

JMP Software: ANOVA and Regression

This level III course is designed for analysts and researchers with some statistical training who want to analyze continuous response data using analysis of variance and regression methods in Version 5 of JMP.

Duration: 3.0 days

Course Description [\[Click to register ONLINE \]](#)

This course is designed for analysts and researchers who want to analyze data with a single continuous response variable. Students will use JMP software to learn these statistical techniques: analysis of variance (ANOVA), linear regression, and analysis of covariance (ANCOVA). Interaction effects and nonparametric ANOVA are also discussed, and an introduction to nonlinear methods is presented. The course explains how to evaluate assumptions using the extensive diagnostic capabilities included in JMP software.

Prerequisites

Before attending the course, it is recommended you complete the [JMP Software: Statistical Data Exploration](#) course or have equivalent experience.

Course Contents

Comparing Group Means

- analyzing paired data
- comparing two independent groups using a t-test
- fitting one-way ANOVA models
- fitting one-way ANOVA models with a block
- interpreting ANOVA reports
- performing multiple comparisons
- examining ANOVA assumptions
- performing nonparametric ANOVA

Regression

- performing simple linear regression
- fitting polynomial regression models
- examining assumptions
- examining nonlinear regression models

Multiple Regression

- inspecting R-squared and correlation
- investigating collinearity
- discovering multivariate outliers
- performing multiple regression
- performing stepwise regression
- interpreting model fit statistics
- using regression diagnostic tools
- examining model residuals

N-Way Analysis of Variance

- fitting n-way ANOVA models
- using contrasts
- analyzing power and sample size

Analysis of Covariance

- fitting ANCOVA models with and without interaction