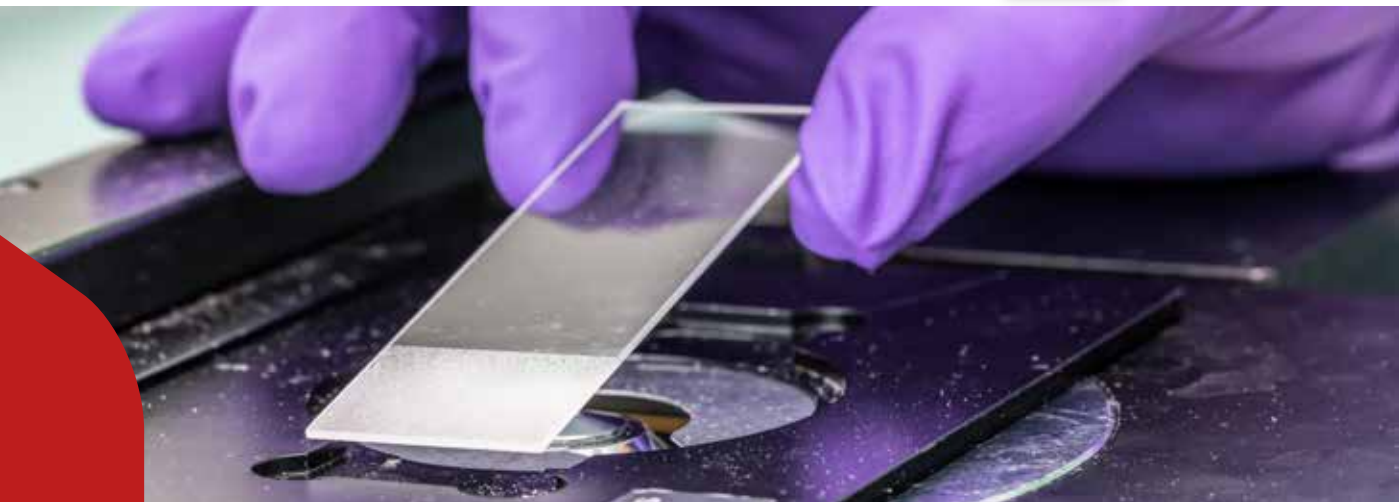


Master of engineering in Biomedical engineering



PRESENTATION

Biomedical Engineering at Phelma provides integrated training for engineers who are able to apply engineering concepts and technology to the modern challenges in biology and medicine. We offer two speciality tracks: "**Medical Imaging and Therapy**" and "**Medical Devices and Diagnostics**". Building on a solid curriculum in physics, mathematics, electronics and instrumentation, students will be trained in biology and medicine to develop strong interdisciplinary skills. Emphasis is put on practical training with wet-lab, programming and clean-room sessions. The curriculum includes two internships, either in industry or in a hospital or academic research facility. The full program is taught in English. Students graduate with a Grenoble INP - Phelma, UGA Engineer degree and can opt for a double degree including a Masters in Nanomedicine and Structural Biology or a Masters in Nanobiology and Nanobiotechnology.

INDUSTRIAL SECTORS

Phelma Biomedical engineers have career options in a wide variety of sectors of the healthcare and medical device industry as well as in biomedical research. The "**Medical Imaging and Therapy**" speciality focuses on design and innovation in different imaging techniques and radiotherapy, including the development of image processing and artificial intelligence applied to health data. The "**Medical Devices and Diagnostics**" speciality trains engineers to create innovative molecular markers and miniaturized devices for tissue engineering, diagnosis and health applications. Career opportunities can be found in research & development, production, quality control, maintenance, sales and marketing. Typically, 30% of Phelma Biomedical Engineers do a PhD.

RESEARCH

Biomedical engineering at Phelma is strongly associated with Grenoble INP - UGA research labs LMGP, IMEP-LAHC, GIPSA and G2ELab within Grenoble's very dense and active industrial and research network in biomedicine. Start-up companies, multinationals and public university and research centres (CEA, Grenoble Institute of Neurosciences, etc.) as well as major European research institutes (ESRF, ILL, EMBL), all actively involved in biomedical research, are located in Grenoble. Unique biomedical-technology platforms, like Clinatec, develop novel technical solutions for neuroprosthesis and neurostimulation and test them directly on patients. Outstanding internship and career opportunities are available within this local network.

ASSETS

Biomedical engineering at Phelma thrives at training students by providing a maximum of experimental and project work in close contact with local researchers. Clean room and molecular and cell biology platforms (CIME Nanotech) provide access to state-of-the-art technical equipment allowing students to train in research conditions. Collaborations with professionals from local industry, research and medical institutions are actively encouraged by invited lectures, seminars and on-site visits so as to facilitate direct contact with the students. Coming to Grenoble is a unique opportunity to start a career at the frontier of physics, chemistry and biology.



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 Engineering 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 & leisure, 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.



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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