet! For the past three years, Lucas has been the president of the LéoSquale club (Romuald is also a member) and a competitive swimmer in the French Federation of University Sport (FFSU). That has earned him the chance to compete in several inter-school competitions and at TOSS, France's leading student sporting event. He is an accomplished athlete and thus decided to design a platform to connect athletes and sport facilities for his third-year General Digital Engineer Project (PING).

Thank you to Julia, Romane, Maé, Louis, Taous, Lucas, Romuald and Théo for their smiles and their contributions to our story on life at ESILV.

BE ENGAGED IN YOUR
STUDENT COMMUNITY

Clubs and societies give students the opportunity to develop their soft skills through optional volunteering that is supported by the school and that can be promoted in job searches.

INTER-SCHOOL COOPERATION AND PARTICIPATION

Student clubs and societies are overseen by the student life department and are open to students from all three De Vinci Higher Education schools. It is a great opportunity for ESILV students to work with future managers and creatives!
The vast selection of clubs and societies to choose from helps students mature and build a network that will come in useful throughout their careers.

A PLACE FOR EVERY PASSION

Over 350 events are held on campus every year. They include theme days, competitions, trips and parties, offering everyone a chance to get involved and find fulfilment. The De Vinci Higher Education student society network covers all areas of higher education: humanitarian, social, cultural, sporting, scientific, technical, business, etc.

ADMISSIONS & ENTRANCE EXAMS

PROFILES

+ **General Baccalaureate**
+ Industrial and Sustainable Development Technologies and Sciences (STI2D) baccalaureate (Avenir Bac entrance exam)
+ **Scientific and technical Bac+1** diploma (Avenir Plus entrance exam)
+ **CPGE Grandes Ecoles foundation course in Mathematics-Physics, Physics-Chemistry, Physics and Engineering Sciences, Mathematics-Physics-IT, Physics and Technology** (Avenir Prépas entrance exam)
+ **Advanced Technician Adaptation, Industrial Sciences and Technology foundation courses** (Avenir Plus entrance exam)
+ **Undergraduate degree years 1, 2 or 3** (Avenir Plus entrance exam)
+ **Scientific and technical master's year 1** (Avenir Plus entrance exam)
+ **BUT undergraduate degree** (Avenir Plus entrance exam): mechanical and production engineering, IT, physical measurement, industrial and maintenance engineering, industrial engineering and maintenance, electrical engineering and industrial computing, thermal engineering and energy, materials science and engineering, networks and telecommunications, statistics and business intelligence, etc.
+ **Scientific BTS undergraduate diplomas with distinction or merit** (work-study track only)

How to apply with international qualifications

Students with an international scientific baccalaureate or other international qualifications must apply to ESILV directly from November 2022 at **http://international.leonard-de-vinci.net**

+ Admission based on academic record and interview

Avenir Bac opens the door to seven undergraduate engineering schools (ECE, EIGSI, EPF, ESIGELEC, ESILV, ESITC, ESTACA).

+ **Number of ESILV spots**
  . PARIS CAMPUS
    General baccalaureate: 365
    (maths + scientific specialism: 360
    maths + non-scientific specialism: 5)
    Industrial and Sustainable Development Technologies and Sciences (STI2D) baccalaureate: 25
  . NANTES CAMPUS
    General baccalaureate: 75
    Sign up from January to March 2023*
    at **www.parcoursup.fr**
+ **Exams**: 29 April 2023 (general), 22 April 2023 (STI2D)
+ **Application fees**
    General baccalaureate: €110 (€30 for grant recipients)
    STI2D baccalaureate: €50 (€15 for grant recipients)
+ **Find more information,** online practice and Avenir entrance exam preparation days at **www.concoursavenir.fr**

*According to the schedule provided by France's Ministry of Higher Education, Research and Innovation (MESRI)

RESTART-POSTBAC@DEVINCI PROGRAMME
To start school in February 2023

Students in the first year of higher education (First-year PASS specific access to medicine or Scientific course, Advanced Maths, first year BUT undergraduate diploma or other programmes)

