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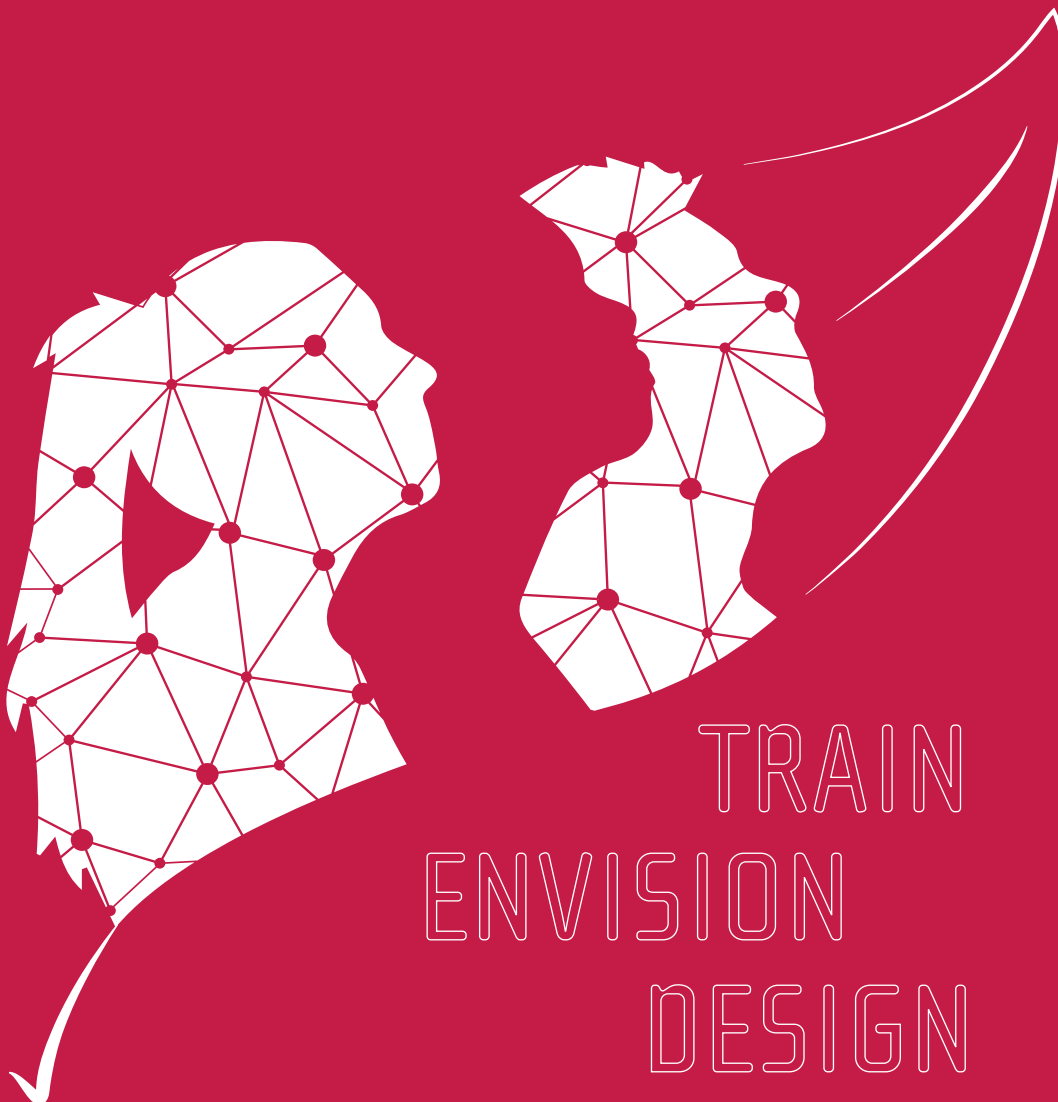
TELECOM
Paris

INSTITUT
POLYTECHNIQUE
DE PARIS

FOCUS

ON THE
ENGINEERING
PROGRAM

2024

TRAIN
ENVISION
DESIGN

Telecom Paris
Dare to succeed

AT THE HEART OF DISTINGUISHED CENTERS OF EXCELLENCE

INSTITUT POLYTECHNIQUE DE PARIS

Institut Mines-Télécom

TELECOM PARIS IS

> a founding member of the **Institut Polytechnique de Paris**, a world-class institute of science and technology that brings together six prestigious schools: École polytechnique, ENSTA Paris, ENSAE Paris, École nationale des ponts et chaussées (ENPC), Télécom Paris, and Télécom SudParis, as well as HEC, a privileged partner. This internationally-oriented group develops cutting-edge scientific research and offers training programs with the highest standards of excellence for all degree levels. It also guarantees excellent employment opportunities for its graduates.

> part of the **Institut Mines-Télécom**, a French federal institute of technological universities of science and management. Composed of eight public graduate schools and two subsidiary universities, Institut Mines-Télécom leads and fosters a rich ecosystem of partner schools, economic, academic and institutional partners, as well as stakeholders in the fields of training, research and economic development. Founded in the 19th century to meet France's economic and industrial needs, Institut Mines-Télécom Graduate Schools have played an active role in all industrial and communication revolutions. Through research and the training of engineers, managers and doctors, Institut Mines-Télécom addresses key industrial, digital, energy and environmental issues, in France, Europe, and worldwide.

POWER IN NUMBERS

910 engineering students

500 Mastères Spécialisés® students

238 doctoral students

+ 21,000 graduates

GLOBALLY

+100 partners in **40** countries, including

40 dual degrees

37 Erasmus programs

45% international students

**1** Shanghai Paris Elite Institute of Technology (SPEIT) partnership

CUTTING-EDGE RESEARCH

159 permanent faculty members and researchers

650 international publications

12 active patents this year

19 academic & research chairs and corporate-funded laboratories

COMPANY CREATION

+ 500 companies created since 1999, of which 80% are still active

3 start-ups founded every month

+ 6,000 jobs created since 1999

€ 1,250 million raised through financial partners
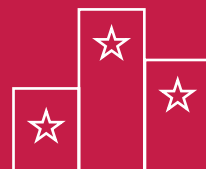
RANKED FOR EXCELLENCE

L'Étudiant 2024

28/30 for academic excellence

20/20 for professional integration

17.2/20 for international influence

YOUR ENGINEERING TRAINING AT TELECOM PARIS

1

1ST YEAR

CORE CURRICULUM

THE FOUNDATIONS OF THE INNOVATIVE ENGINEER

Courses, projects, and a Personal Development internship

2

2ND YEAR

PERSONALIZED TRAINING

Choice of **2 academic tracks from 14**+ core courses

3

3RD YEAR

PREPARE YOUR CAREER

TELECOM PARIS OPTION
Choice of 1 option among 13 + Research Innovation Master Project (PRIM)

DUAL DEGREE IN FRANCE
Master's program within the Institut Polytechnique de Paris or at a partner university (dual engineering degree + Master's degree)

INTERNATIONAL OPTION[1]
Study abroad program: Dual degree or Exchange program (e.g. Erasmus)

SIX-MONTH ENGINEERING INTERNSHIP

INTERNATIONAL EXPERIENCE

1 For international students, the option is offered only within the framework of a three-year program.

YOUR 1ST YEAR
INNOVATIVE FOUNDATIONS

From the nanoscale, where the electronic structure of matter is unveiled, to the expansive realms of economic, social, and environmental challenges in the digital age, the first year provides an intellectually rich and diverse curriculum. This includes core courses addressing critical themes such as social and environmental transformation, collaborative team projects tailored to your interests, and elective opportunities in advanced scientific exploration, language proficiency, or personal and professional development.

