Curriculum

The program is 3 semesters long, but it can be extended up to 6 semesters. The education comprises of obligatory courses, optional courses, and a master thesis. The student should follow 12 semester courses, out of which at least 4 are in mathematics and 4 in computer science. The courses are to be chosen from a list published annually by the Section of mathematics together with the Department of computer science. Obtaining a diploma gives 90 credits.

3 semesters
(max 6
semesters)
90 credits*

Compulsory and optional
Teaching
60 credits
Geometric integration, Ising model, Number theory, Knot theory, Lie algebras, Probabilistic algorithms, Parallel algorithms, Bioinformatics, Data mining, Multimedia security, etc.

Master thesis
30 credits

* ECTS (European Credit Transfer and Accumulation System) credits: a measure of the work required for a given programme. One semester equals 30 ECTS credits. One credit corresponds to 25-30 hours of work. ECTS enables students to move from one European university to another.

Teaching language:
French and English, limited knowledge of French may be sufficient

Criteria for admission:
Bachelor in Mathematics and Computer Science or Bachelor in Mathematics or Bachelor in Computer Science or a degree considered equivalent

Tuition fee:
CHF 500 per semester

Contacts

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Deadline: April 30
Conditions of enrolment
www.unige.ch/immat

www.unige.ch/math

Mathematics is a dangerous science: it reveals deceptions and calculation errors.

Galileo Galilei
(1564-1642)

Mathematics and Computer Science
Master of science
Masters of Science
The Masters program of the internationally top-ranked Faculty of Sciences constitutes an ideal entry point for professional and academic careers. They cover a broad range of scientific disciplines: Mathematics, Computer Science, Physics, Chemistry, Biochemistry, Biology, Prehistoric Archaeology, Geology, Environmental Science, Pharmacy, Neuroscience and Proteomics and Bioinformatics.

Objectives of the education
Master in Mathematics and Computer Science gives an in-depth introduction to different areas of mathematics by integrating into it programming and new computing technologies. This training allows the student to establish concrete links between various theories and methodologies of mathematics and computer science. Students can thus master subjects such as modelling, simulation, information management, database or multimedia security development.

Career opportunities
The Masters degree in Mathematics and Computer Science leads to multiple possibilities in and outside Switzerland:

- Academic research (PhD, post-doctoral studies)
- Teaching
- Applied research
- Telecommunications
- Banking sector
- Insurance
- Corporate IT

In addition to careers in teaching and research, there is also significant demand for Masters graduates in the private sector, not only for their mathematical skills, but also for their ability to develop specialized method for analyzing and solving practical problems in a logical and creative way.

Fellowship
The Faculty of Sciences, in collaboration with several sponsors, has established an Excellence Fellowship Program to support outstanding and highly motivated candidates who intend to pursue a Master of Science in any of the disciplines covered by the Faculty. Admission criteria can be consulted on our website. French proficiency is not a formal requirement for the Masters of the Faculty of sciences.

Application for an Excellence Fellowship is open to students from any university with very good performance in their studies (belonging to the top 10% of their bachelor’s program) and who have completed the Bachelor degree or expect to complete it within 6 months. Selection of the applicants will be based on excellence. Evaluation will be made on the basis of the documentation sent by the applicants.

Additional information is available at www.unige.ch/sciences/Masters.