Geostatistics

Intended audience
Geoscientists who need to know how geostatistics can help with the analysis and interpretation of spatially distributed scientific data.

Course objective
▪ To provide an understanding of regionalised variable theory as the basis for geostatistics.

Course description
▪ The course provides practical experience of using the statistical environment and packages in R* for exploratory analysis variogram estimation and modelling and optimal estimation of sample values at unsampled sites using kriging.
▪ Geostatistical theory sufficient for the course content.
▪ Exploratory data analysis — descriptive statistics, transformations, presence of trend, removal of trend.
▪ Variogram estimation.
▪ Variogram modelling.
▪ Kriging — punctual and block.
▪ Cross-variograms and co-kriging, universal kriging.
▪ Pointers for more advanced work.
▪ The course will include examples based on real data using packages from the open source R environment (sp, gstat) for spatial prediction and mapping.

*R is a programming language and software environment for statistical computing and graphics.

The R language has become a de facto standard among statisticians for the development of statistical software, and is widely used for statistical software development and data analysis.

Course duration
3 days

Delivery mode
Classroom-based course

Course fee
£1000

Course fee based on delivery at BGS’s training centres

Date(s)
As required

Location
The course is available at BGS’s Nottingham (Keyworth) or Edinburgh training centres, or at customer premises worldwide, by arrangement.