ENERGY AND PROCESSES

APPLIED GRADUATE STUDIES

Language: **French** | Duration: **16 months** | Degree: **Master's degree/Specialized engineering degree**

The energy sector is on the lookout for new talent to help it address the challenge of energy transition, improving energy efficiency of existing products and developing new processes to convert biomass-derived raw materials. Our Energy and Processes program provides the training you need to become a responsible, versatile professional who will be immediately operational, with a firm grip on the process industry's current and future needs. Accept the challenge, apply today!

HIGHLIGHTS

- Work/study alternating program
- Training recognized and supported by the largest energy companies
- High-level instruction presented by experts from the industry
- Provides a wealth of skills that are easily applied to a wide range of sectors in the energy field

CAREER OPPORTUNITIES

- **Process engineer (for on-site unit optimization or engineering design)**
- **Equipment maintenance engineer**
- **Manufacturing planning and scheduling engineer**
- **Research and innovation engineer**
- **Facility commissioning and start-up engineer**
- **Production engineer**

The Energy and Processes program offers recent engineering graduates and young professionals practical training in process design and operations for the energy sectors. Acquired skills cover conventional processes (refining, petrochemicals, natural gas processing) as well as new energy technologies (bioprocesses, hydrogen production, CO_2 capture and storage, etc.). Emphasis is given to energy optimization for each facility.

In addition to the technical and economic aspects of these fields, you'll gain knowledge in safety and environmental issues, work methods and behavior for a multicultural professional setting.

We'll provide you the keys to become a real player in energy transition. Your broad range of skills will lead you to numerous career opportunities, opening doors to a wide selection of professions within the largest international energy groups and engineering companies.

The Energy and Processes program ensures you'll be prepared to take on major international projects of strategic importance. It provides a springboard to take on significant responsibilities.

Most of our students take part in the alternating school/company track. The trust we have built with the largest companies in the energy sector ensures that your training will be rewarding and well-suited to current needs. You'll put your knowledge to use during your company periods.

IFP School aims to transform students into well-rounded professionals who are ready to meet the changing needs of the energy sector.

Find out more: **www.ifp-school.com**

IFP SCHOOL

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TYPICAL CLASS PROFILE/ MAIN SPONSORS

Students in this program are almost all sponsored by companies (through apprenticeships, sponsorships or as seconded professionals) that finance their living expenses during the academic period and contribute towards their tuition.

Among these companies, the following have been IFP School partners in recent years (non-exhaustive list):
Air Liquide, Arkema, Axens, Cepsa, DCNS, EDF, Elengy, Engie, ExxonMobil, GRT Gaz, Heurtey, IFPEN, Jacobs France, Lyondellbasell, Saipem, SARA, Shell, Sofregaz, Storengy, Technip, Total.

PROGRAM CONTENT

→ The program covers **3 main topics**

Processes

- Introduction to refining, petrochemicals, natural gas
- Processing crude during production
- Refining processes
- Separation engineering
- Project engineering
- Natural gas
- Current and future petrochemical processes

Energy optimization

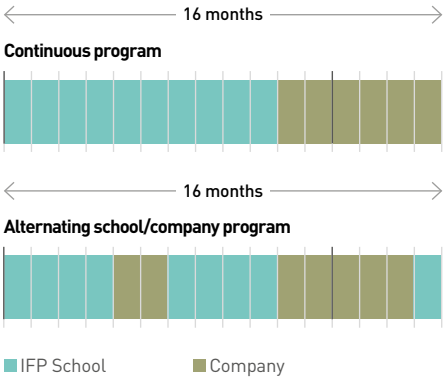
- Thermodynamics applied to hydrocarbon and biomass processes
- Energy efficiency and energy management
- Sustainable development and energy transition

Operations

- From crude to clean products: operations optimization
- Equipment in the process industry
- Process control and optimization
- Applied economics
- Process safety and QHSE management

PROGRAM SCHEDULE

The two examples of schedules shown below correspond to the most frequently encountered cases for students in this program: a 16-month continuous program for students with a 4- or 5-year engineering degree, and a 16-month alternating school/company program for students with a 5-year engineering degree.



Other situations may arise, such as: a 22-month alternating school/company program for an engineering student in the penultimate year of a major European school or university having signed a double-degree agreement with IFP School.

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