THE CORE CURRICULUM

Applied mathematics and digital communications
• Linear algebra
• Probability and statistics
• Digital communication and information theory
• Tools and applications for signals, images and sound

Fundamentals in physics and electronics
• Optics and photonics
• Propagation
• Micro- and nano-physics
• Acquisition system electronics

Computer science
• From the logic gate to operating systems
• Algorithms and fundamentals of computer science
• Typescript web programming
• Java object-oriented programming
• Open-access software contribution
• Networks

Economic and social sciences
• Introduction to contemporary economics
• Introduction to management
• Technology & society
• Written communication techniques and analysis
• Entrepreneurship and digital innovation

Exploring the corporate world
• To discover and understand the role and responsibilities of digital engineers
• Company visits
• Speaker series: "Exploring Careers in Digital Engineering"

Climate change science
• Scientific mechanisms of climate change
• The key role of energy
• The role of organizations (governments, companies and community groups) and individuals (citizens, employees and entrepreneurs)

COLLABORATIVE PROJECTS

Team production project – ARTEFACT
(1 half-day per week throughout the fall semester)
Working in groups of four to five, you will have dedicated sessions throughout the first semester to bring your digital-themed project to life. ARTEFACT challenges you to harness your ingenuity to design a fully functional system, unleash your creativity to tailor and optimize your creation, and acquire the necessary technological expertise as you progress. It's a hands-on exploration of innovation in action. *(See page 6 for more details)*

An application project of your choice – ARTISHOW
(1 half-day per week throughout the spring semester)
This project provides an invaluable opportunity to translate first-year theoretical knowledge into practice through a tangible creation that integrates both hardware and software components, drawing expertise from at least two technical disciplines. It also serves as a gateway to selecting your master's program, offering a deeper understanding of the diverse and dynamic fields available to you. *(See page 7 for more details)*

INTERDISCIPLINARY COURSES

• Intercultural and Language Courses
English + one or two languages from a selection of 10, beginner to advanced levels available
• Contemporary humanities
• Interpersonal Training (drama, improvisation, etc.)

THE INTER-SEMESTER WEEK

Introduction to cybersecurity, satellite telecommunications, quantum technology, astroinformatics, artificial intelligence, etc. are a few examples of 10 + interdisciplinary courses offered during the inter-semester.

PERSONAL DEVELOPMENT INTERNSHIP

Ranging from 1 to 2 months during the summer, this internship allows you to experience life in a company, in an organization, or through humanitarian work in France or abroad.

SPORTS IN ACTION AT TÉLÉCOM PARIS

Sports are an integral component of holistic personal and professional development. Recognizing their importance, Télécom Paris integrated sports into its academic program in 2023 to cultivate essential skills and foster well-being.

The APSA module, an optional credit-bearing initiative, is designed to accommodate students of all levels—whether beginner or advanced, and inclusive of those with disabilities. Through this program, you can earn up to 2 credits annually during your first and second years while participating in one of 25 diverse activities, organized into three distinct categories.

BELONG

MEET

SHARE

CONFIDENCE

COHESION

EXCEED

PERFORMANCE

ARTISTIC SPORTS
Pilates, yoga, circus arts, breakdance, dancesport

INDIVIDUAL SPORTS
Badminton, training/crossfit, bodybuilding, step aerobics, laser run, climbing, table tennis, boxing, fencing, tennis, swimming, judo, BNSSA (National Water Safety and Rescue Certificate)

TEAM SPORTS
Spikeball, basketball, rugby, handball, volleyball, ultimate frisbee, touch rugby

Elevating Mind and Body

With this module, we aim for progress before performance, through mixed-level groups but with differentiated coaching so that everyone progresses together. At Telecom Paris, we firmly believe that the additional skills developed through physical activities and sports help to resolve the complex and demanding challenges future engineers will face.

What do our students say?

"

Meet friendly people

Discover new sports

Boost your confidence

Helps my self-discipline

"

The home of champions

In October 2024, Télécom Paris took part in the Ecole polytechnique sports competition (one of the other schools of the Institut Polytechnique de Paris) and proudly came away with **1 gold medal** in crossfit and boxing, **3 bronze medals** in judo and 1 in badminton.

FIRST-YEAR PROJECTS: IGNITING INNOVATION

Throughout their studies, our student-engineers engage in pioneering educational projects that foster innovation and creativity. First-year team projects, guided by expert tutors, are intentionally designed to be both engaging and inspiring. These projects provide an invaluable opportunity to:

- **Immerse yourself in collaborative project work,**
- **Cultivate effective teamwork skills,**
- **Strengthen your capacity for independent problem-solving,**
- **Master the art of strategic planning, and**
- **Sharpen your critical thinking and analytical abilities.**

Spotlight on the ARTEFACT project: Fostering creativity and autonomy

The ARTEFACT project is a collaborative endeavor where teams work together to bring a tangible concept to life, guided by clear objectives, available resources, and a final challenge. All first-year students engage in this unified project throughout the first semester, fostering teamwork, innovation, and practical application of their skills.

In 2023-2024

Students were tasked with designing a dynamic, moving object featuring web interface control, an autonomous module, and a coordination system for multiple vehicles. The project incorporated a wide range of technologies, including design dimensions, connected devices, WebSockets, Git, and Raspberry Pi.

The final presentation of their completed project involved:
- A flag hunt with field markers, the primary test for each team. Utilizing autonomous driving, the goal was to identify and locate 12 markers in the shortest time possible.
- An individual bonus test, consisting of a manual-drive speed race.

Spotlight on the ARTISHOW project: tackling a scientific and technical issue.

ARTISHOW is a collaborative, educational and multidisciplinary project which includes a computerized production element.

Building on their experience from the ARTEFACT project, students in the second semester undertake a personalized application task of their choosing, which must integrate at least two distinct disciplines. This project provides valuable insight into the academic pathways available in the second year of the program, as well as potential career trajectories.

Transformative Learning Outcomes

• Collaborative Engagement: Contribute effectively to group work by generating and presenting ideas, actively listening, enhancing the contributions of others, and managing conflicts constructively when necessary.
• Time Management and Adaptability: Assess the time required to complete tasks and adapt plans as needed to address unforeseen challenges.
• Scientific and Technical Problem-Solving: Develop the ability to understand and approach complex scientific and technical problems with a methodical mindset.
• Resourceful Independence: Identify and leverage both human and material resources to drive progress autonomously.
• Application of Programming Skills: Apply acquired knowledge in programming to contribute meaningfully to a collaborative project.

Showcase of Past Student Creations
• Introductory web game to cryptography
• My first AI for video gaming
• Estimating the carbon footprint of computer science conferences
• A reflection tool to boost collaborative skills

2 YOUR 2ND YEAR: PERSONALIZED TRAINING

EXCEL IN 2 EXPERT AREAS AND

THEIR FIELDS OF APPLICATION

By selecting two core digital fields from a diverse range of 14 in the second year, you have the opportunity to tailor your academic profile. Over 50% of the curriculum is dedicated to deepening your expertise in these specialties. Additionally, a broad spectrum of elective courses is available to complement your education, covering scientific and technical skills, law, social sciences, languages, culture, and personal development. The personal and interpersonal competencies you acquire will play a pivotal role in shaping your future professional success.