+ **Admission** based on academic record and interview
+ **Number of spots**: 40
+ **Sign up online**, from 7 November 2022, via the Avenir+ portal on **www.concoursavenir.fr**
+ **Application fees**: €100 (€40 for grant recipients)

STUDENTS WITH A BAC+1 TO BAC+4 SCIENTIFIC OR TECHNICAL DIPLOMA/DEGREE
Parallel admissions (excluding work-study track)

+ **Admission** following consideration of application and interview
+ **Number of spots**:
    40 in the first year
    45 in the second year
    50 in the third year
    15 in the fourth year
+ **Sign up online**, from 13 January 2023, via the Avenir+ portal on **www.concoursavenir.fr**
+ **Application fees**: €100 (€40 for grant recipients)

STUDENTS IN SCIENTIFIC GRANDES ECOLES FOUNDATION COURSES (MATHS-PHYSICS, PHYSICS-CHEMISTRY, PHYSICS AND ENGINEERING SCIENCES, PHYSICS AND TECHNOLOGY)

+ **Number of ESILV** Maths-Physics spots: 55 - Physics-Chemistry: 35 Physics and Engineering Sciences: 60 - Mathematics, Physics and IT: 15 Physics and Technology: 35
+ **Sign up online** at **www.scei-concours.fr**
+ **Application fees**: Banque e3a-Polytech/Banque PT entrance exams: €65 (€15 for grant recipients)

WORK-STUDY TRACK ADMISSION
For students with a Bac+2, Bac+3 or Bac+4 qualification
(BUT undergraduate degree, BTS undergraduate diploma with distinction/merit, third-year degree students, vocational degree and first-year master's students)

+ **Eligibility for admission** determined following consideration of application, maths and English exams, and interview
+ **Admission** following signature of a work-study contract with a company
+ **Number of spots**: 80 in the first year of the engineering cycle, 20 spots in the second year of the engineering cycle
+ **Sign up online,** from mid-November 2022, at **www.esilv.fr**
+ **Application fees**: €50 (free for grant recipients)

OPEN DAYS

ESILV organises open days, campus tours, immersion days and webinars throughout the year. You can find all the upcoming dates on our website.

🌐 For more information, go to **esilv.fr**

If you have any questions, you can contact Admissions Office **admissions@esilv.fr**

+ **PARIS CAMPUS**
  Valerie Castellani / Benjamin Gimard
  +33 (0)1 81 00 29 37

+ **Nantes Campus**
  Clémence Besson
  +33 (0)2 30 79 04 45

ACCOMMODATION

ESILV has a platform that helps students find housing that meets their needs in France and abroad. Students can live in one of the many student residences around the campus. The area is also home to a wide variety of restaurants.

INTERNATIONAL APPLICANTS

Do you have an international baccalaureate or are you currently studying at a higher education institution abroad?
If so, the international admissions procedure is for you.

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For more information, contact the international admissions office
international.admission@devinci.fr
+33 (0)7 86 16 74 66 via WhatsApp

FINANCING YOUR ENGINEERING STUDIES

+ **Tuition fees**
  For 2023-2024, the annual tuition is **€9,600**. Engineering-Management double degree: **€2,000** per year, in addition to the base tuition You will also have to pay the following additional costs: CVEC (Student Life and Campus Contribution), food, transport, as well as living costs for your time abroad.
  You can partially finance your studies with jobs and internships: the ESILV admissions office can advise students and their families on finding appropriate financing solutions.

+ **Reduced tuition fees**
  The school can reduce tuition fees based on social criteria and in addition to government grants. The amount of the reduction for grant students varies depending on the level.

+ **Bank loans**
  ESILV partner banks offer loans with preferential rates and terms for ESILV students

+ **Work-study track**
  All or part of the engineering course can be completed as part of a work-study contract. In the work-study track, students become employees and are paid a salary, and the company finances their course.

+ **Mandatory internships**
  A paid internship in a company forms part of the engineering course (12 months).

+ **De Vinci Junior**
  Students can carry out paid consulting and research projects for businesses.

+ **Teaching assistants**
  ESILV offers its students paid administrative or educational work.