

E-202

▲ Who should attend?

Geologists, geophysicists junior professionals, who would like to updated or improve the techniques and know-how in the field of petroleum geosciences.

▲ Duration

85 days

▲ Dates & Location

August 24 - Dec. 18, 2009
Pau (South-West)

(Intensive english courses optional, July 15 - August 21)

▲ Registration

Fees:

Geology option: € 35,500

Geophysics option: € 41,500

(English courses fees:
€ 4,200)

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▲ Course Coordinator

Laurence BOVE

Ref. **GEO / DIPGEO**



GRADUATE DIPLOMA GEOSCIENCES

COURSE OBJECTIVES

The program is designed with a clear industry orientation. The competencies acquired through this program will enable the participants to contribute actively to petroleum exploration studies within multidisciplinary teams.

A 4 months internship period in the participant's company, will have to be performed in order to obtain the Graduate Diploma. This internship work will be validated by the writing of a technical report (Memory) and its technical presentation in front of a board of professors and experts.

Upon successful completion of the program (i.e. examinations passed for the different modules and final Jury presentation), participants are awarded a "Graduate Diploma of Petroleum in Geosciences" of IFP School.

COURSE CONTENT

MODULE 1: FUNDAMENTALS OF PETROLEUM GEOSCIENCES 4 weeks

Introduction du basin analysis and reservoir characterization

Brief complete overview of the petroleum system through exercise and workshops, in order to present all the steps of petroleum exploration that will be developed in the training

Structural analysis and sedimentology of carbonate - core description

Geological depositional environments in carbonate domains

Field trip in Bordeaux's region at the Gironde river estuary

Observation and understanding present day sedimentation, focus on reservoir scale (facies, geometries, heterogeneities)

Well log interpretation

Characterization of simple to complex lithology reservoir geological formations on practical exercises.

MODULE 2: GEOLOGY OR GEOPHYSICS OPTION 5 weeks

Geophysics option (in Paris region)

Acquisition: concepts & applications (with oneweek field seismic acquisition): design a seismic acquisition survey and its application on real field seismic acquisition

Seismic data processing: methodology and workflow on eachstep of seismic data processing steps, with practical examples and workshops

Geology Option

Geophysics: Basic acquisition & processing with practical examples and workshops during the first week

Field trip in the South East of France (Nyons area): Understand all the characteristics of a petroleum system from basin scale to reservoir scale

Advanced structural analysis: Structural aspect of a basin, in complementary of the geophysical tools and logging tools

Geochemistry: from source rock to petroleum system. Hydrocarbon migration pathways

Sedimentology well log interpretation: facies cross correlation, geological sequences interpretation

MODULE 3: BASIN ANALYSIS 4 weeks

Seismic interpretation

Structural seismic interpretation on different structural styles

Seismic interpretation on Petrel software on an north sea

Sequence stratigraphy from seismic and log data

Basin modeling

Synthesis of data, modeling and quantifying uncertainties. Workshops for prospect analysis will be ending this week

MODULE 4: RESERVOIR & PROSPECT EVALUATION 4 weeks

Reservoir characterization & Fractured reservoir

Introduction to basic of reservoir characterization

Reservoir architecture, heterogeneities, petrophysical parameters. Introduction to fractured reservoir

For Geophysicists: Seismic reservoir characterization

For Geologist: Reservoir Modeling

Hunting for Oil

Presents all exploration, development and production techniques involved in the upstream business. With the support of a computer assisted game, the tools used in the upstream petroleum industry will be introduced and manipulated, in order to acquire the understanding of the techniques and the links between these ones

Required level in english: TOIEC 750. Intensive english courses are organised prior to the diploma. A specific brochure is available on request.