



Cybersecurity

Master of Science in Cybersecurity

International master's program fully taught in English.

This program is offered jointly by Université Grenoble Alpes (UGA) Faculty of Science, IM²AG and Grenoble INP Ensimag, UGA / France



With the increasing externalization of corporations and organizations in an interconnected world, security of information systems and integration of data protection technologies are now among the most critical issues. Security of Information Systems is thus an active field of research, both academically and industrially.

Within the Grenoble Alpes community, the Grenoble technopole gathers international level experts in Computer Science, Mathematics and Electronics from UGA (Université Grenoble Alpes), working together in the fields of Security of information systems and Cryptology.

Objectives

Training cybersecurity experts in:

- › Risk analysis and audits, certification for security evaluation
- › Security of software, hardware, operating systems and networks
- › Security architecture, secure
- › Cryptology, privacy.

Academic program

SEMESTER 1

SEPTEMBER > FEBRUARY

Common core

- › Software security, secure programming and computer forensic
- › Security architectures: network, system, key managements, blockchains, cybersecurity of industrial IT
- › Cryptographic engineering, protocols and security models, data privacy, coding and applications
- › Threat and risk analysis, IT security audit and norms
- › Physical security: embedded, smart cards, quantum

Elective courses

- › Advanced Cryptology
- › Advanced Security

SEMESTER 2

FEBRUARY > SEPTEMBER

Master thesis (30 ECTS)

ADMISSIONS

Students are selected and admitted to the program based on their academic records, language skills, motivation and a assessment of their ability to successfully complete the program.

The CySec master program is a one-year (M2) specialized program.

To enter the program, students are selected after successful completion of:

- › **MSc in Informatics or Mathematics at Grenoble** (M1 MoSIG, M1 AM, M1 Mathématiques, M1 Informatique)

- › **Alternatively an equivalent M1 program** in France or abroad.

Candidates must have previously completed their undergraduate studies and been awarded a Bachelor's degree in either Science (BSc) or Engineering (BEng) in Computer Science, Computer Engineering, Informatics or Applied Mathematics and solid practice in programming. Skills in mathematics (algebra, probability theory, arithmetic) are required.

The minimum requirement is to have earned at least the equivalent of 240 ECTS credits, candidates must have a 4-year Bachelor's Degree or be currently enrolled in Master's study.

RELATED RESEARCH LABS

Institut Fourier, LJK, LIG, VERIMAG, Gipsa-Lab, TIMA, LCIS and also Inria research center.

Those labs federate their research in cryptology and security within the IDEX Cross disciplinary Grenoble Alpes CyberSecurity Institute, in collaboration with the CEA and the Social Sciences community

REQUIREMENT

English language competence B2
(see English test scores accepted on our admission webpage)

A2 level recommended in French

APPLICATION DEADLINE

End of April



Contacts

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<https://ensimag.grenoble-inp.fr/fr/formation/masters>

