



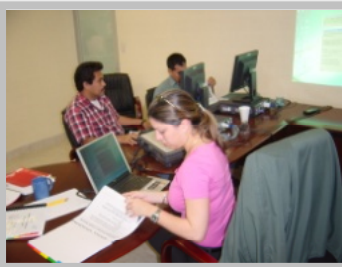
## COURSE CATALOG

# Geostatistics for the Environment

The course is designed for engineers and other geoscientists requiring a practical introduction to geostatistical methods applied to data analysis, interpolation and simulation.

GEOVARIANCES offers a continuum of high quality programs for beginners right through to geostatistics experts provided by a highly experienced team.

Over the last 18 months, over 250 trainees have participated in GEOVARIANCES geostatistical training sessions.



Our training sessions are run by our own consultants, the ones who understand your needs best.

We offer inter company sessions in our offices throughout the year. Sessions can also be organized in your premises or another location.

All our training courses are computer-based using ISATIS. Our courses cover a wide range, from hands-on to get you up on running ISATIS to practical or advanced geostatistics.

We focus the contents of our courses to your job. Contents can also be tailored to address specific training needs or topics.

### GEOSTATISTICS FOR CARTOGRAPHY\*

■ 3 days

To present the basic concepts and methods of geostatistics for interpolation. The subject matter ranges from variograms to kriging and multivariate geostatistics. The potential pitfalls and hints in the geostatistical analysis of data are highlighted for each of these concepts.

Particular attention is paid to the specific problems associated with environmental applications such as air pollution and hydrogeology.

#### Key features

*Interpolation of spatially correlated data. Exploratory data analysis. Estimation variance*

### GEOSTATISTICAL CHARACTERIZATION OF SOIL POLLUTION\*

■ 3 days

To present the concepts and methods of geostatistics for the characterization of soil pollutions. The subject matter ranges from variograms to different types of kriging and co-kriging techniques when several variables are correlated. The limitations of linear tools for the delineation of polluted areas are discussed. Appropriate tools to assess uncertainties in the pollution and compute contaminated volumes are presented.

#### Key features

*Accounting for the historical data and soft data. Sampling optimisation. Cartography of in place pollution. Computation of contaminated soils, soil excavation.*

### RISK ANALYSIS: THE GEOSTATISTICAL APPROACH\*\*

■ 3 days

To provide an in-depth review of the different simulation methods applicable to the environment. The course specifically addresses issues of uncertainty assessment in different application fields such as air and water pollution.

#### Key features

*Gaussian anamorphosis. Conditional simulations. Sequential simulation techniques. Simulations with turning bands*

The courses are organized on a 3 days basis. Half of the courses is dedicated to practical computer exercises, using Isatis in order to reinforce the previously presented theoretical notions.

\* Basic knowledge of statistics is recommended

\*\* Basic understanding of geostatistics is required (variograms & kriging)