THE 2ND YEAR PROGRAM

- Two academic tracks (40 ECTS credits) from a choice of 14. Some programs offer various options.
- 8 additional courses (20 ECTS credits) in science, economic, social, and human sciences.
- Language courses (4 ECTS per semester).
- Courses in interpersonal and professional training (3 ECTS per year) in a wide range of subjects.

THE 14 PROGRAMS

(Further details on the following pages)

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE
- Data Science (in English)
- Signal Processing for Artificial Intelligence (in English)
- Image

MATHEMATICS AND COMPUTER SCIENCE
- Stochastic processes and scientific computing (in English)
- Applied Algebra (in English)
- Mathematics, Theoretical Computer Science and Operation Research

DIGITAL ECONOMY AND INNOVATIONS
- Markets, Organizations, Data, Strategies (partly in English)

NETWORKS, COMMUNICATIONS AND CYBERSECURITY
- Large Digital Infrastructures
- Wireless Networks and IoT (partly in English)
- Cybersecurity
- Telecommunications: From Data to Systems

COMPUTER, INTERACTIVE AND EMBEDDED SYSTEMS
- Embedded Systems
- Distributed Software Systems (in English)
- 3D and Interactive Systems (partly in English)

RESEARCH PATHWAY: WHERE VISION MEETS EXPERTISE

You can replace one of your two second-year specializations with a research initiation program. Based on a research topic proposed by a faculty researcher at the school, you can work independently in a laboratory for half a day each week. In the first semester, you will learn how to establish a literature review on your topic. Then, in the second semester, you will write your first research article, which you will present at the end of the year in front of your peers.

This program can continue into your third year with an internal option associated with a Research Innovation Master Project (part-time for one semester) or by applying to the PhD Track at the Institut Polytechnique de Paris.

In addition to your technical expertise, an array of interdisciplinary courses to broaden your knowledge base.

Because a Telecom Paris engineer must understand how digital technology transforms economies and societies, you will receive training in economics, law, digital design & sociology, general knowledge, management and languages.

You will also participate in **innovative team projects** throughout your three years, collaborating with companies and laboratories to apply your learning in real-world contexts.

Moreover, the **Dynamic Fitness Program** offers you the chance to engage in a physical activity of your choice every week, ensuring a balanced approach to both intellectual and physical development.

As a Telecom Paris student, you will benefit from:

- Exceptional education and access to top-tier training
- Research pathways
- Corporate connections and enhance your professional network
- Global mobility opportunities in your 3rd year
- International exchange programs

DATA SCIENCE

For those who love
- Applied mathematics and computer science
- Working on a highly topical domain

Data Science courses are taught in English.

Objectives
This major covers all fields related to the management, the analysis and the exploitation of large data volumes.

In practice
Classes combine theory and practice through a smart balance between tutorials in mathematics and lab sessions. You will develop your knowledge in databases, statistics , optimization and statistical learning.

Careers
Examples of potential career paths include data scientist, statistical engineer, data manager, or in research and R&D sectors related to machine learning, data management, and statistics.

3rd year Telecom Paris option
- Data science, Image and Artificial intelligence

Master-Engineer dual-degree programs
- Data and Artificial Intelligence (IP Paris)
- Data Science (IP Paris)
- Mathematics, Vision, Apprentissage (IP Paris/ Université Paris-Saclay)
- DataScale (Université Paris-Saclay)

**Olivia Hennequin
Class of 2022**

"

Combining computer science and mathematics, this pathway teaches you how to work with databases through a mix of theoretical classes, practical work (exclusively on Python and SQL), and group projects. These projects allow us to apply our knowledge to chosen topics while fostering teamwork in a professional context. The DS program pairs well with many other courses, offering a comprehensive view of data alongside technical insights into its processing and applications. This makes it the most popular choice among students.

This major also provides opportunities for international exchanges and dual degrees in the third year, offering students a range of options to continue their studies in France or abroad. Graduates benefit from excellent career prospects in cutting-edge sectors.

This version refines the flow, eliminates redundancy, and enhances clarity while maintaining the student's perspective.

"

Program directors: Thomas Bonald and Ekhine Irurozki
Head of international mobility: Maria Boritchev
Internship coordinators: Olivier Fercoq

SIGNAL PROCESSING FOR ARTIFICIAL INTELLIGENCE

- Applied mathematics and practical problems
- Machine learning
- Signal processing

TSIA courses are taught in English.

Objectives

On completing this major, students will have acquired vast and operational insight into statistical learning and signal processing. They will understand the issues surrounding data processing and big data, and acquire methodological foundations (statistics and optimization) and the specific techniques for temporal data processing (signal processing).

In practice

Teaching focuses on dynamic lectures and lab work in a real-world context.

Careers

This major shapes future engineers with a broad range of skills in the field of machine learning and signal processing, which covers a vast panel of applicative sectors: music and speech, biological signals, radio astronomy, multimedia information transmission and compression, etc.

3rd year Telecom Paris option

- Data science, Image and Artificial intelligence

Master-Engineer dual-degree programs

- Control, Signal and Image Processing (Université Paris-Saclay)
- Data and Artificial Intelligence (IP Paris)
- Data Science (IP Paris)
- Mathematics, Vision, Learning (IP Paris/ Université Paris-Saclay.)
- Acoustics, signal processing and computer science applied to music (Sorbonne University)
- Bio-Imaging (Université Paris-Descartes, Biomedical specialty)

Yukun Liu, Class of 2022

"

This major integrates knowledge from a range of subjects, exploring each step by step. For instance, the learning path for machine learning progresses from Hilbert spaces to SVMs, perceptrons, and finally to neural networks, building a solid foundation in the field. What sets TSIA apart is its strong connection between theory and practice. Each course includes two to three practical assignments, making it exciting to learn the theories, implement them, and see them come to life in real-world applications (especially when everything works!).

"

Program director: Roland Badeau
Head of international mobility: Matthieu Labeau
Internship coordinator: Mathieu Fontaine

IMAGE

For those who love
- Images
- Digital photography
- Mathematics and algorithms
- Machine learning applications

Objectives

This major provides solid knowledge in the field of image processing and interpretation, which will be useful both in the industrial sector and in research laboratories with a PhD.

In practice

Students in this major will acquire the basics of image processing and go on to more advanced courses in mathematical techniques for images, computer vision and 3D reconstruction, AI-inspired methods, and more particularly deep learning for image analysis and interpretation, image and video classification and indexing. The main fields of application (medical imagery, aerial and satellite imaging and consumer photography) will be presented by researchers working in these areas, in addition to industrial players in other applications (biometrics, industrial vision, etc.).

Careers

This major prepares for careers in research and design engineering in image processing and interpretation, vision and 3D in a range of fields: medical and biological imaging, consumer photography, scene modeling and synthesis, spatial and aerial imaging, biometrics, or defense, etc.

