This course teaches how to analyse data with a single continuous response variable using analysis of variance and regression methods. You learn how to perform elementary exploratory data analysis (EDA) and discover natural patterns in data. Important statistical concepts such as confidence intervals are also introduced.

Learn how to:
Use JMP® software to:
• compare two means using a t-test
• generate and interpret an analysis of variance to compare more than two means
• analyse relationships between continuous variables using simple and multiple linear regression models
• perform an analysis of covariance to incorporate continuous and categorical predictors
• evaluate assumptions in statistical hypothesis testing.

Who should attend:
Analysts and researchers with some statistical knowledge.

Prerequisites:
Before attending the course, you should complete the JMP Software: Data Exploration course or have equivalent experience.

Course contents:
Introduction to Statistics
• reviewing populations and samples
• exploring data with descriptive statistics and graphs
• generating and understanding confidence intervals
• understanding statistical hypothesis tests.

Comparing Means
• analysing a one-sample t-test
• analysing paired data
• comparing two independent groups using a t-test.

Analysis of Variance
• fitting one-way ANOVA models
• fitting one-way ANOVA models with multiple levels
• performing multiple comparisons
• examining ANOVA assumptions
• fitting N-way ANOVA models
• analysing power and sample size.

Simple Linear Regression
• using scatterplots and correlation statistics
• performing simple linear regression
• fitting polynomial regression models.

Multiple Regression
• performing multiple regression
• performing multiple regression with interactions
• performing stepwise regression.

Regression Diagnostics
• examining model assumptions
• discovering multivariate outliers
• investigating collinearity.

Analysis of Covariance
• fitting ANCOVA models with and without interactions.

Software addressed
This course addresses JMP Software.
Training Path for JMP® Analysts

For JMP Users

1. JMP® Software: Data Exploration
2. JMP® Software: ANOVA and Regression
3. JMP® Software: Introduction to the JMP® Scripting Language
4. JMP® Software: Classic Design of Experiments
5. JMP® Software: Custom Design of Experiments
6. JMP® Software: Categorical Data Analysis

For JMP Users