

BAC+3

BACHELOR

Engineering Sciences

Specialization: Thermal power and Energy
Systems



The Bachelor in Engineering Sciences is a course which leads to different careers, whether in academia, teaching technology or foundation sciences, or in industry as an engineer. This course becomes progressively more specialised so that you can work at your own pace. You will also have the opportunity to go abroad as part of your studies thanks to different exchange programs.

The course is made up of two years of common curricular modules before you specialise in the third year. You will be allowed to choose what you specialise in, in accordance with your career choices.

The foundation core modules include mathematics, mechanics, computing skills, research methods, tools and techniques for project management and introduction to thermal energy and electrical energy systems.

As of the third year, in Belfort, these courses become two distinct options: Thermal power and Energy systems or Electrical Engineering and Energy Systems.



UFR STGI

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Internship periods

6 to 8-week internship during
Semester 6

Further studies

Master Energy, specialisation in
Thermal and Energy Engineering
at the UFR STGI.



● Outline of the training

The two specializations of the Bachelor's degree in Engineering Sciences are in harmony with:

- the Master's degree offer in the UFR STGI,
- the different fields of research of teacher-researchers,
- the industrial employment area in Nord Franche-Comté region.

The program includes an internship in the third year, which allows students to put their academic knowledge into practice, discover and take part in the operation and daily life of a company, develop their sense of initiative, and adjust their career plans.

The specialization in Thermal power and Energy systems offers education in scientific education, enabling students to acquire and strengthen their knowledge and skills in the fields of physics and energy systems engineering, at both small and large scales.

● Skills the student will acquire

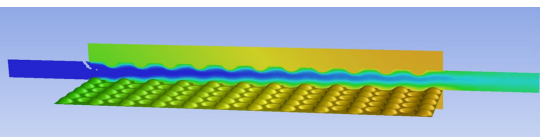
- Applying a scientific method to problem-solving.
- Carrying out and analysing a study on Energy systems
- Planning and leading projects.
- Preventing industrial risk factors and understanding technical, organisational and human factors.
- Applying security measures and keeping up-to-date with regulations as well as putting preventative measures in place.
- Being able to communicate in both written and spoken English in a clear and precise way



Source : GE Courtesy

● Academic content

Applied mathematics – Thermodynamics and energy conversion – Heat transfer engineering – Measurements and instrumentation – Data processing – Thermal and mechanical systems – Energy production and storage – Research, design and project management – English and corporate culture.





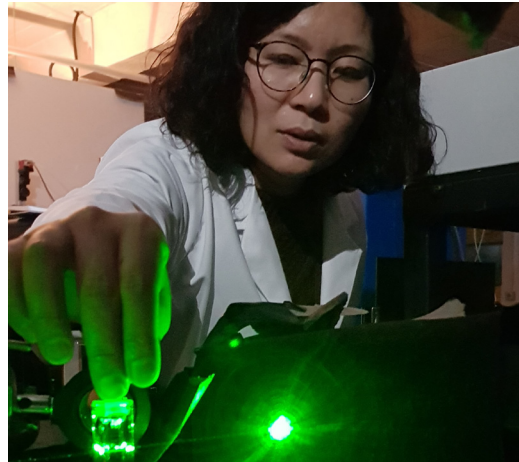
● Entry requirements

In the first year, admission through the Parcoursup platform for general high school graduates who have taken one or two scientific specialties (such as Physics-Chemistry, engineering sciences, or computer science) and studied mathematics in their final year, as well as for graduates from the STI2D specialization.

In the second or third year, admission is based on an application review for students who have completed one to three years of higher education, such as a scientific preparatory class, a BTS, or a BUT in fields related to thermal or electrical energy systems engineering.

● Further studies

- Master's degrees with specialization in energy engineering, renewable energies, climate engineering, industrial production and industrial systems maintenance.
- Engineer in the fields of electrical engineering and industrial systems
- Quality management and business administration



● Career opportunities

- Qualified technician in methods and research
- Assistant engineer (design, quality, control)
- Manager of energy production / conversion facilities
- Scientific presenter / Energy efficiency consultant
- R+D engineering assistant
- Technical sales engineering assistant
- Head of testing and/or qualification laboratory
- Project manager

● Business sectors

- Specialized activities, scientifics and technicals
- Energy, heat, cold, air conditioning production and distribution
- Fluid, gas, liquids and ventilation production and distribution
- Manufacturing business
- Building and architecture, thermal regulation



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Engineering Science
> *Specialization: Thermal power
and Energy systems*



Find all the
information
on our website:
stgi.umlp.fr



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