3rd year Telecom Paris option

- Data science, Image and Artificial intelligence

Master-Engineer dual-degree programs

- Image (Sorbonne University)
- Mathematics, Vision, Learning (IP Paris/ Université Paris-Saclay)
- Healthcare engineering: Bio-imaging specialty (Paris-Descartes University)
- Control, Signal and Image Processing (Université Paris-Saclay)
- Physical Methods in Remote Sensing (Sorbonne University)
- Data and Artificial Intelligence (IP Paris)

Clara Teissier, Class of 2023

I really liked the practical aspect of the Image major. There are lots of practical tasks and projects throughout the year to apply the image processing methods seen in class. This program combines well with a more theoretical track.
It provides broad knowledge in image processing, with or without machine learning, and in the various fields of application, such as medical imaging or satellites.
The projects help us to further our knowledge and teach us to hunt for research articles and more advanced methods than those seen in class.

Program directors:
Yann Gousseau and Florence Tupin
Head of international mobility: Elsa Angelini
Internship coordinator: Loïc Le Folgoc

STOCHASTIC PROCESSES
AND SCIENTIFIC COMPUTING

For those who love
- Probability
- Data analysis
- Mathematics and its applications
(in finance, data science, etc.)

Courses are taught in English.

Objectives

This major provides training in applied mathematics, and more specifically in the fields of random modeling and scientific calculus for a host of applications ranging from financial mathematics, data science, modeling and image & signal processing.

In practice

In this major, students dive into mathematical tools for statistics, scientific computation, and financial mathematics. The theoretical approach mirrors that of preparatory courses, complemented by tutorials and hands-on practice in Python. This program lays the groundwork for advanced studies, with opportunities to pursue Master 2 programs in probability, finance, or statistics.

Careers

A dual degree with these masters is highly-sought after in technology companies and the financial sector. This type of course also offers numerous opportunities for PhDs in the form of an academic thesis or as part of an industrial project (CIFRE thesis).

Program director: François Roueff
Head of international mobility: Pascal Bianchi
Internship coordinator: Laurent Decreusefond

3rd year Telecom Paris option
- Stochastic processes and scientific computing

Master-Engineer dual-degree programs
- Random modeling, finance and data science (Paris-Diderot University)
- Probability & Finance (IP Paris)
- Data Science (IP Paris)
- Statistics, Finance and actuarial science (IP Paris)
- Mathematics of randomness (IP Paris)
- Mathematiques, Vision, Apprentissage (IP Paris/ Université Paris-Saclay)

**Anna Van Elst
Class of 2023**

This major is an excellent choice for fans of probability and theoretical mathematics. It covers the key notions of probability, i.e., mathematical statistics, stochastic calculus, convergence modes or martingales.
I was particularly impressed by the quality of demonstrations and the diversity of mathematical reasoning. What's more, this program was invaluable in helping me to understand the tools used in data science and financial mathematics.
This major also leads to great opportunities in leading applied math master courses (Probability & Finance, Mathematics, Vison, Learning, etc.).

APPLIED ALGEBRA

Cryptography, quantum information and coding

Applied Algebra courses taught in English.

Objectives

This major offers an introduction to several computing and telecommunication fields: formal calculation, correction coding, cryptography and quantum computing theory. The specificity of this program is that it draws in large part on a common mathematical base composed essentially of algebra.

In practice

These fields will be explored from a theoretical perspective. It consists of purely mathematical classes (arithmetics and finite fields, algebraic curves) and classes at the interface of computing and mathematics or physics (correction coding, cryptography and quantum computing). Modules are presented in the form of standard tutorials with classes of around 15 students. Some modules may also be in the form of projects or machine-based practical work (computational algebra).

Careers

This major constitutes a first gateway to research, the most natural next step is thus a Master 2, followed by a thesis. However, it may also serve as a theoretical complement for students wishing to go into engineering careers in communication systems, networks or security.

Program director: Aslan Tchamkerten
Head of international mobility: Michèle Wigger
Internship coordinator: Robert Graczyk

For those who love
- Algebra
- Mathematics in general, and especially abstraction

3rd year Telecom Paris option
- Quantum Engineering

Master-Engineer dual-degree programs
- Machine Learning, Communications, and Security (IP Paris)
- Algorithmics and Foundations of Programming, ex-Paris Master in Computer Research (Université Paris-Saclay)

You can also apply for a PhD Track, mathematics or computing specialty, at Institut Polytechnique de Paris.

**Vincent Moreau,
Class of 2021**

The Applied Algebra major offers high-level mathematical training in a range of topics including cryptography, algebraic geometry and quantum computing. Combining fundamental mathematics and its most recent applications, ACCQ opens up opportunities for students in the academic sphere as well as in R&D with prestigious companies.

With fewer than 15 students per class and an outstanding teaching team, ACCQ is a flagship Telecom program. The ideal choice for those wishing to continue with algebra after the selective admission process!

MATHEMATICS, THEORETICAL COMPUTER SCIENCE AND OPERATION RESEARCH

This program is designed for students seeking in-depth training at the intersection of computing and mathematics. It is particularly recommended for those hoping to pursue a doctorate in computer science.

Objectives

This major trains future engineers looking to acquire all the necessary skills to analyze and resolve mathematical problems and complex algorithms through a variety of methods.

In practice

The major combines classes presenting combinatorial optimization methods, in advanced algorithmics, game theory, graph theory, and distributed calculus with teaching modules exploring the limits or issues of programming, with calculability and logic.

Careers

This major prepares profiles ready to tackle challenges not only with major players in the field of computer science, but also in a wide range of sectors including transport, energy, logistics, banking, health, or telecommunications. Careers are also possible in research, or as an expert in companies ranging from start-ups to major groups.

Program director: Bertrand Meyer
Heads of international mobility: Petr Kuznetsov and Jean Leneutre
Internship coordinator: Bertrand Meyer

3rd year Telecom Paris option

- Quantum Engineering

Master-Engineer dual-degree programs

- Algorithmics and Foundations of Programming, ex-Paris Master in Computer Research (Université Paris-Saclay)
- Operational research (Université Paris-Saclay)

Paul Vezia, Class of 2022

Anyone who likes mathematics and theoretical computing will find the different classes on this major fascinating.

From game theory to complex algorithmic problems, the courses are both distinct and highly coherent with each other. MITRO is ideally suited to students who enjoy thinking and solving complex problems, as the practical exercises are similar to solving puzzles.

There are generally around twenty students enrolled in this program, which fosters a tight-knit class with strong ties and a close relationship with teachers.

The skills acquired are widely recognized and open the door to theoretical research or applications in the business world. Lastly, the professors are renowned experts in their field, and are attentive and talented educators.

MARKETS, ORGANIZATIONS, DATA, STRATEGIES

The Economy option of the MODS program is taught in English.

Objectives

This major enables you to decipher market operations and corporate strategies, understand the impacts of digital technology and sustainable development on company organization and digital platforms, business models, company information systems and innovations, and will introduce you to the qualitative and quantitative tools used in Economic & Social Science.

In practice

MODS consists of multidisciplinary and complementary courses (management, economics, law/ethics, sociology) which offer global insight into the challenges of contemporary digital transition.

Its aim is to train engineers with a capacity for innovation who can transform society, taking into account new environmental and social logics as well as ethics in economic models.

