**Statistical data analysis with elements of geostatistics**

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16 hours – 4 CFU

**Short Program content**:

* Nature of data in geosciences and main analytical approaches – 1 hour
* Descriptive statistical analysis (Relative frequencies, graphical methods of data analysis. Indices of centrality, dispersion, shape and symmetry) with practice (4 hours)
* Inferential statistical analysis (T-test, Chi-square) with exercise (3 hours)
* Correlation, regression and multivariate statistics (Principal Component Analysis [PCA], Factor Analysis [FA], Cluster Analysis [CA]) with exercise (4 hours)
* Introduction to spatial data analysis techniques with exercises (4 hours)

**Suggested Background**:

• Basic knowledge of the principles of statistics and mathematical analysis.

• Basic knowledge of the operation of software such as "spreadsheet" and "GIS"