

Getting Started

- The Project—the basic Prism File with its multiple sections, sheets, and reports.
- Overview of menus, toolbars, data tables and default settings—a quick tour of the most used icons; moving data within the data tables and setting user defined preferences
- Importing data—methods for entering data, linking to Excel, filtering and arranging rows and columns, setting up data tables with replicates and generating custom data series.
- Choosing the right graph types—simple XY scatter plots, line graphs, one-way data, two way data, the three types of bar graphs, area graphs, and others
- Creating color schemes—creating custom color and pattern schemes

Statistical analysis of data

- An overview of the terms used in analyzing data such as significance, normality, error, and confidence.
- Checking data for normality or symmetry—looking at the distribution of the data with histograms; using formal normality tests and using box plots effectively.
- Descriptive statistics—a look at the basic statistics such as mean, median, standard deviation, standard error, confidence, coefficient of variation and how they are related.
- Comparing groups of data with each other—setting up the data table for comparing paired and independent groups with each other, comparing variance of multiple groups with one or two factors ANOVA, comparing changes in over time with repeated measures.
- Analyzing nongaussian data—comparing groups that are not symmetrical; transforming nongaussian data; plotting nongaussian data effectively
- Dealing with small data sets
- Survival Analysis methods
- Comparing totals and counts for significant differences—contingency analysis

Regression analysis

- Searching for trends—linear regression and how it compares to correlation
- Fitting data to known models—looking at the most common methods such as dose-response, kinetic, and competition models; comparing models; comparing best fit parameters from datasets; constraining parameters and sharing parameters with global curve fitting.
- Data manipulation—transforming and normalizing data; Transposing x and y; Column math
- Simulating data and creating theoretical curves as a learning tool in regression analysis
- Creating standard curves to derive unknown X and Y values
- Finding the area beneath a curve

Miscellaneous techniques

- Axis breaks—creating segments along the X or Y axes
- Saving specific sections of a project and merging multiple projects
- Adding a second axis
- Creating layouts—adding graphs from current and saved projects
- Prism online—quick calculators; technical support, frequently asked questions and more.
- Reference lines and custom axes
- Using the information section effectively; entering info constants
- Organizing the Navigator for large projects
- Aligning objects and equalizing sizes of graphs in layouts
- Creating PowerPoint presentations
- Creating simple templates to speed the project along

These are a few of the subjects covered in the introduction to Prism. Any part of this list is flexible and can be changed to concentrate more effectively on the specific applications of the users in the class. A short review of basic biostatistics is offered as the class progresses. Please direct any questions to techsupport@startrain.com