The courses will further and apply your theoretical knowledge through business cases, mini class projects, projects in association with companies, start-ups and non-profit organizations, as well as external experts.

Careers

Strategic or IT consulting, marketing, finance, or technological product and service development.

3rd year Telecom Paris option

- Management, Innovation, Digital option (with Sciences Po).

> **Program director:** Myriam Davidovici
> **Head of international mobility:**
> Myriam Davidovici
> **Internship coordinator:** Dana Diminescu

For those who love

- Understanding the latest challenges in responsible and sustainable digital transformation
- Discovering data analysis through socioeconomic methods

Master-Engineer dual-degree programs

- Network Industries and Digital Economy (IP Paris)
- Innovation Project Design (IP Paris)
- Organizational, Strategic and System Consulting (IP Paris, Panthéon Sorbonne)

International option

- Master of Science in Management and Technology and Master of Science in Economics (LSE, Berkeley, Columbia, MIT)

Paul Frambot, Class of 2022

This major offers courses in responsible digital transformation and introduces us to digital project management and the consideration of social, ethical or environmental factors.

The concepts dealt with in class are applied directly to highly interesting company projects. For example, in groups of three, we spent 6 months working alongside Air France, to develop the 5G application of Paris-Charles de Gaulle airport.

I also worked on the socioeconomic challenges of CityTaps, a start-up which develops connected water meters in Africa. We learned a great deal about the organization and strategy of start-ups and major corporations.

LARGE DIGITAL
INFRASTRUCTURES

For those who love
- Understanding the various stakeholders in large digital infrastructures and their interactions
- Understanding the technologies used and their developments

Objectives

This major provides a 360° view of the players, architectures and technologies of major digital infrastructures. This major seamlessly integrates various elements (cloud, fixed and mobile networks, security) which can also form part of specialized programs.

In practice

This major aims to provide a global view of the various stakeholders of major digital infrastructures, their interactions and underlying technologies: content distribution (video and web in particular), cloud service providers, internet service providers and operators, campus/company networks, access networks (fixed and mobile, IoT) and end users. Subjects are explored from both a technical point of view, with an architectural and formal protocol, and a techno-economic perspective (challenges, inter-player relations and areas of tension). Security issues are also covered. The aim is not only to keep pace with current and future technology, but to also understand the reasons behind these developments.

Careers

This major opens vast prospects, given the importance of these major digital infrastructures for our economies and societies. Company types in this field are highly diverse, from start-ups to specialist SME (e.g., content distribution and specialist software publishing), major national groups (sovereign networks and cloud), and international corporations (outfitters and service providers).

> **Program Director, Head of international mobility and Internship coordinator:** Jean-Louis Rougier

Possible professions include:
- Architect and pre-sale engineer
- Consultant (IT services, integrators)
- Customer manager (operators, service providers)
- Project manager / product manager
- Research engineer (builders, service providers)
- PhD (in an academic or industrial laboratory)
- Business owner (start-up, etc.)

3rd year Telecom Paris option

- Networks, Large Digital Infrastructures and the Internet of Things

Master-Engineer dual-degree programs

- Optical Networks and Photonic Systems (IP Paris)
- CSN Computer Science for Network (IP Paris)

**Alexandra Deniaud
Class of 2022**

This major offers a good balance between theory and practice, and above all provides a comprehensive view of how all digital exchanges work. This is a new major, and the professors are highly attentive to what we would like to learn and how we'd like to work.

WIRELESS NETWORKS AND INTERNET OF THINGS

These courses are partially in taught English.

This major offers in-depth training in mobile networks and the Internet of Things. While cellular networks have shaken up our communication methods, the Internet of Things (IoT) is set to revolutionize healthcare, industry, transport, cities and leisure. Mobile networks and IoT are thus key elements of the fifth generation.

Objectives

This major is designed to train engineers who possess deep expertise in existing technologies while also being equipped to design the networks of the future.

In practice

This major offers balanced training in the general principles of wireless networks, technological aspects (standards, protocols, and architectures, including mobile cloud), platform experimentation, theoretical aspects (stochastic modeling for performance assessment and optimization) and perspectives around current challenges.

Careers

This major trains future consultants, network architects, and design engineers working with operators, energy providers, smart car manufacturers, or in e-health, etc. It is also possible to work in IoT start-ups, or to pursue a path in research or teaching.

Program director: Anaïs Vergne
Head of international mobility:
Marceau Coupechoux

For those who love

- Exploring the world of Internet of things
- Understanding how our smartphones communicate
- Understanding the challenges facing operators and IoT players

3rd year Telecom Paris option

- Networks, Large Digital Infrastructures and the Internet of Things

Master-Engineer dual-degree programs

- Optical Networks and Photonic Systems (IP Paris)
- Computer Science for Network (IP Paris)
- Radio Systems, E3A Electronic specialty, Electronic Energy, Electric Energy

Innimei Tiroumalechetty Class of 2022

The RIO major is built around three key themes: mobile networks, the Internet of Things (IoT), and cloud technologies for mobile. We take a deep dive into various wireless technologies, exploring their historical development and current operations.
This major is structured to ensure we build a solid knowledge foundation before progressing toward modern applications. For example, we start with the study of a 2G network and gradually move to 5G, along with the tools required to configure and optimize wireless networks.
Each theme includes practical sessions and projects to apply what we've learned. For the mobile network component, we primarily focus on radio frames. Additionally, we collaborate on a group project centered around an IoT application. To gain a clearer understanding of the cloud, we engage in hands-on work with virtualization and analyze relevant scientific papers.

CYBERSECURITY

For those who love

- Exploring a system and diverting its use
- Cybersecurity in all its facets
- Cryptographic challenges
- Future networks and critical infrastructures
- Manage an Information System

Objectives

This major trains highly skilled engineers in cybersecurity, equipping them with expertise in the technical, organizational, and legal aspects of IT infrastructures and networks. It prepares them to effectively manage the risks associated with their ongoing transformations.

In practice

Students in this major master a wide range of cybersecurity skills, including the understanding of various security services and their cryptographic mechanisms.

They are trained to assess risks, threats, and their potential consequences, while also gaining expertise in analyzing and implementing attacks. Students also learn how to use analysis and auditing tools, develop secure applications and protocols, and implement trust infrastructures to ensure robust system security.

Theoretical training, reinforced through various practical activities such as workshops, hands-on tasks, and both group and individual projects, provides a strong foundation in key concepts and tools.

Program Director and Internship Coordinator:
Sébastien Canard
Head of international mobility: Rida Khatoun

Careers

The Cybersecurity program trains engineers in all areas of cybersecurity.

3rd year Telecom Paris option

- Cybersecurity

**Bastien Morantin
Class of 2023**

For my 2nd year of engineering school, I opted for the Cybersecurity major, because it trains us to address emerging security challenges in the digital world.

Security has become a paramount concern for all our information systems. We learn the key aspects of a secured system, how to analyze and improve them.

Our classes cover various aspects of security and explore a wide range of technical solutions, particularly through practical tasks.

I've always been fascinated by computing, so I also took the Embedded Systems path. Both are highly complementary, which will allow me to work on a project in its entirety in my future job.

TELECOMMUNICATIONS:

FROM DATA TO SYSTEMS

For those who love
- Understanding the architecture of a communication system
- Gaining insights into data transfer processes
- Exploring the workings of lasers, antennas, and other technologies

Objectives
This major offers a global and comprehensive view of communication network technologies, from both a theoretical and practical perspective.

