

# MATHEMATICS

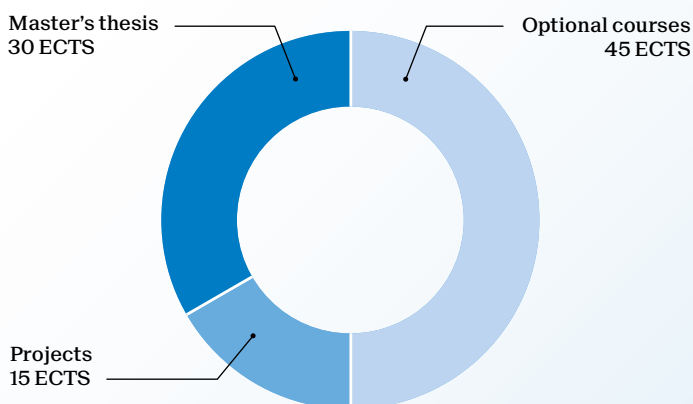
MASTER





# Master of Science in MATHEMATICS

1 1/2-year program - 90 ECTS



Students must choose between the following two orientations:

## Fundamental mathematics

- at least 30 credits in list A

## Applied mathematics

- at least 30 credits in list B

It is possible to choose an additional 30 ECTS Minor.

## Recommended minors:

- Management, Technology and Entrepreneurship
- Science, Technology and Area Studies

	Orientations			Credits
Optional courses	A	B	C	45
Advanced regression		B	C	5
Algebraic curves and cryptography	A	B		5
Analyse fonctionnelle II	A	B		5
Analysis on groups	A			5
Biostatistics		B	C	5
Calcul des variations	A			5
Combinatorial optimization		B	C	5
Commutative algebra	A			5
Computational finance		B		5
Computational linear algebra		B		5
Convexity		B		5
Differential geometry of framed curves	A	B		5
Elliptic partial differential equations	A	B		5
Géométrie hyperbolique et groupes discrets	A			5
Gödel and recursivity	A			5
Harmonic analysis	A	B		5
Introduction à la géométrie riemannienne	A			5
Introduction to algebraic geometry	A			5
Lattice models	A		C	5
Martingales in financial mathematics		B	C	5
Mathematical modelling of behavior		B		5
Mathematical modelling of DNA		B		5
Number theory in cryptography	A	B		5
Numerical approximation of partial differential equations I		B		5
Numerical approximation of partial differential equations II		B		5
Numerical integration of stochastic differential equations		B		5
Numerical methods for conservation laws		B		5
Numerical methods for electromagnetics			C	5
Packing and covering		B	C	5
Parabolic and hyperbolic PDEs	A	B		5
Probabilistic method		B	C	5
Probability theory		B	C	5
Risk, rare events and extremes		B	C	5
Robust and nonparametric statistics		B	C	5
Set theory	A			5
Statistical theory		B	C	5
Statistics for genomics		B	C	5
Statistique multivariée		B	C	5
Théorie du calcul stochastique		B	C	5
Topics in number theory	A			5

Projects				15
Project in Mathematics				9
Project in human and social science				6