

PETROLEUM GEOSCIENCES

APPLIED GRADUATE STUDIES

Language: **English**

Duration: **16 months**

IFP School's Master's degree/Specialized engineering degree
(Diplôme d'ingénieur spécialisé)



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 CO₂ 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
- Customizable academic path
- 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 CO₂, geothermal energy or civil engineering.

Geoscientists are vital to these challenges. 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. Common courses will allow you to obtain a core understanding of the different disciplines in geoscience. Later on you will be able to choose specific courses to specialize or to broaden your technical 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.

- Exploration geoscientists implement the techniques and tools needed to acquire and interpret data in order to evaluate basins and identify new resources. They can also be involved in the geological monitoring of drilling operations or geophysical aspects of data acquisition.
- Reservoir geoscientists interpret and integrate all available data to characterize the reservoir's architecture and properties. They equally evaluate its potential and contribute to future developments.

CAREER OPPORTUNITIES

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



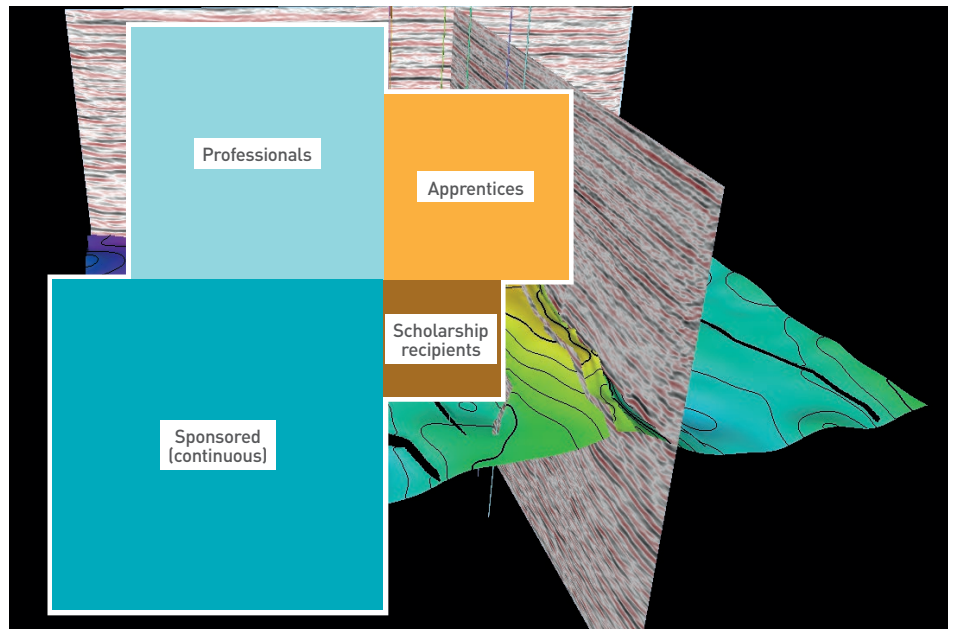
Find out more: www.ifp-school.com



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, Equinor, ExxonMobil, GNPC, Hocol, IFPEN, Lundin, Maurel & Prom, Onhym, Pemex, Perenco, PTT, Saudi Aramco, Schlumberger, Shell, Sonangol, Storengy, Total.



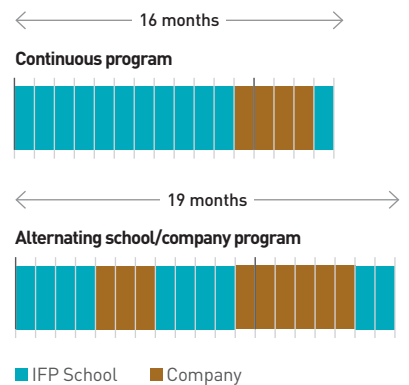
PROGRAM CONTENT

→ The program is divided into **3 major themes**

Topics	
Geology, geophysics & exploration tools	
Introduction to basin studies	
Structural analysis	
Rock physics & geophysics	
Drilling, well site geology, geohazards	
Well logging, petrophysics	
Geostatistics	
Basics of reservoir engineering	
Seismic interpretation and basin evaluation	
Seismic interpretation	
Basin analysis and evaluation	
Advanced basin analysis and evaluation	↔ Seismic methods
Advanced seismic interpretation	
Reservoir characterization	
Sequence stratigraphy	↔ Advanced seismic interpretation
Carbonate deposits	↔ Advanced geophysics
Clastics deposits	↔ Reservoir geophysics
Reservoir characterization and modeling	
Advanced reservoir characterization and modeling	↔ Fractured reservoirs
	↔ Unconventional hydrocarbons
	↔ CO ₂ management
↔ Choose your course	

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.