



...Maximizing your investment in the SAS® System...
and those in your organization who use it...

This one-day seminar shows you how to implement, and interpret the results of, key SAS/STAT and BASE SAS module procedures that perform many of the most commonly performed statistical analyses.

After taking this seminar you will be able to:

- Understand the variables in your data set in the context of the “level of measurement” used to collect the data.
- Apply the “levels of measurement” concept to identify appropriate statistical tests for your data.
- Understand and apply both a “statistical” and a “substantive null hypothesis” when setting up a statistical research plan.
- Use **PROC UNIVARIATE** to analyze continuous variables
- Apply **PROC FREQ** to analyze categorical data
- Implement **PROC CORR** to analyze relationships between continuous level variables
- Implement one- and two-way ANOVAs using PROCs ANOVA and GLM
- Use **PROC REG** for simple and multiple linear regression models
- Use ODS Statistical Graphics to display your analysis (experimental in SAS 9.1 software).

One Day Seminar from Sierra Information Services

Introduction to SAS/STAT® Software

Overview

This one-day session offers an overview of the key statistical analysis capabilities found in the SAS/STAT and BASE SAS software procedures. It is designed to acquaint you with how SAS is used to carry out various types of statistical analyses. This seminar guides you to both select the right tool(s) to apply to your data and then interpret the results of output generated by the procedures you’ve applied. The materials presented introduce general concepts and implementation of various types of statistical analyses without the theory underlying the statistics themselves.

The emphasis of this seminar is therefore on the “how” and “what” of data analysis with the SAS System, and not on the “why.”

Intended Audience

Introduction to SAS/STAT Software is appropriate for statisticians and data analysts who want to become acquainted SAS’ analytic capabilities, and is often a useful “bridge” to the application of SAS Software capabilities for users of other statistical software such as STATA™ and SPSS™. It is also appropriate for experience SAS programmers and data managers who want to implement the statistical analyses requested by the statisticians and investigators with whom they work. The materials presented assume you are familiar with basic SAS Software concepts such as Data and Procedure “steps,” variable, observation, data set and format.

After completing this session you will be able to:

- Identify BASE SAS and SAS/STAT procedures used to perform statistical analyses of data
- Select the appropriate PROC to conduct the desired analysis for the data/research question at hand
- Interpret the output generated by the SAS procedure(s) applied to the data in the contexts of a statistical and substantive “null hypothesis”
- Decide whether the results are “statistically significant” and what the substantive implications of “significance” or “non-significance” means to your research project
- Provide a basic explanation of the output/ results to others.
- Identify potential problems and remedies to the problems uncovered by the procedure output (e.g., outliers, influential observations, highly correlated variables, etc.)

Topics covered in Introduction to SAS/STAT Software include:

- **Selecting the Right Analytic Approach: “Levels of Measurement”**
- **Descriptive Statistics Using PROCs MEANS and UNIVARIATE**
- **Statistical Hypothesis Testing**
- **Working with Categorical Data**
- **T-tests for Two-Group and Single Samples**
- **Analysis of Variance**
- **Correlation and Regression**
- **Introduction to Multiple Regression Analysis**
- **Introduction to Logistic Regression**

Contact Sierra Information Services For More Information:

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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 24-year SAS user, Andrew is a SAS Certified Professional™ who has presented this, and other, 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 twelve 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 Dept. of Experimental Statistics at Louisiana State 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. Our firm is based in the California Wine Country region north of San Francisco but travel both domestically and internationally to work with clients and present training seminars. 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. 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., 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 instructor's bio above), Sierra also works with other leading SAS experts to offer their training seminars around the United States. Sierra is proud to have well-known experts such as Art Carpenter, Dr. Paul Allison, and David Cassell present their training seminars under our auspices.

For the most current list of our public 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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