

Statistics for geoscientists: basic

Intended audience

Geoscientists who routinely work on the interpretation of data sets and wish to gain a basic knowledge of statistics or who would like to refresh their knowledge in this area. Participants should be familiar with Excel and ideally, have some knowledge of S-plus.

Course objectives

To enable participants to;

- Explain, calculate and interpret descriptive statistics including: basic terminology, frequency distributions, measures of central tendency, measures of dispersion, and the normal distribution.
- Read and analyse basic charts and graphs and other basic data summaries.
- Explain, calculate, and interpret basic inferential statistics including probability, and basic hypothesis tests.
- Identify and apply the correct statistical technique to the research question.
- Use a combination of Microsoft Excel and S-Plus software to compute descriptive and inferential statistics and produce appropriate summary plots.

Course description

- Why do we need statistics?
- Types of data.
- Populations and samples.
- Describing univariate data—central tendency, spread, shape of univariate distributions, displaying univariate information, data distributions and probability density functions.
- Describing bivariate data—correlation and regression.
- Significance testing—steps involved in a hypothesis test, t-tests, analysis of variance, significance test.
- Non-parametric tests—bootstrap resampling.

Course duration

1 day

Delivery mode

Classroom-based course

Course fee

£500

Course fee based on delivery at BGS's training centres

Date(s)

As required

Location

The course is available at BGS's Nottingham (Keyworth) training centre