In practice
One of the highlights of the program is the main project, which guides students throughout the year and provides a clearer understanding of communication systems while forming a coherent link between the various teaching units.

More specifically, studies will cover digital communication, optical communication, antennas and wireless electronic communication systems and their interaction, to provide a comprehensive view of a communication network.

Careers
Upon completing this major, you will have acquired a global and multidisciplinary understanding of communication systems. The 3rd year will enable you to further explore one of the program fields.

You will then be ready to join a major group, SME or an innovative start-up in a wide range of sectors, such as telecommunications, aeronautics, the automotive industry or healthcare, etc. Your profile will also attract the attention of consulting firms and technology companies. It is also posible to pursue either an industrial or academic thesis afterward.

Program Director and Internship coordinator:
Anne-Claire Lepage
Head of international mobility: Michèle Wigger

3rd year Telecom Paris option
- Integration Circuits Systems and Communicating Objects

Master-Engineer dual-degree programs
At Institut Polytechnique de Paris:
- Integration Circuits and Systems
- Optical Networks and Photonic Systems
- Radio Systems

**Joe Ing Lee,
Class of 2022**

After a 1st year which opened me up to the multitude of fields linked to digital technology, I chose to specialize in Telecommunications, a subject area which this school obviously excels in.
While highly specialized, this major is nevertheless extremely varied, covering subjects such as wave propagation, quantum optics and communication theory.
We build a strong knowledge foundation throughout the year while also having the opportunity to engage in practical tasks. A cohesive thread connects all the subjects in the syllabus, allowing us to understand real-world applications and the challenges they present.

EMBEDDED SYSTEMS

For those who love ♡
- Understanding interactions between hardware and software
- Learning through both practical tasks and theory

Objectives

The major aims to provide future engineers with theoretical and practical expertise in the field of embedded systems.

In practice

Theoretical teaching is consolidated and furthered by numerous projects and practical tasks. The themes explored cover a broad spectrum, from hardware (hardware description languages, reconfigurable architectures, runtime support) to software (programming a microprocessing system, compilation, concurrent computing), as well as modeling skills.

Careers

This training leads to opportunities in numerous industrial sectors, such as transport, telecommunications, space, nuclear energy, robotics, manufacturing, defense, and consumer electronics, etc. The major also prepares for several master's courses.

3rd year Telecom Paris option

- Embedded systems

Master-Engineer dual-degree programs

- Integration Circuits and Systems (IP Paris)
- Embedded Systems and Information Processing (IP Paris)
- Distributed Systems and Applications, Computer Science major (Sorbonne University)

Sami Tendjaoui
Class of 2023

"

I fell in love with this major. It offers a clear understanding of digital systems, from writing computer programs in C or Rust to processor architecture and FPGA circuit design. Everything we learn in class is immediately applied through highly informative practical work.

While the program requires personal investment, the teaching team is dedicated, supportive, and always available to help. Plus, small class sizes foster collaboration, making it easier for us to help each other.

"

Program director: Samuel Tardieu
Head of international mobility: Lirida Naviner
Internship coordinator: Tarik Graba

DISTRIBUTED SOFTWARE SYSTEMS

For those who love
- Designing computer systems
- Spotting current system trends
- Consolidating knowledge through practical tasks

These courses are taught in English.

Objectives

This major presents an overview of the fundamental theories, structural models, solutions, techniques and methods which are essential for distributed software and system architects or designer-developers. The aim is to provide students with concrete skills for a career in corporate engineering.

In practice

The topics covering the distribution, design, verification, validation, and the life cycle of development are renewed in pace with emerging fields of application.

Careers

This major trains future IT specialists with acquired skills in three key fields: advanced technologies in distributed systems, new development methods, and the roll-out of software solutions and business line processes in companies.

Career opportunities include:
- Distributed system architect or planner
- Development engineer in software services and systems
- Integration engineer
- Consultant
- Project manager

3rd year Telecom Paris option
- Advanced distributed software systems

> **Program directors:** Petr Kuznetsov and Rémi Sharrock
> **Head of international mobility and Internship coordinator:** Petr Kuznetsov

Master-Engineer dual-degree programs

- Parallel and distributed systems (IP Paris)
- Algorithms and Foundations of Programming, ex-Parisian Master in Computer Research (Université Paris-Saclay)
- M2 Computing in complex systems (COMASIC), Computer Science program (Université Paris-Saclay)
- Distributed Systems and Applications, IT specialty (Sorbonne University)
- Parisian Master of Research in Computer Science (MPRI/AFP), Master program in Computer Science (Paris-Diderot University, ENS Ulm, Université Paris-Saclay and IP Paris)

**Adrien Boitreaud
Class of 2023**

This major explains how large modern IT systems work, offering a solid balance between theory and practice. The theoretical part covers distributed algorithms, including blockchain fundamentals, and software development and testing methods. On the practical side, projects throughout the year help us deepen our knowledge of Java, rolling out systems to make multiple machines interact or using threads for distributed computation. In short, this major is perfect for those who want to continue coding in their third year and explore large-scale IT concepts.

3D AND INTERACTIVE SYSTEMS

For those who love
- 2D & 3D design and virtual reality
- Interactive devices and systems
- Tactile, mobile, and gesture-based interfaces
- Video games, animations, and special effects

These courses are partially in taught English.

Objectives

This major provides students with comprehensive training in human-machine interaction, computer graphics, and visualization. Our intensive training in theoretical and practical knowledge for the digital content creation will enable future engineers to design and develop advanced interactive systems for various industrial and research applications.

In practice

You will learn how to develop 2D and 3D interactive applications including desktop and mobile tools as well as web and head-mounted displays. You will work on computer graphics, human-machine interaction, and visualization through our intensive training curriculum with projects selected under your interests.

Careers

Opportunities in this field include computer-assisted design (CAD), video games, special effects, computer animation/simulation, interaction design, web and mobile applications, virtual/augmented reality, and visualization. This major also trains students for scientific careers linked to human-machine interaction (HMI) or 3D computer graphics research, with the possibility of pursuing a specialized master's program in either of these fields.

Program Directors and Internship Coordinators:
Éric Lecolinet and Kiwon Um
Head of international mobility: Amal Dev Parakkat

3rd year Telecom Paris option
- Advanced 3D and interactive systems

Master-Engineer dual-degree programs
- Image (Sorbonne University)
- Interaction, Graphics & Design (IP Paris)
- Mathematics, Vision, Learning (IP Paris/ Université Paris-Saclay)

**Arthur Lambert
Class of 2022**

This major offers a broader range of courses than others, from web design in HTML to MHI design, 3D graphics, and visualization—something for everyone. What ties them together? The significant focus on creation and visual art, which is why I chose this major. The many practical tasks and projects are both stimulating and highly rewarding, as they lead to a finished product we've designed and built ourselves—such as a restaurant terminal, 3D modeling of erosion, or an interactive presentation tool—while learning far more than in a purely theoretical class!

EXPLORE HUMANITIES, LAW, ECONOMICS, SOCIAL SCIENCES, ENVIRONMENTAL TRANSITION, LANGUAGES AND TECHNOLOGIES

Because a Télécom Paris engineer must understand how digital technology is transforming economies and societies, you will receive training in economics, law, the sociology of digital technology, general culture, management, and languages.

