



Get the most from PROCs **FREQ** and **MEANS**, two of the SAS System's core analytic tools for tabulating and calculating descriptive statistics. Intended for newer users of the SAS System who want to understand and apply the power of these key BASE SAS PROCs in their projects and programs.

After taking this seminar you will be able to:

- Create one-, two- and multi-way tabulations using PROC FREQ
- Control the amount of information calculated and displayed in your PROC FREQ-generated output
- Change the display of PROC FREQ's results with the LIST option
- Create SAS data sets containing PROC FREQ-generated results
- Compute and display descriptive statistical measures in your Output Window using PROC MEANS
- Select the statistics you want to calculate using Statistics Keywords
- Create grouped Analyses in PROC MEANS Using the CLASS Statement.
- Generate multiple SAS data sets in a single PROC MEANS step with the CHARTYPE option
- Apply the power of SAS Formats to the analyses you generate with PROCs FREQ and MEANS

Summarizing and Analyzing Data Using PROCs FREQ and MEANS



Presentation Formats:
Half-day in classroom or via the internet.
Also see our **full-day** seminar, "Summarizing and Reporting Data with the SAS System"

Overview

This half-day seminar shows you how to create tabulations and analyses of data using the FREQ and MEANS Procedures, two of the core analytic tools available to SAS® Software users in the BASE module. By attending this session you will learn how to apply key features in these PROCs to create useful reports containing tabulations and/or descriptive statistics from the data in your SAS data sets, as well as how to use them to create new SAS data sets containing the results of their work.

Intended Audience

Summarizing and Analyzing Data Using PROCs FREQ and MEANS is designed for newer SAS users who are already familiar with core SAS System concepts such as observation, variable, data set, and format. The materials presented also assume you are comfortable with basic statistical/arithmetic concepts such as frequency, sum, mean and median. **Please note:** this session does NOT cover the categorical data modeling capabilities in PROC FREQ.

Topics/Agenda

- **PROC FREQ: The Basics**
 - Default One- and Two-Way Tables
 - PROC FREQ Statement Options
 - Using Multiple TABLE Statements in One PROC FREQ Step
 - Using Formats to "Group" or "Bin" Your Data
- **PROC FREQ: Beyond the Basics**
 - Creating Three- and Higher-Way Tables
 - Key TABLES Statement Options:
 - LIST, NOPERCENT, NOCUM, NOROW NOCOL, NLEVELS, SPARSE
 - Creating Output SAS Data Sets from Your PROC FREQ Output
 - Default Output Data Set
 - Options Controlling Output Data Set Creation
- **PROC MEANS: The Basics**
 - Core PROC MEANS Capabilities and Defaults
 - Displaying PROC MEANS Results in the Output Window
 - Customizing Output Window Results with Statistics Keywords and the MAXDEC Option
 - Creating Sub-Group Analyses with the CLASS Statement
 - How SAS Formats Interact with the CLASS Statement in PROC MEANS
- **PROC MEANS: Beyond the Basics**
 - Creating Output SAS Data Sets with PROC MEANS
 - Understanding the automatic _TYPE_ and _FREQ_ variables
 - Powerful OUTPUT Statement Options
 - Creating Multiple SAS Data Sets in a Single PROC MEANS "run"
 - Using Multilabel Formats with PROC MEANS
 - Applying Ordering Options in the CLASS Statement
 - Understanding the Power of the PRELOADFMT and COMPLETETYPES Statements

About the Instructor

This seminar is written and presented by Andrew Karp, who started his own SAS Software consulting and training firm, Sierra Information Services, in 1994. Prior to starting Sierra he used SAS Software to manage and analyze data while holding positions with PriceWaterhouseCoopers, Federal Express Corporation, Pacific Gas & Electric Company and Kaiser Foundation Health Plan. A 25-year SAS user, Andrew is a SAS Certified Professional™ who has presented numerous training seminars to SAS users in the United States, England, Scotland, Belgium, Australia, New Zealand and the People's Republic of China.

He has served on the technical review teams for seven books published by SAS Institute and has been an invited speaker at thirteen consecutive SAS Global Forum/SAS User Group International conferences, as well as other events for SAS users in seven countries. Andrew earned undergraduate and graduate degrees from The George Washington University and taught SAS classes for UC Berkeley's Extension Division from 1989 to 1995. He has also been a visiting lecturer in the Department of Experimental Statistics at Louisiana State University, the School of Government and Business Administration at The George Washington University and at the University of Auckland in New Zealand.

About Sierra Information Services

Sierra Information Services is a **leading independent provider of SAS Software** consulting and training services. Sierra offers clients a wide range of support, including SAS programming, data analysis/data mining with SAS tools, as well as the design and delivery of customized SAS Software training solutions tailored to the client's individual needs. We also present numerous public and online training seminars every year.

Since its inception in 1994 Sierra has provided consulting and/or training services to, among others, Wells Fargo Bank, Bear Creek Corporation, Limited Brands, IBM, American Honda Motor Company, Lloyd's Bank/TSB, Capitol One Financial Services, Inc., the Sacramento Municipal Utilities District, Discover Financial Services, Inc., the US Department of Commerce and the US Federal Communications Commission. We have also provided consulting and training for numerous public and private sector entities in the United Kingdom, Belgium, Australia and New Zealand.

In addition to training solutions developed by Sierra's founder, Andrew Karp (see bio above), Sierra also works with other leading SAS experts to offer their training seminars under our auspices.

For the most current list of our public on line training seminars, or to learn more about how Sierra can assist you and your organization, please visit our web site at www.Sierrainformation.com or call us a (707) 996 7380. We look forward to hearing from you soon!



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and those in your organization who use it...*

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