The strong partnership with engineers and researchers of EDF R&D and CEA working on materials for nuclear industry will allow you to refine your professional project. The international Master MaNuEn will allow you to become a nuclear engineer or a researcher in R&D department. As an engineer you will have knowledge ranging from design and construction, to operation and maintenance to power station decommissioning and waste management to the fuel cycle. As a researcher you will be able, often after a PhD, to enter in the large R&D center involved in nuclear engineering (EDF, AREVA, CEA...) but also in the academic laboratories in all around the world.

INDUSTRIAL SECTORS

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In Grenoble there are several laboratories involved in the nuclear research. The group nuclear physics at LPSC laboratory (www.lpsc.in2p3.fr) is for example working on the physics of reactors (molten salt reactors, nuclear data, thorium, and accelerator driven systems). The SIMAP laboratory (www.simap.grenoble-inp.fr) is involved in multiscale modelling of irradiation defects in materials and also in materials behavior for fission reactors and ITER. The LEPMI laboratory (www.lepmi.grenoble-inp.fr) is also involved in nuclear engineering (fluid dynamics, corrosion...).

**THE STRONG POINTS OF THE MASTER ARE:**

- A strong partnership with EDF and CEA: this master is supported by this two key actors of nuclear industry
- 50 % of the course are given by engineers and researchers from EDF and CEA-INSTN
- Two M2 modules courses in industry: 3 weeks are planned at the CEA Cadarache and one week at the R&D center of EDF in Renardières near Paris
- All courses are provided in English in an international environment
- General courses on energy

**RESOURCES**

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

- **micro and nano-technologies** (micro / nano-electronics, nano-sciences, materials, health, building, etc.),
- **energy** (nuclear energy, renewable energies, accumulators, etc.),
- **innovative materials** (for aeronautics, automobiles, sport & leisure, health, microelectronics, energy, etc.),
- **information technology** (digital technologies, image and signal processing, telecommunications, computer science & networks, embedded softwares, etc.),
- **biomedical engineering** (medical imagery and therapy, implantable devices, etc.) and the **environment** (eco-processes, energy management, natural signal analysis, etc.).

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.

**Key figures:** more than 1,200 students, plus 300 engineering graduates a year, 150 permanent research lecturers from the school’s thirteen partner laboratories, 200 speakers from industry and the world of research, plus 25% of engineering students studying for doctorates.

**PRESS RANKINGS**

- Grenoble INP ranked 2nd by L’Usine Nouvelle among the 100 best french engineering schools in 2014
- Grenoble INP ranked 1st by « Industrie et Technologies » in 2013
- Grenoble, ranked 5th World’s most inventive city by Forbes in 2013