You are required to complete a module in economics & management, information & communication, design & sociology, a course in contemporary humanities, law, and entrepreneurship. Additionally, you can enhance your training with elective courses in science and technology.

INTERPERSONAL TRAINING
- The art of debating and leadership through body language
- Digital solidarity
- Unleashing my superpowers
- Speed strat workshop
- Public speaking and literature
- Design Thinking: innovation methodology
- Video-making workshop (write and shoot a movie)
- Societal impact and equal opportunity, acting for the world of the future
- Fostering your relational intelligence
- Engaging your body and finding your voice
- Human and leadership skills
- Guiding discussion to an agreement
- Managing and working with a team
- Negotiation
- Introduction to sci-fi literature and creative writing workshop on the theme of the future
- Relational intelligence for environmental transition
- Life design

and many others!

LAW
- Comparative International Law
- Information Technology and Computer Law
- Labor Law

CONTEMPORARY HUMANITIES
- The mysteries of classical music
- Modern-day philosophy of science
- Understanding contemporary architecture
- Introduction to psychoanalysis
- The history of invention in music
- Anthropological and visual approaches to humans, technology and society
- Philosophical questions
- The political sphere
- Design and information, an intertwined history
- Seeing the world through geography: dynamics, representations and scales
- The revenge of analog technology
- Modern and contemporary art

HUMAN AND SOCIAL SCIENCES
- Social interaction, technology and uses
- Introduction to human factors and design in digital systems
- Film, Society and Management
- Internet and Society
- Responsible innovation
- The digital economy
- Digital technology and public policy
- Corporate finance

SCIENCES AND TECHNOLOGY
- Databases
- Foundations of learning
- Building responsible and inclusive digital technology
- Technological innovation
- Machine Learning
- Optimization
- Programming paradigms
- Preparation for the programming contest
- Statistics
- Innovation in a responsible environment
- Web development

SOCIAL AND ENVIRONMENTAL TRANSITION
- Building responsible and inclusive digital technology
- Innovation in a responsible environment
- Responsible innovation: Green IT, eco-design and other applications

The diverse student body, representing over 40 nationalities, brings a wealth of cultural and linguistic perspectives that shape the curriculum of the Languages and Cultures Department. We offer an extensive array of interactive courses aimed at enhancing academic and professional skills and fostering intercultural exchanges and dialogue.

LINGUISTIC TRAINING
- Highly engaging general and themed courses in groups adapted to each student's CEFR level
- Bilingual courses
- Integration activities in association with International Relations Office and Student Union
- Intercultural training with other departments
- Guidance in official external certifications
- In-house collaboration with partners
- Tailored assistance and coaching for dual-degree and professional applications

INNOVATIVE THEMED COURSES
- Advanced Debating Techniques
- Advanced Public Speaking and Soft Skills Training
- American West
- An Adventure through American Cinema
- The Art of British Humour
- Behind the Series US
- Conflict Management
- Creative Writing
- Detective Mysteries
- Franco-American Studies
- Hip-Hop
- The Hobbit
- Internet Cultures
- Introduction to Debating
- Jazz
- Non-fiction Writing
- Professional Communication
- Promotional Skills for the Sciences
- Public Speaking Step-By-Step
- Sociolinguistics
- Technology and Ethics
- Project: Contemporary Spanish Cinema
- Project: Latin American Civilizations
- US Economy
- US Humor

AVAILABLE LANGUAGE COURSES
- English
- French as a Foreign & Second Language
- German
- Spanish
- Arabic
- Chinese
- Italian
- Russian
- Japanese
- French Sign Language

THE IP PARIS ELEVATE CENTER
Excellence in Language, Eloquence, and Verbal Advancement for Technical Endeavors
- CV writing workshops and proofreading services
- Statements of Purpose and Personal Statement support
- Scientific communication services (written and spoken)
- 3-Minute Thesis competition (3MT)

YOUR 3RD YEAR: PURSUE YOUR AMBITIONS LAUNCH YOUR CAREER

As 3rd-year students at Telecom Paris, you are already at the heart of the action. This is quite simply an extraordinary year, consisting of six months of intensive courses and a six-month immersion internship. You have the opportunity to choose from an exciting range of options to shape your future career.

TELECOM OPTION

Building on your second year, the 'in-house' Telecom option at Télécom Paris spans one semester. Alongside the courses offered in this program, you will undertake a Master Innovation Research Project (PRIM), providing a robust foundation in the innovation challenges central to businesses and research laboratories.

DUAL-DEGREE IN FRANCE OPTION

Follow a complementary master's degree offered by one of our many university partners. You will obtain a dual degree from Telecom Paris and the partner university's master's program.

INTERNATIONAL TRACK OPTION[1]

The international option consists of an exchange or a dual degree. For the latter, you will obtain a dual degree from Telecom Paris and the partner university's master's program.

INTO THE FUTURE

1 For international students, this option is offered only within the framework of a three-year program.

TELECOM OPTION

INNOVATION AT THE CUTTING-EDGE OF TECHNOLOGY
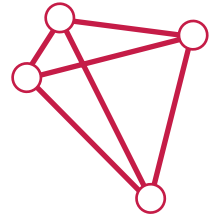
The in-house option is a natural follow-on from the second-year programs. You will choose 1 option to specialize in, out of a selection of 13, for 120 hours of teaching, in addition to a part time Research and Innovation Master Project.

THE 13 OPTIONS FOR THE 3RD YEAR

- Advanced 3D and Interactive Systems
- Image
- Integration Circuits Systems and Communicating Objects
- Artificial Intelligence in partnership with ENSTA Paris
- Management, Innovation and Digital Technology Sciences Po partenership
- Stochastic Processes and Scientific Computing
- Mathematics and Theoretical Computer Science and Operation Research
- Quantum Engineering
- Data Science, Image and Artificial Intelligence
- Embedded Systems
- Cybersecurity
- Networks, Large Digital Infrastructures and the Internet of Things
- Advanced Distributed Software Systems

THE RESEARCH AND INNOVATION MASTER PROJECT

Research and Innovation Master Project is a training program in innovation. You will carry out this project independently during one semester.

Embark on concrete projects exploring new innovation issues, assigned by partner companies and the school's research laboratories. You can also put forward a topic you wish to explore and are already working on, or an entrepreneurial subject to be supervised by Thomas Houy, associate professor in Management.

This project is enriched by additional training in key innovation skills. The aim is to fully prepare you for research, innovation and entrepreneurship in a digital world.

RECENT EXAMPLES OF PRIM PROJECTS

- E. Orisni - Graph compression by clique overlay

- H. Braun - Aggregating and finding common structure between k strings

- A. Delaunay - Product correspondence in images, based on AI techniques

- L. de Freitas Smaira - Automatic creation of features and their impact on predictions.

- C. Rydhal - Implementation and market launch of a mobile application

Multidisciplinary partnerships are available to all students, regardless of the program completed in the second year, though each option comes with specific prerequisites.

A DUAL-DEGREE PROGRAM WITH LEADING GRADUATE SCHOOLS AND PRESTIGIOUS PARTNER INSTITUTIONS

> Telecom Paris students have the opportunity to enroll at **HEC Paris**, the French leading Graduate Management School. They earn both the HEC Paris Graduate School diploma and the Telecom Paris engineering diploma in a two-year program.

