RÉPUBLIQUE FRANÇAISE
Liberté Égalité Fraternité

GRENOBLE INP UGA Phelma

Graduate School of Engineering in Physics, Electronics, Materials Sciences

Master of engineering in Integrated Electronic Systems

SEI

PRESENTATION

This program addresses up-to-date topics on the design of software and hardware architectures for embedded systems, Systems on Chip (SoC), digital and analog microelectronic circuits, and Radio Frequency (RF) integrated circuits.
Students are trained in specification, design, validation, and experimentation on the latest micro and nanoelectronic technologies.
The second-year is a specialization either in digital design (SoC option) or in RF Integrated Systems design (SyRF option, courses in English). Students following the SyRF specialty may follow in parallel the master WICS (courses in English). The last semester of the two options consists in an internship in a research laboratory or in industry.
Students may follow seminars on sustainable electronic design all along with their studies (SUMMIT Graduate School GS@UGA).

INDUSTRIAL SECTORS

The students may find jobs as an engineer or a researcher in large consortiums (NXP, STM, ARM, CEA, HP, Orange Labs, Thales, Safran, Soitec, Synopsys, Siemens, Asygn, Dolphin design, Schneider Electric, INTEL, Apple,...) or SME or academia.

Our students are experts in:

- High-performance microprocessors and multiprocessors design
- Wireless systems design
- Systems verification
- High security and reliable design
- Sustainable electronic, green computing
- Integrated solutions for biochips

Their jobs are in the fields of:

- Automotive, avionics, space, military
- Multimedia and Mobile systems
- Telecommunications
- IOT
- Artificial Intelligence (AI)
- etc.

RESEARCH

During the first year of the program which may lead to an internship in a lab during the summer. In the second year, students may also choose an internship in a research lab. Students registered in the SUMMIT program must achieve a project in a research lab during the second semester of the first year.

ASSETS

The students are trained on up-to-date platforms in the CIME Nanotech. It is a teaching and research center of 8 platforms of excellence: Design and Test, Clean Room, Electrical Characterization, Nano Characterization, Communicating Objects, Hyper Frequencies, and Optical Waveguides, Biotechnology, and Microsystems. The students use up-to-date CAD industrial tools. These platforms allow the newly graduated to be directly operational in the industry. The Integrated Electronic Systems department proposes several dual degree agreements with Karlsruhe, Darmstadt, Stockholm, Linköping, Politecnico de Torino, San Paolo and exchange agreements in the top universities in Europe, Morocco, Lebanon, south America (Brasilia, Chili, Colombia,...), Canada...

PRESS RANKINGS

Shanghai
Since 2020, Grenoble INP - UGA has contributed to the international ranking of the University of Grenoble Alpes
Shanghai Global 2022
Grenoble Alpes University ranked among the 150 best universities in the world and in the top 5 of French universities.

QS 2023 ranking by theme: Grenoble INP - UGA makes good progress in the field of engineering and technology
Grenoble INP - UGA has made good progress in the overall field of "engineering and technology", moving up 74 places to 93rd position worldwide and 5th position in France, making it the leading institution outside the Paris region. The institute has made eight appearances in this ranking.

REUTERS

Grenoble INP - UGA leader in 2 lists from Reuters Ranking 2019

Most innovative universities in Europe
- 2nd of the French Engineerings Schools
- 13th in France

Grenoble INP - Phelma, UGA is the school for scientific diversity. It offers its students courses in various fields with a promising future:

- **Microelectronics and nano-technologies** (electronics, nanosciences, materials, health),
- **Decarbonated energy** (nuclear energy, photovoltaic, electrochemical storage),
- **Information technology** (digital communication, image and signal processing, telecommunications, computing and networks, Internet of Things, artificial intelligence),
- **Innovative materials** (for aeronautics, automobiles, sport & leisures, health, microelectronics, energy),
- **Biotechnology and biomedical engineering** (medical imagery and therapy, implantable devices),
- **Sustainable development** (decarbonated energies, eco-processes, recycling, material durability, energy management, natural signal analysis).

Based in Grenoble in the heart of the French Rhône Alpes region, Phelma boasts a rich academic and industrial infrastructure. As the only teaching institute on the Minatec innovation campus, Phelma benefits from an exceptional Training / Research / Industry synergy.

GRENOBLE INP Phelma UGA

1,400 students
380 + Engineering graduates a year
+ More than 25% of engineering go on to complete a thesis

110 permanent teacher-researchers from **11** laboratories associated with the school
Approximately 370 stakeholders from industry and research

CONTACT

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