TELECOM ParisTech
Une école de l'IMT

MASTER OF SCIENCE IN INFORMATION TECHNOLOGY (IT) ENGINEERING IN PARIS
All curriculum is taught in English

Innovate and Foster Entrepreneurship in a Digital World

MASTER OF SCIENCE IN IT ENGINEERING IN PARIS

If you are enrolled in a partner university of Télécom ParisTech, consider applying for a Master of Science in IT Engineering, which is now available entirely in English!
This degree includes being admitted to the 2nd year of the graduate engineering programme and two years of study in France in order to obtain the "Diplôme d'ingénieur – Master of Science in IT Engineering" of Télécom ParisTech.

STRUCTURE OF THE PROGRAM

1ST YEAR

Choose two study tracks among five study tracks:
. Stochastics processes and scientific computing (MACS)
. Algebra, Codes, Crypto, Quantum (ACCQ)
. Data Science (SD)
. Strategies, Innovation, Markets (SIM)
. Signal Processing for Artificial Intelligence (TSIA)

2ND YEAR

Choose a six-month specialization and carry out a six-month engineering internship in France.

DURING THE 2 YEARS:

Complementary courses in science and humanities as well as language courses*.

French language courses are mandatory.

After two years, students obtain the "Diplôme d'Ingénieur – Master of Science in IT Engineering" degree upon successful completion of the studies.

SPOTLIGHT ON THE 5 TRACKS

ALGEBRA, CODES, CRYPTO, QUANTUM (ACCQ)*

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Description	The ACCQ study track provides an introduction to several domains of computer science and telecommunications: symbolic computation, coding theory, cryptography, and quantum information theory, which all rely to a certain extent on a common-algebra-based mathematical background.
A sample of courses	Finite algebraic structures, information theory for networks, computational algebra, introduction to algebraic curves, introduction to quantum information and computation, etc.
Job opportunities	Practical and applied complementary tracks tend to lead to careers in communication systems, networks or security engineering. An abstract complementary track it can be a first step towards a research career.

Students are expected to have previously acquired a high level in mathematics.

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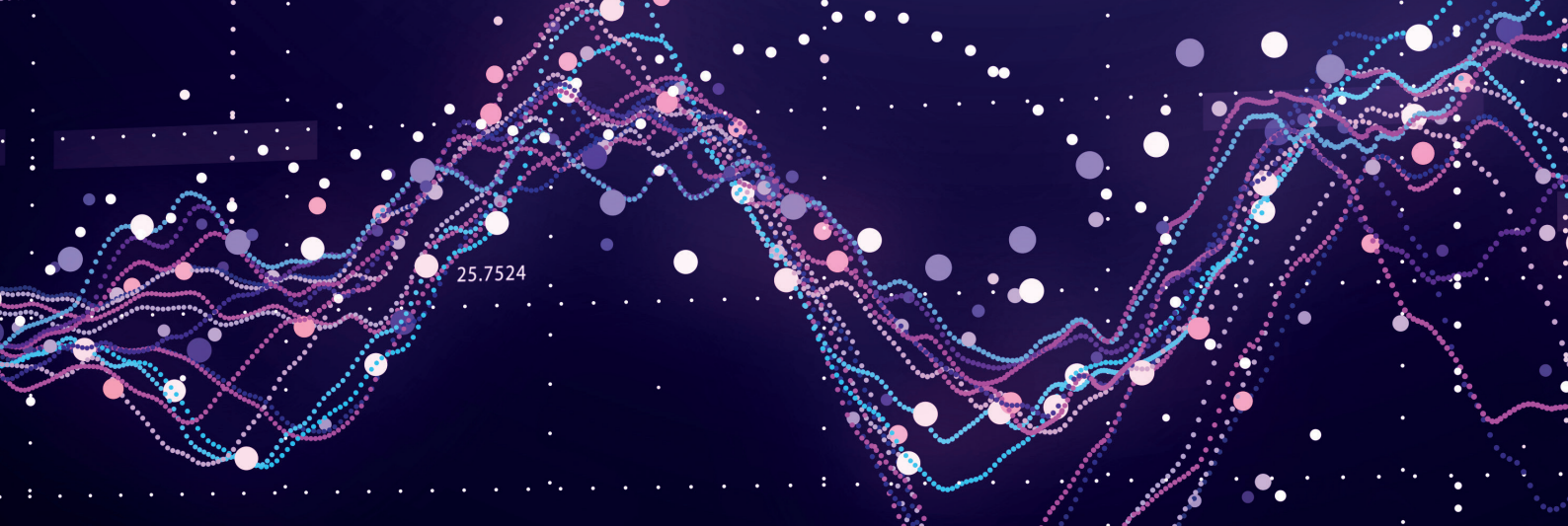
DATA SCIENCE (SD)

Description The Data Science track covers all fields related to the exploitation, management, and analysis of large datasets, both structured and unstructured.

