

MSIAM

Master of Science in Industrial and Applied Mathematics

Grenoble INP-Ensimag / Université Grenoble Alpes-IM2AG

The Master of Science in Industrial and Applied Mathematics (MSIAM) offers a large spectrum of courses, covering areas where the research in applied math in Grenoble is at the best level.

Our graduates are trained to become experts and leaders in scientific and technological projects where mathematical modelling and computing issues are central, in industry or research.

Currently, applied mathematics is an area that provides many job opportunities, in industry and in the academic world.

There is a great demand for mathematical engineers on topics such as scientific computation, big data analysis, imaging and computer graphics, with applications in many fields such as physics, medicine, biology, engineering, finance, environmental sciences.

Experienced graduate faculty members teach in this program and bring their expertise in a wide range of areas of mathematics including applied analysis, numerical analysis and scientific computing, probability theory and statistics, computational graphics, image analysis and processing, and applied geometry.



Academic program

The academic program is a two-year Master program (120 ects) , fully taught in English. It combines three semesters of courses and laboratory work with a six-month individual research project.

The first year (60 ects) is composed of a common core, which provides theoretical and practical grounds in probability and statistics, PDE and modelling, images and geometry as well as computer sciences, optimization and cryptology. All courses include a substantial time of practical sessions, mostly with Python and C++.

In the second year, the third semester (30 ects) is essentially divided in 2 tracks:

- Data Science
- Modeling, Scientific Computing and Image analysis

The fourth semester (30 ects) is devoted to the master thesis project.



Who should apply?

To be admitted to the program, candidates must have previously completed their undergraduate studies and been awarded a Bachelor degree in Mathematics or Applied Mathematics, or equivalent. MSIAM is a two-year Master Degree. Students can apply to M1 (1st year) or directly to M2 (2nd year).

/ Admission in M1 (MSIAM 1st year): Anyone holding a L3 or Bachelor Degree in applied mathematics or mathematics, with a background in both mathematics and numerical programming. Candidates should be interested in pursuing a high level mathematical education and motivated by the applications of mathematics.

/ Admission in M2 (MSIAM 2nd year): Anyone holding a first year of master (60 ects credits) in mathematics or applied mathematics or an equivalent degree, interested in pursuing a high level mathematical education and motivated by the applications of mathematics. The minimum requirement is to have earned at least the equivalent of 240 ects credits.

/ Students from related backgrounds (physics, computer science, engineering...) may also apply provided they possess outstanding mathematical qualifications and are highly motivated by applications.

Language requirements

/ Students from countries where English language is not the primary language are required to provide evidence of Competence in English.

The requirement is waived for applicants from English speaking countries as well as applicants whose previous degree is from a program taught in English.

English scores required: TOEFL IBT 78 / TOEIC 700 / IELTS 6.0. This is equivalent to the CEFR level B2.

/ An A2 level in French is recommended in everyday life.

Admissions:

<https://relint.ensimag.fr/MainEn/Admission>

Application deadlines :

Non-European students

Mid-April

European students:

End of June

Contact :

msiam@ensimag.fr

Website:

<http://msiam.imag.fr>