PETROLEUM GEOSCIENCES

APPLIED GRADUATE STUDIES

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

Want to work in natural resources? Our Petroleum Geosciences program offers cutting-edge training, based on field trips and tackling case studies proposed by companies within the sector. You'll be immediately operational upon graduation, contributing to the energy transition by applying your Exploration-Production skills to discover and describe Oil & Gas fields, identify new geothermal projects, and define sustainable strategies for geological CO_2 storage. A single training course for a multitude of current and future job prospects: don't wait, join us today!

HIGHLIGHTS

- Various field trips: basin, reservoir, seismic acquisition
- Team work on case studies provided by the industry
- High tech tools and advanced workflows for exploration and production of georesources
- Lectures by best professional specialists
- Wide range of international opportunities

The world demand for hydrocarbons is constantly growing. The Oil & Gas industry is facing key challenges for the next decades: discover new reserves and better understand the architecture of existing reservoirs in order to optimize their development.

Meanwhile, associated with the energy transition and the concern for a cleaner environment, new fields of application of the Exploration-Production tools and methods emerge to address the underground storage of gas and CO_2, geothermal energy or civil engineering.

Two professions are vital to these challenges: geologists and geophysicists. Students are trained in new concepts, new technologies and new tools in geology and geophysics, at the scale of both basins and reservoirs. You will be able to implement cutting-edge technologies: acquisition and processing of seismic and well data, basin evaluation, reservoir modeling and characterization and the methodologies needed to make decisions for exploration.

Our course content evolves as innovations occur in industry. For this purpose, you will have access to all the necessary means: case studies based on data provided by industry, use of industrial software, organization of several field trips in geology and geophysics. The two program majors (geology and geophysics) are organized in parallel, but many courses are common, allowing you to obtain an understanding of the other field and broaden your skills. You will conduct work and projects with students from many different origins and cultures. This will also prepare yourself for working in industries that are by nature international.

The Petroleum Geosciences program specializes in two types of geoscience applications in Exploration-Production of georesources: basin exploration and reservoir characterization. It opens the path to two main professional categories: geology and geophysics.

- Geologists implement the techniques and tools needed to acquire and interpret data in order to evaluate basins or describe reservoir architecture and identify new resources. They can also be involved in the geological monitoring of drilling operations.
- Geophysicists implement seismic tools in order to design and acquire new seismic surveys, process and interpret data to evaluate basins. At the reservoir scale, they implement the specific techniques of reservoir geophysics.

CAREER OPPORTUNITIES

- **Oil & Gas companies (IOC and NOC)**
- **Oil & Gas service companies**
- **Geothermal energy industry**
- **Energy consulting companies**
- **International institutions**
- **Big data companies**

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

ifp SCHOOL

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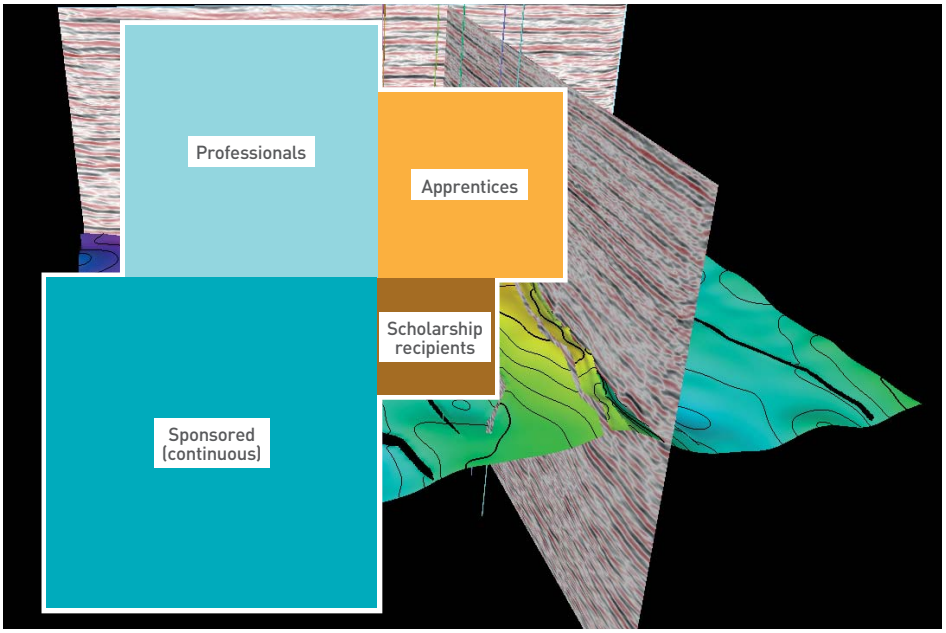
TYPICAL CLASS PROFILE/ MAIN SPONSORS

Students in this program are almost all sponsored by companies (through sponsorships or apprenticeships) 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):
BG Group, BP, BRGM, Cepsa, CGG, Engie, ExxonMobil, GNPC, Hocol, IFPEN, Lundin, Maurel & Prom, Onhym, Pemex, Perenco, PTT, Saudi Aramco, Schlumberger, Shell, Sonangol, Statoil, Storengy, Total.



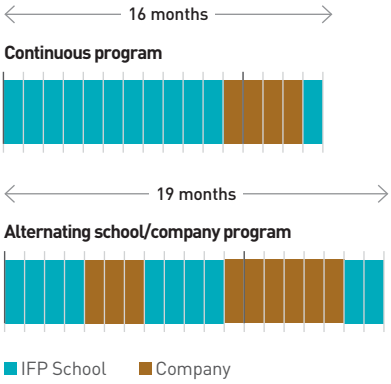
PROGRAM CONTENT

→ The program is divided into **4 major themes**

Geology major	Geophysics major	Topics
	Geology, geophysics & exploration tools	
✓	✓	Introduction to petroleum geosciences
✓		Seismic methods for geologists
	✓	Seismic methods for geophysicists
	✓	Multi-scale geological analysis
✓	✓	Structural analysis
✓		Drilling and well-site geology
✓		Well logging – Evaluation of formations for geologists
	✓	Well logging – Evaluation of formations for geophysicists
✓	✓	Reservoir engineering and fluid production
	Seismic interpretation and basin evaluation	
✓	✓	Seismic interpretation
✓	✓	Basin analysis and evaluation
✓		Advanced basin analysis and evaluation
	✓	Advanced seismic interpretation
	Reservoir characterization	
✓		Clastics deposits
	✓	Advanced seismic methods
✓		Carbonate deposits
	✓	Reservoir geophysics
✓	✓	Reservoir characterization and modeling
✓		Advanced reservoir characterization and modeling
	✓	Advanced reservoir geophysics
✓	✓	Fractured reservoirs
✓	✓	Unconventional hydrocarbons
	Georesources and energy transition	
✓	✓	CO_2 management, geothermal energy, gas storage

PROGRAM SCHEDULE

The two examples of schedules shown below correspond to the most frequently encountered cases for students in this program: 16-month continuous program for students with a 4- or 5-year degree, and alternating school/company 19-month program for students with a 5-year engineering degree.



There are other possible cases, such as: 22-month alternating school/company program for students in their penultimate year of a major European school or university having signed a double-degree agreement with IFP School.

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