e-Learning SAS Graph
Training Content

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Course Aims

After completing this course attendees should be able to produce a wide range of graphical reports using SAS/Graph software, extend basic SAS/Graph functionality with the ANNOTATE facility, use SAS/Graph software to enhance tabular reporting and generate web-ready reports.

Duration

3 days

Required Knowledge

Attendees should have attended Base Programming or have at least five months' experience of programming with the SAS System.

SAS/GRAPH at Your Site

To see if your site has SAS/GRAPH licensed you will need to execute the following piece of code in the editor window:

```
PROC SETINIT;
RUN;
```

The results will be displayed in the Log window and if SAS/GRAPH is available you will have a line that resembles the following:

```
---SAS/GRAPH                          14NOV2012
```

Note: The date 14NOV2012 represents the expiry date for the SAS/GRAPH product. This will vary at your site depending on when your SAS license is due for renewal.

Graph Course

1. Graph Concepts
    1.1 What is SAS/GRAPH?
        - SAS/GRAPH Features

2. Text Applications & the GSLIDE Procedure
    2.1 Using text within SAS/Graph
        - Attributes
    2.2 Verifying SAS/Graph Installation
        - The GTESTIT Procedure
        - Device drivers
    2.3 The GSLIDE Procedure
        - General Syntax
        - Titles and Footnotes
        - Controlling text within a graphic
        - SAS/GRAPH Fonts
        - Windows System Fonts
        - Controlling the appearance of text
        - NOTE Statements
        - TITLE, NOTE & FOOTNOTE options
        - Moving Text
    2.4 GOPTIONS for Controlling Text
        - Options List
        - Resetting Graphics Options
        2.4 Exercises
        2.4 Solutions

3. The GPLOT Procedure
    3.1 The GPLOT Procedure
        - Syntax and Options
        - The PLOT statement
        - Plot Requests
        - The PLOT2 Statement
        - Reference Lines
    3.2 Controlling Lines & Symbols
        - SYMBOL Statements
        - Options for controlling symbols
        - Specifying Plot Markers
        - Multiple SYMBOL Statements
        - Controlling Lines
        - Generating Box Plots
        - INTERPOL=BOX options
        - Standard Deviation Plots
        - Combining STD and BOX Plots
        3.2 Exercises
        3.2 Solutions

- Controlling Patterns
- Multiple PATTERN Definitions

4.5 Exercises

4.5 Solutions

4.6 Grouped & Subgrouped Charts

- Grouped Charts
- Subgrouped Charts
- Subgrouping Grouped Charts

4.6 Exercises

4.6 Solutions

4.7 PIE Charts

- PIE Charts - Basics
- Adding Legends
- Slice Labels
- Slice Labelling Options
- Controlling Slice Labels
- Controlling Patterns
- Controlling Statistics
- Grouping PIE Charts
- Subgrouped PIE Charts
- Applying Emphasis to Slides
- Controlling Slice Order

4.7 Exercises

4.7 Solutions

4.8 Other GCHART Statements

- 3D Bar charts
- 3D PIE charts
- DONUT Charts
- Star Charts

5. The GREPLAY Procedure

5.1 Replaying SAS/GRAPH Output

- GREPLAY Procedure Uses

5.2 Storing SAS/Graph Output in Catalogs

- SAS/Graph Catalog Entry Names
- Storing SAS/GRAPH Output in Catalogs

5.3 Templates

- Creating Templates
- Creating a SAS/GRAPH Template

5.4 The GREPLAY Procedure for Replaying Graphs

- GREPLAY Procedure Syntax
- The TREPLAY Statement
- Replaying Graphs
- Other GREPLAY Statements

5.4 Exercises

5.4 Solutions

5.5 Creating Templates Interactively

- Template Design Window
- Defining Panels
- Creating a Template
- Editing an Existing Template
- GREPLAY Procedure Interactive
- Deleting Entries
- Replaying Entries

6. Graph Output & External files
    6.1 The GDEVICE Procedure
        - GDEVICE Procedure Uses
    6.2 Sending SAS/Graph Output to an External File
        - Exporting Output to a .CGM File
        - Exporting Output to .GIF Files
        - Exporting Output to .JPG Files
        6.2 Exercises
        6.2 Solutions
    6.3 Sending SAS/Graph Output to a Printer
        - Choosing a Graphics Device Driver
        - Windows Printer Drivers
        - SAS/GRAPH Printer Drivers

7. ANNOTATING Graphs
    7.1 Introduction to Annotate Graphs
        - Creating Custom Graphs
        - Enhancing Graphs
        - The Annotate Facility in SAS Help
    7.2 Basics of Annotate Data Sets
        - ANNOTATE Variables
        - Action Variables
        - Coordinate Variables
        - Coordinate Systems
        - Coordinate System Units
        - Coordinate System Placement
        - The POSITION Variables
        - Graphic Instructions
        - Selected Variables Related to MOVE, DRAW and LABEL
        7.2 Exercises
        7.2 Solutions
    7.3 Enhancing Plots & Charts with Annotate Data sets
        - Enhancing Output with Annotate
        - Manual Generation of Annotate Data Sets
        - Dynamic Generation of Annotate Data Sets
        - Enhancing Bar Charts with Annotate
        - The MIDPOINT Annotate Variable
        - The GROUP Annotate Variable
        7.3 Exercises