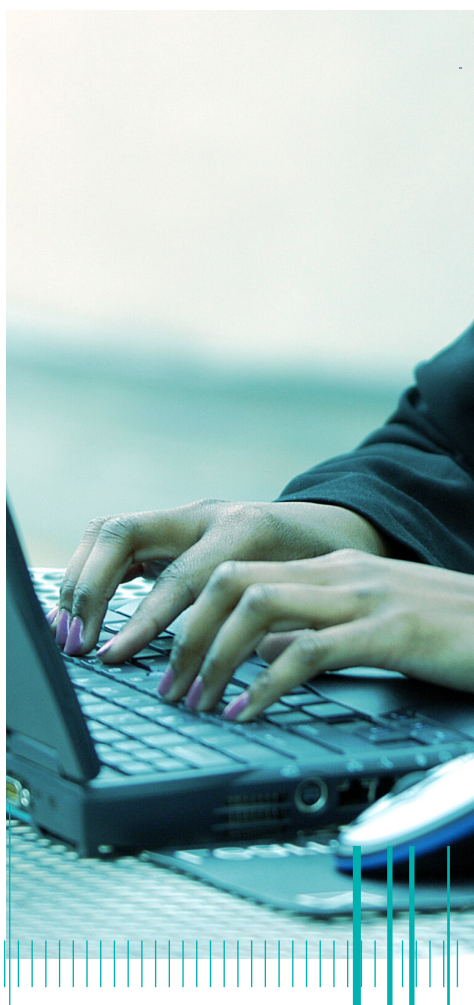


Sciences, Technology and Health

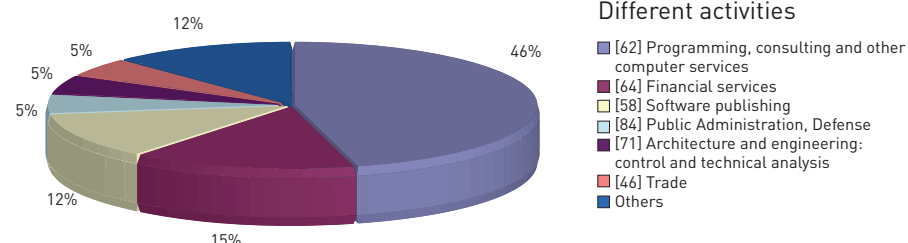
Ingénieur diplômé (Engineering Master Degree) Major in Computer Science



OBJECTIVES

► In computer science, Sup Galilée aims at educating high-level engineers who can address any computing problem and provide broad and relevant solutions in terms of soft and hardware. Our engineers are able to manage a project and operate at all levels of the process: analysis, modeling, implementation, certification, and maintenance.

Engineers in Computer Science operate in all sectors where new systems are needed: they design and develop new models, they assemble, consolidate and adapt existing software, they manage large computing systems and networks. All kinds of businesses are concerned: major companies of the manufacturing and service industry (energy, transport, automotive, bank, insurance) and small dynamic companies specialized in new technologies or computer service.



ADMISSION REQUIREMENTS

Admission in first year is subject to a selection based on qualifications and interviews. The process is opened to undergraduate in computer science (bachelor or equivalent to French DUT, two years after secondary school).

Approval to continue studies (French "avis favorable à la poursuite d'étude") is required.

Admission is also opened to students in Science, through the Polytech (previously Archimède) competitive entrance examination process.

Admission is automatic for students who have successfully completed an accredited Engineering school integration program.

Admission in second year is subject to a selection based on qualifications and interviews. It is opened to graduates in computer science.

In case you are not sure your situation meets these requirements, please contact the School office for further information (phone and e-mail below).

POLYTECH COMPETITIVE ENTRANCE EXAMINATION

► Application should be filed before mid-January:
www.scei-concours.fr
www.demain-ingenieur.fr

APPRENTICESHIP :

► Sup Galilée offers an apprenticeship course for "computer science and networks", focused on network and system programming, web technologies and multimedia content. For information, see: www.sup-galilee.univ-paris13.fr, in the « apprentissage » tab.

Program Organization

The program lasts three years. Each year combines theoretical and practical courses: lectures, tutorial classes and lab work. In addition to specialized scientific skills-our engineers' "core competencies", we aim at giving our students a broad scientific knowledge base: statistics, numerical methods, signal processing. Acquisition of corporate culture makes up for an important part of the curriculum (20% of our courses): economics, management, entrepreneurship, project management, labor/employment laws, IT legislations, intellectual property rights, communication and presentation skills. Special attention is given to the acquisition of full proficiency in English (European level B2+).

1 FIRST YEAR

The focus of this year is a strong and broad knowledge in computer science: operating systems, computer architecture (with a special focus on software/hardware interface, algorithmic methods, database, software engineering...). Students are also trained to C and object-oriented programming (Java). These courses are broadened by:

- Lectures on more theoretical approaches: logics, semantic of programming languages, as well as theory of language
- Modules aiming at introducing the students to specialized disciplines or application fields (computer graphics, man-machine communication).

This first year gives a great importance to lab work. In addition, during the second semester, students are required to complete a project of approximately 200 hours. The year ends on an internship in a company (one month).

2 SECOND YEAR

Courses are focused on in depth knowledge in software engineering (architecture, advanced specification) and database (management systems), operating systems (administration) and in programming (C++, introduction to logical and functional programming). The program also includes a major operations research module (linear programming, discrete optimization) and introductory courses to computing networks and to graphical interface techniques and web programming.

From November to June, students are confronted to a real-life software project management: teams of three to five students work on a project of about 150 person-day. They cover all the phases of the project, from the response to the call to the full implementation of the project.

SPECIAL ARRANGEMENTS FOR THE THIRD YEAR

Time abroad is encouraged, some students being allowed to spend part or full time of their third year abroad. On the other hand, some students can, subject to specific conditions, apply to the Master in Computer Science of Institut Galilée, in addition to their current curriculum. The different courses of this master, in line with the options of the third year, focus on a specialty in decision computing, numerical content management and in operational research. Students then complete an internship in a research and development department or laboratory.

3 THIRD YEAR

After core courses to complete the knowledge base (compilation, parallel and distributed algorithm), in algorithms and in networks (routing, services, cryptography and security), students choose one of the two following options:

- Application fields, from decision support systems to optimization
- Techniques of Information research and Content acquisition.

The end of year project begins in September and is completed by February. It can consist in a technological monitoring or a preliminary review for an industrial client. From March ongoing, students are immersed in the professional world, for four to six months. This internship completes the program and offers plenty of opportunities to test and practice the knowledge base.

INTERNSHIP

- First Year: 4 weeks of internship
- Second Year: 8 weeks
- Third Year: 4 to 6 months.

PROJECTS

- First Year: development, 200 hours
- Second Year: full cycle, 150 person-day
- Third Year: exploration, monitoring or prototyping, for an industrial client

> INTERNATIONAL

Engineer students can choose to carry out part of their program abroad, through different organizations and academic exchange schemes such as Erasmus, Socrates, Micefa, Crepuq. Most of our students go to Canada, United-States, Scotland, Sweden or Japan.

Director of Institut Galilée Frédéric Roupin • **Associate Director, responsible for Education** Thierry Hamon

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