

Master of Science in MATHEMATICS

11/2-year program - 90 ECTS



Optional courses are classified in the following tracks (included in the 44 ECTS is the possibility to choose courses in other EPFL programs):

- Algebra and geometry
- Algorithmic and discrete mathematics
- Analysis
- Numerical analysis
- Probability and interactions / Statistics

Students may choose an additional 30 ECTS minor or opt for a Teaching specialization (additional 30 ECTS at the *Haute école pédagogique du canton de Vaud*).

School of Basic Sciences go.epfl.ch/master-mathematics Contact: sma@epfl.ch

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Optional courses	40
Algebra and geometry	
Advanced analysis on groups	5
Algebraic geometry II - Schemes and sheaves	10
Algebraic geometry III - Selected topics	5
Algebraic K-theory	5
Complex manifolds	5
Differential geometry IV - General relativity	5
Ergodic theory	5
Homotopical algebra	5
Introduction à la géométrie riemannienne	5
Lie groups	5
Linear algebraic groups	5
Number theory - Modular forms	5
Number theory - Selected topics	5
Number theory - Cryptography	5
Representation theory of semisimple lie algebras	5
Riemann Surfaces	5
Student seminar in nure mathematics	5
Topics in arithmetic geometry	5
Topology - Cohomology rings	5
Algorithmic and discrete mathematics	
Integer optimisation	5
Mathematical modeling of behavior	5
Metric embeddings	5
Calculus of variations	5
Dispersive PDEs	5
Distribution and interpolation spaces	5
Harmonic analysis	5
Lattice models	5
Nonlinear Schrödinger equations	5
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