
France is one of the leading nations in mathematics alongside the US, Russia and Great Britain. Its international influence is reflected by the numerous prestigious prizes – Fields Medal, Wolf Prize, Crafoord Prize – awarded to its mathematicians, and by the great number of French speakers invited to events.

The field of mathematics accounts for many diverse sectors and academic programs in French higher education in universities and engineering schools. It encompasses all applied professions, with a strong Master’s-level specialization, and provides research and development training in physics, electronics, computer science, chemistry, biology, with specializations in statistics, engineering, industry, and artificial intelligence.
INTENSIVE COURSE: CLASSE PRÉPARATOIRE AUX GRANDES ÉCOLES (CPGE)

YEARS OF POST-SECONDARY STUDIES – L2

Some Lycées (high schools) offer two prep classes for the competitive entrance exams to the prestigious engineering Grandes écoles. The first year: the Mathematics, Physics, and Engineering Sciences preparatory class (MPSI) with Computer Science and Industrial Science options, and the Mathematics, Physics, and Engineering and Computer Science preparatory class (MPSI) with Computer Science and Industrial Science options. The following courses are offered: the Mathematics-Physics preparatory class (MP), with Computer Science and Industrial Science options, and the Mathematics, Physics, Computer Science preparatory class (MPSI).

INTENSIVE COURSE: CLASSE PRÉPARATOIRE AUX GRANDES ÉCOLES (CPGE)

2 YEARS OF POST-SECONDARY STUDIES – L2

The CPGE is a pathway in “Mathematics and Physics” integrated to the Mathematics program of the Bachelor for the preparation, in two years, of the entrance exams to the Grandes écoles.

BACHELOR’S DEGREE

3 YEARS OF POST-SECONDARY STUDIES – L3

180 ECTS credits

The Bachelor’s degree in Mathematics offers several pathways: Mathematics for teaching; Mathematics for engineering and research; General and applied mathematics; Mathematics finance-economy; Fundamental mathematics; Mathematics-economy; Economics and finance; Mathematical engineering; Computer science; physics, chemistry; Engineering sciences; Engineering – Data sciences; Data sciences; health; Multidisciplinary mathematics; Mathematics – mechanics; Mathematics for economics; Mathematics and teaching; Mathematics for research. LAS option accès santé (health access option).

The double Bachelor’s degree in Mathematics offers several options: Management; Natural History; Humanities; Heritage; Society; Electronics; Environment; History and Philosophy of science and technology; Mechanics; Physics; Chinese; Communication and scientific mediation; Innovation in health; Data modeling and analysis.

Some specializations encompass other disciplines:
- Mathematics and Applied Sciences
- Mathematics applied to Social Sciences (MASS) pathway: Statistics and computer science
- Mathematics applied to business management (MIAGE)
- Mathematics, physics, chemistry, computer science
- Mathematics, physics, engineering sciences
- Mathematics, life sciences

Other Bachelor specializations include pathways in Mathematics:
- Economics and Management, pathway: Mathematics, computer science, economics
- Economics and Mathematics
- Computer Science, pathway: Mathematics, computer science
- Computer Science – Mathematics
- Physics, pathway: Mathematics and in-depth physics
- Science and Technology, pathway: Chemistry - physics - computer science
- Mathematics

MASTER’S DEGREE

5 YEARS OF POSTGRADUATE STUDIES – M2

120 ECTS credits

The Mathematics and Applied Mathematics degrees offer several applications and specializations: Algebra, Number Theory and Applications; Applied Analysis and Modelling; Modelling and Numerical Analysis; Actuarial Science; Statistical and Financial Engineering; Insurance; Economics and Finance; Sciences and Humanities. Statistics and data processing; statistical modeling.

The Science, Technology and Health program offers a wide range of applications and specializations: Applied Mathematics and Computer Science; Mathematics and Interactions; Fundamental and Applied Mathematics; Applied Mathematics, Statistics; Mathematics and Computer Science. Mathematics, Computer Science and Cryptology Applications; Finance, Banking, Finance, Insurance; Financial Engineering and Modelling; Mathematical Engineering and Computer Tools; Actuarial Science...

Other programs have Mathematics courses:
- Engineering sciences: Applied mathematics and information sciences
- Life and Environmental Sciences and Technologies: Mathematics and modeling economic and social sciences
- Law, Economics, Management and Social Sciences: Mathematics and computer science applied to human and social sciences; Mathematics, computer science, decision-making and organization.

Engineering schools deliver the Master’s degree in Engineering Sciences with the Applied Mathematics mention and several specializations in Information Sciences and Synthetic and Systems Biology, Design and Management of Complex Computer Systems, Vision and Learning, etc.

In the field of agriculture and agronomy, the Life and Environmental Sciences and Technologies program offers a pathway in Mathematics and Modelling in Economic and Social Sciences with a specialization in Comparative Dynamics of Development.

www.campusfrance.org > Students > Studying > Find your programme

Training programs in English:
Algebra, Geometry and Number Theory; Analysis, Number Theory and Geometry; Applied Mathematics; Computational and Mathematical Biology; Data Sciences: Health, Insurance and Finance; Applied Analysis and Mathematical Physics; Mathematics and Applications; Mathematics of Artificial Intelligence; Mathematics, Statistics; Mathematics, Modeling and Simulation; Mathematics of Randomness; Stochastic Tools and Computational Methods for Decision; Mathematics, Vision, Learning; Mathematics and Interactions; Quantitative finance.

TITLE OF ENGINEER

MASTER’S LEVEL- 5 YEARS OF POSTGRADUATE STUDIES – M2

120 ECTS credits

French engineering schools deliver diplomas accredited by the CTI (Engineering Accreditation Institution), the title of Engineer and Master’s degrees. 25 schools and institutes offer specializations in Applied Mathematics and Computer Science.

www.cti-commission.fr (in French) > Accréditation > Rechercher une école ou une formation