



# MoSIG

## Master of Science in Informatics at Grenoble

Université Grenoble Alpes-IM2AG / Grenoble INP-Ensimag

The Master of Science in Informatics at Grenoble offers access to world-class graduate training in a domain where the scientific research community in Grenoble is particularly strong. MoSIG is a highly competitive, two-year European standard (LMD) graduate program, entirely taught in English.

### Academic program

The Master's Program (120 ECTS) combines three semesters of courses and laboratory work (90 ECTS) with a six-month individual research project (30 ECTS). The first semester is composed of a common core curriculum of fundamental courses in Informatics. During the second semester, students have the opportunity to choose a selection of introductory courses to different subdomains. During the third semester, students follow an advanced academic program in one of the seven areas of specialization. The fourth semester is devoted to the master research project, conducted under the direction of an academic supervisor within one of the research teams associated with the program.



### Admission

To be admitted to the program, candidates must have previously completed their undergraduate studies and been awarded a Bachelor degree in either Science (BSc) or Engineering (BEng) in Computer science, Computer Engineering, Informatics or Applied Mathematics and solid practice in programming.

While students are normally expected to follow the full 2-year program, it is possible for students with a strong academic background and the necessary prerequisite courses to apply for admission directly to the second year.

Selection is based on

- prior academic and/or scientific achievement as documented by academic transcripts,
- completed on-line application form,
- a motivational essay,
- letters of recommendation,
- standardized test scores for English language competence (B2 level required),

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

An A2 level in French is recommended for everyday life





## First Semester

The first semester is a 12-week (September-January) program designed to ensure competence in core areas of Informatics.

**Students are required to follow 24 ECTS from the following courses:**

- Principles of Operating Systems
- Mathematics for Computer Science
- Software Engineering
- Visual Computing
- Programming Languages and Compiler Design
- Algorithms and Program Design
- And 6 ECTS of non-elective courses:
  - English and/or French language training (3 ECTS)
  - Programming Project (3 ECTS)

## Third Semester

The third semester (first semester of the second year, September-January) is composed of a 120 week academic program which includes 30 ECTS credits from one of the following specialized programs.

The specialized programs include 18 ECTS in one of the following areas plus 12 ECTS chosen among the optional courses (all areas):

- Advanced Information Systems & Software Engineering,
- Artificial Intelligence and the Web,
- Data Science,
- Graphics, Vision and Robotics,
- High-confidence Embedded and Cyberphysical Systems,
- Parallel, Distributed and Embedded Systems,
- Ubiquitous and Interactive Systems.

## ■ Master project (February to July)

The final semester is devoted to an individual research project conducted at a local research laboratory, under the supervision of the academic supervisor.

The research project requires an original solution to a problem situated within an existing scientific domain.

Continuation for doctoral studies requires demonstration of aptitude for scientific research.

## Second Semester

The second semester is composed of a 12-week (February-May) academic program, followed by participation in a 4-week internship in a research group (June).

The academic program combines advanced work on fundamental topics as well as introduction to more specialized subjects.

**Students should select 21 ECTS from the following courses:**

- Data Base Foundations
- Adaptive Computing Systems
- Operations Research
- Computer Networks Principles
- Intelligent Systems: Reasoning and Recognition
- 3D Graphics
- Introduction to Robotics
- Introduction to Cryptology and Coding
- Introduction to Human Computer Interaction
- Introduction to Distributed Systems

The laboratory internship is worth 6 ECTS credits. The program also includes a language course (English or French) of 3 ECTS credits.

After the first year of the program it is also possible to enter the Master in Cybersecurity (CySec)

[http://cybersecurity.imag.fr/index\\_en.html](http://cybersecurity.imag.fr/index_en.html)

## Tuition and fees

Approximately 500 Euros /Year Note that tuition fees are highly subsidized by the French Government.

## Application Deadlines

- Non-European Students: Mid-February
- European students: Mid-May

## Contact:

[mosig@ensimag.fr](mailto:mosig@ensimag.fr)

## website :

<http://mosig.imag.fr>