Report Writing: A Programming Approach

Duration: 3 units   CEUs: 1.8

This course shows the most popular types of reports created by SAS®. Students will learn how to create many types of what-if style reports along with reports meeting exact specifications. There is even a procedure that allows you to create reports without writing the code. This course covers report writing techniques including Proc Print, Proc Tabulate, Proc Report, Proc Means, Proc Summary and the creation of data step reports

BENEFITS

After completing this course, you should be able to:

* Design reports for one, two and three-dimensional cross tabulation reports
* Create labels and formats for variables and statistics
* Calculate totals and percentages for rows and columns
* Use a single data step to create multiple reports
* Specify macro variables in report titles and footnotes
* Design html output and develop customized output templates using the output delivery system (ODS)
* Produce both detail and summary reports

PREREQUISITES

Completion of Programming I: SAS Essentials and Programming ll: Data Manipulation Using the Data Step, or equivalent knowledge.

You should be able to:

* Run SAS programs in your operating system
* Run the DATA step to create, subset, and merge SAS data sets
* Create, store, file and recall SAS data sets and read in external files
* Assign labels on output, and read and format date values
* Include assignment statements in DATA steps
* Specify logical operators and IF-THEN/ELSE statements

COURSE TOPICS

Fundamentals of Report Writing
* Analyzing and organizing data
* Formatting and displaying data
* Utilizing SAS tools for report writing

Designing and Structuring Reports
* Specifying the overall report layout
* Using report options to modify columns
* Specifying titles and footnotes
* Utilizing report and system options
* Saving and filing a report definition
* Creating html output and developing customized output templates using ODS.

Working with Variables and their values
* Specifying the order of variables
* Changing the default order of variables

Grouping Information
* Creating BREAK and RBREAK statements
* Creating subtotals
* Separating information on different pages
* Changing breaks
* Specifying custom break lines

Filtering Report Information
* Where statement uses
* Data set option uses

Custom Formats
* PROC FORMAT
* Creating user-defined or custom formats

Cross-Tabulation Reporting
* Defining tabulations across variables
* Defining missing values
* Designing a column with statistics
* Stacking items in a column
* Column header labels

Column Grouping
* The purpose of WRAP and NAMED options
* Listing a single variable many ways
* Grouping columns together
* Incorporating complex grouping of columns

Understanding the TABULATE Procedure
* The TABLE Statement
* CLASS and VAR Variables
* Operators
* Statistics

Formatting Tabulate Reports

- *Tabulate Options such as FORMCHAR, NOSEPS and RTS*
- *Formatted values, global and cell level with F=*
- *Formatting missing values*
- *Working with missing CLASS data*

Percentage Calculations

- *Grand total, column and row percentage calculations*
- *ALL summary percentages*

Data Step Report Writing

- *The purpose of DATA _NULL_*
- *PUT statements*
- *Custom and Group listings*
- *End of file testing*
- *Formatting column labels and values*

Descriptive Statistic Reports

- *Using PROC SUMMARY and PROC MEANS*
- *Multi-level summarization*
- *The purpose of _type_*

Incorporating Macro Variables

- *Make use of automatic and user defined macro variables*
- *Specifying macro variables in a data step*

Software Used: Base SAS Software