> The **ENSAE Paris** dual program is a two-year course in the fields of actuarial science, data science, finance & risk management, markets and companies.

> **IFP School** offers a two-year program in the fields of energy for industrial needs and societal demands in terms of sustainable development and innovation in technical, industrial, economic and financial aspects.

> The dual-degree program with **ENS Lyon** consists of a two-year training program in research and professorship.

> A 3rd year in one of the **Institut Mines-Télécom schools**.

> A 3rd year in a school in the **ParisTech network : AgroParisTech, École Supérieure Nationale d'Arts et Métiers, etc.**

> **Management, Innovation, Digital Option** in partnership with **Sciences Po.**

This degree aims to develop innovation across all company business lines, through cross-cutting and complementary roles developed in each of our schools.

> **Sciences Po** and Telecom Paris team up to offer an innovative dual degree enabling you to acquire unique and threefold expertise **in social sciences, management, engineering and digital technology.**

> **"Digital for Health" program with Institut Mines-Télécom and Montpellier 2 University**

This program trains research and development engineers specialized in the new technologies used in all areas of healthcare.

> **"Design innovation project" Master with Ecole polytechnique, HEC Paris, Mines Paris PSL, and Paris-Dauphine University**

Certified training geared towards innovative project management in companies. This program produces experts in the implementation and steering of corporate innovation processes.

> **"Network industries and digital economy Industries" Master with Ecole polytechnique, CentraleSupelec, Paris-Dauphine University and Paris-Saclay University**

This program trains students to master the operational principles of network and digital economy industries, and acquire the analytical and methodological skills to follow fast-evolving and growing trends.

CO-ACCREDITED M2 AT IP PARIS

OR PARTNER UNIVERSITIES

Telecom Paris works closely alongside other graduate engineering schools and universities to develop master training programs.

These master's programs, recommended by Telecom Paris faculty, serve as a third-year specialization, similar to the school's in-house options.

Second-year engineering students may apply to the master's programs listed below. Admission begins in the second year and leads to a dual degree.

Institut Polytechnique de Paris also offers master programs, including 8 led by Telecom Paris:

> Integration, Circuits & Systems (ICS)
> Information Processing: Machine Learning, Communications and Security (MICAS)
> Embedded Systems and Information Processing (SETI)
> Data & Artificial Intelligence
> Interaction, Graphics & Design (IGD)
> Mathematics, Vision & Learning (MVA)
> Design Research
> Network Industries & Digital Economy (IREN)

See all the training programs on offer at Institut Polytechnique de Paris at: www.ip-paris.fr

**Master's in Design
(co-accreditation Paris-Saclay Uni.)**
M2 Research in Design

Masters in Electronics, Electric Energy, Automatics (co-accreditation Université Paris-Saclay)
M2 ICS - Integration, Circuits & Systems
M2 MICAS - Machine Learning, Communications and Security
M2 MN - Multimedia Networking
M2 ROSP - Optical Networks & Photonic Systems
M2 SETI - Embedded Systems & Information Processing
M2 Radio Systems
M2 TRIED - Information Processing & Data Use
PhD Track in Electrical Engineering for Communications & Information Processing

Master's in Computer Science:
M2 CPS - Cyber Physical Systems
M2 CSN - Computer Science for Networks
M2 Cyber - Cybersecurity
M2 Data AI - Data & Artificial Intelligence
M2 AFP (ex-MPRI) – Algorithmics and Foundations of Programming
M2 HPDA - High Performance Data Analytics
M2 IGD - Interaction, Graphics & Design
M2 MPRO - Operation Research
M2 PDS - Parallel & Distributed Systems
PhD Track in Computer Science

Master's in Innovation, Business & Society:
M2 IREN - Network Industries & Digital Economy
M2 PIC - Design Innovation Project
M2 COSI - Organizational, Strategic and Information System Consulting
PhD Track in Innovation Industry & Society

Master's in Mathematics and Applications (co-accreditation Université Paris-Saclay)
M2 MdA - Random Mathematics
M2 MVA - Mathematics, Vision & Learning
PhD Track in Mathematics Jacques Hadamard

Master's in Applied Mathematics and Statistics
M2 - Data Science
M2 - Mathematical Modeling
M2 - Statistics, Finance and Actuarial Science
M2 - Probability & Finance
PhD Track in Data Science and Artificial Intelligence

THE INTERNATIONAL OPTION[1],
AN OPENING TO MULTICULTURALISM

The overseas training period is a unique opportunity to discover new horizons while benefiting from outstanding training. Telecom Paris offers its students more than 100 partnerships in 40 countries across four continents.

International training is open to all our students from French universities or those admitted via a selective admission process in the 1st year.

The overseas training period may be certified (Dual Degree, Master of Science) or not (the Erasmus program, notably).

A Dual Degree program abroad may last 12, 18 or 24 months. The engineering internship may be carried out during this dual degree in the host country, or on returning to France at the end of the academic cycle.

INTERNATIONAL MOBILITY AT TELECOM PARIS

Students are required to spend at least one semester abroad during their studies.

The period abroad can take several forms:
Non-certified study period:
• 1 to 2 semesters in the 2nd or 3rd year
• Short stays: ATHENS weeks, summer schools
Certified study period:
• 2 to 3 semesters on a Dual Degree or Master of Science (MSc) program
• and 1 semester on an engineer internship
Engineer internship:
• six months in the 3rd year.
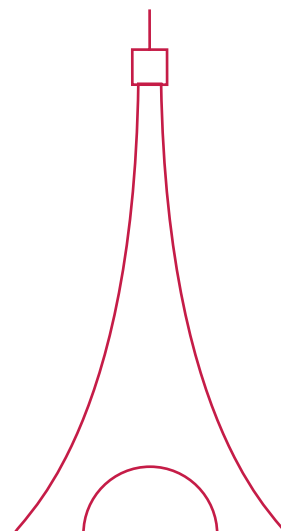**Intermediary internship:**
• July - September (between the 2nd and 3rd years).

RECENT EXAMPLES OF STUDENT MOBILITY

• Dual degree (DD) with Polytechnique Montréal, Canada.
• DD with the National University of Singapore
• DD with the Technical University of Munich, Germany
• DD with the Royal Institute of Technology in Stockholm, Sweden
• DD MSc in biomedical engineering with Columbia University, USA
• Semester-long exchange at Aalto University, Finland
• Semester-long exchange at Universidad Politécnica de Madrid, Spain
• MSc in Artificial Intelligence and Machine Learning at Imperial College, London, UK
• MSc in Computer Science at ETH Zurich, Switzerland
• Msc in Business Analytics with the Massachusetts Institute of Technology, USA

1 For international students, this option is offered only within the framework of a three-year program.

TELECOM PARIS

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INSTITUT POLYTECHNIQUE DE PARIS CAMPUS CAMPUS

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RESOURCE &
RESEARCH LIBRARY
OPEN 7 DAYS A
WEEK

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RESTAURANT
AND TWO
CAFETERIAS

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ACCOMMODATION**
NEAR THE SCHOOL
AND AT THE CITÉ
UNIVERSITAIRE DE
PARIS

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Institut Mines-Télécom

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