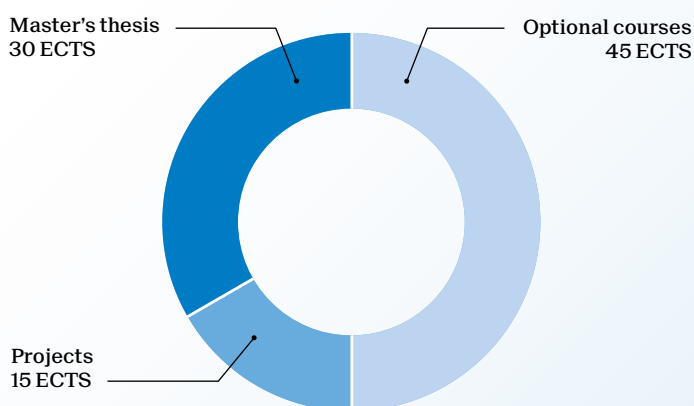


# Master of Science in MATHEMATICS

1 1/2-year program - 90 ECTS



Students must choose between the following two orientations:

## Fundamental mathematics

- at least 30 credits in list A
- at most 5 credits in list D

## Applied mathematics

- at least 30 credits in list B
- at most 5 credits in list D

It is possible to choose an additional 30 ECTS Minor.

## Recommended minors:

- Management, Technology and Entrepreneurship
- Area and Cultural Studies

	Orientations				Credits
Optional courses	A	B	C	D	45
Analyse fonctionnelle II	A	B			5
Analysis on groups	A				5
Arithmetic groups	A				5
Biological modeling of neural network				D	4
Biomedical signal processing				D	6
Combinatorial optimization		B	C		5
Computational finance		B			5
Computational linear algebra		B			5
Convexity		B			5
Differential geometry of framed curves	A	B			5
Gödel and recursivity	A				5
Harmonic Analysis	A	B			5
Information theory and coding				D	7
Introduction to algebraic geometry	A				5
Lattice models	A		C		5
Linear PDE's	A	B			5
Martingales in financial mathematics		B	C		5
Mathematical modelling of behavior		B			5
Mathematical modelling of DNA		B			5
Number theory in cryptography				D	4
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 integration of dynamical systems		B			5
Numerical methods for conservation laws		B			5
Probabilistic methods		B	C		5
Probability theory		B	C		5
Introduction à la géométrie riemannienne	A				5
Relativity and cosmology I				D	4
Relativity and cosmology II				D	4
Risk, rare events and extremes		B	C		5
Robust and nonparametric statistics		B	C		5
Set theory	A				5
Signal processing for communications				D	6
Statistical signal and data processing through applications				D	5
Statistical theory		B	C		5
Statistique multivariée		B	C		5
Théorie du calcul stochastique		B	C		5
Topics in number theory	A				5
<b>Projects</b>					<b>15</b>
Project in Mathematics					9
Project in human and social science					6