A sample of courses Statistics linear models, machine learning , mining of large datasets, databases, Symbolic Natural Language Processing, etc.

Job opportunities Data scientist, engineering statistician, database administrator as well as Research and R&D careers in machine learning, data management, data extraction, data mining and statistics.

SIGNAL PROCESSING FOR ARTIFICIAL INTELLIGENCE (TSIA)

Description The aim of the Signal Processing for Artificial Intelligence (TSIA) track is to obtain a broad vision of machine learning and signal processing techniques and related application fields. The 2nd year courses combine a methodological approach to learn fundamental theoretical tools (statistics, optimization), techniques related to learning from big data, and specific signal processing courses to handle temporal data. Various applications fields are investigated including music and speech processing, multimedia compression, dictionary learning, sensor networks, target tracking, source separation.

A sample of courses Statistics linear models, machine learning, introduction to deep learning, etc.

Job opportunities Engineer in the fields of music, biomedicine, finance, etc.

STRATEGIES, INNOVATION, MARKETS (SIM)

Description The Strategy, Innovation, Markets (SIM) track offers a set of theoretical courses in economics and management, as well as applied courses to better understand the principles of competition dynamics, market mechanisms, the behavior of consumers, business models, the design-driven approach to innovation, etc.

A sample of courses Microeconomics and industrial organization, Economics of platforms, Digital finance, Competition and regulation of digital Economy, etc.

Job opportunities Business analyst, product manager, R&D project manager, strategy analyst and advisor, etc.

STOCHASTICS PROCESSES AND SCIENTIFIC COMPUTING (MACS)*

Description This program is dedicated to applied mathematics, more precisely in the domain of stochastic modeling and scientific computing. Possible applications are in financial mathematics, data sciences, signal and image processing and modeling.

A sample of courses Hilbert spaces and Probability, Martingales and Asymptotic Statistics , Numerical analysis , Stochastic Calculus, Continuous time Markov chains and martingales, etc.

Job opportunities Data scientist, Finance analyst, Signal and image processing engineer, etc.

Students are expected to have previously acquired a high level in mathematics.

GENERAL OVERVIEW

Degree awarded:
"Diplôme d'ingénieur" = Master of Science Degree accredited by the French Ministry of Higher Education & Research.

Language of the courses offered:
English.

Language proficiencies:
- **A minimum level of B2 in English is compulsory** with proof of English proficiency such as First Certificate (Cambridge): A, TOEFL ITP (institutional): 564 pts, TOEFL IbT (internet-based): 85 pts, TOEIC: 870 pts, IELTS: 6.5.
- **No prerequisite in French**

Admission requirements:
- A three-year minimum scientific Bachelor's degree plus a first year of Master in a relevant field before September of the following academic year.
- Nominations by your home university's international coordinator.

Organization of the curriculum:
The program lasts 24 months - two academic years which include three semesters of courses and a paid six-month internship in a company or lab.

Academic year:
Starting in September, ending in June of the following year.

How to apply:
Contact: *incoming@telecom-paristech.fr*

FIVE REASONS TO CHOOSE TÉLÉCOM PARISTECH

INNOVATION:
Ranked **N°1** French engineering school for the creation of start-ups

DIRECT ACCESS TO THE INDUSTRY:
Ranked **N°2** for company relations (L'Etudiant 2019)

ACADEMIC EXCELLENCE:
Ranked **N°2** in academic excellence (L'Etudiant 2019)

INTERNATIONAL DIVERSITY:
48% international students, **140** partners in **42** countries

MEMBER OF MAJOR CENTERS OF EXCELLENCE IN EUROPE:
Institut Polytechnique de Paris, IMT, ParisTech

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