This course teaches students how to identify complex and dynamic patterns within multilevel data to inform a variety of decision-making needs. The course provides a conceptual understanding of multilevel linear models (MLM) and multilevel generalised linear models (MGLM) and their appropriate use in a variety of settings.

Learn how to:
• use basic multilevel models
• use three-level and cross-classified models
• use generalised multilevel models for discrete dependent variables.

Who should attend:
Researchers in psychology, education, social science, medicine, and business, or others analysing data with multilevel nesting structure.

Prerequisites
Before attending this course, you should:
• preferably, be familiar with the basic structure and concepts of SAS® (for example, the DATA step and procedures)
• be familiar with concepts of linear models such as regression and ANOVA and with generalised linear models such as logistic regression
• be familiar with linear mixed models to enhance understanding, although this is not necessary to benefit from the course.

It is recommended that you complete SAS Programming 1: Essentials and Statistics 2: ANOVA and Regression, or have equivalent knowledge before taking this course.
**Multilevel Models for Discrete Dependent Variables**
- discrete dependent variables
- generalised linear models
- multilevel generalised linear models
- additional considerations.

**Generalised Multilevel Linear Models for Longitudinal Data**
- complexities of longitudinal data structures
- the unconditional growth model for discrete dependent variables
- conditional growth models for discrete dependent variables.

**Software addressed:**
This course addresses:
- SAS/STAT® software.

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**Training Path for Statistical Analysts**

For SAS Programmers

[Diagram showing the training path]


Statistics 2: ANOVA and Regression → Categorical Data Analysis Using Logistic Regression → Mixed Models Analyses Using SAS®

Longitudinal Data Analysis with Discrete and Continuous Responses

Bayesian Analyses Using SAS®

Multilevel Modeling of Hierarchical and Longitudinal Data Using SAS®

For SAS Enterprise Guide Users

[Diagram showing the training path]


CP Preparation for SAS® Certification Exam