

Free SAS® MACRO and SQL Training

for Harvard students & employees

sponsored by the department of Health Care Policy

NRB building Rotunda room, 3rd floor 77 Ave Luis Pasteur, Boston, MA 02115

Admission is Free but since the building will be locked, pre-registration is required.

Email: Name, Harvard ID # , affiliation with school/group , status (student or employee) to russ.lavery@verizon.net

If you are NOT associated with Harvard, you can attend these seminars by signing up, and paying for, the reasonably priced BASUG Friday Seminar on macro quoting : <http://www.basug.org/events/t201005.htm>.

Sat. May 8th: 8 until Noon – two topics

1) Getting the Correct Answer Using SAS Software & 2) SAS Proc SQL

1) Getting the Correct Answer Using SAS Software

In a business situation, programs can be thousands of lines long with many data sources and many merge points. It is critical that a programmer, after all that work is done, turns in the correct answer. LACK OF ERROR MESSAGES DOES NOT MEAN A SAS PROGRAM DOES NOT CONTAIN LOGICAL ERRORS. This seminar presents some simple techniques for discovering logical errors and increasing “output quality”.

2) SAS Proc SQL

Since Proc SQL is such a powerful tool for querying data. It can be employed extensively in the tasks above as can be used as a stand alone programming language. SQL is the basis for Queries in M.S. Access, Oracle, Business Objects, and many other packages. Learning SQL will help you use many computing products.

Proc SQL enhances ANSI standard SQL and has been difficult to learn because Proc SQL has been a “black box”.

This seminar shows a flowchart of, previously undocumented, Proc SQL internal processes and makes Proc SQL easier to learn.

The major deliverable of this part of the seminar is that it offers a graphical representation of the SQL process and uses the graphical model to develop rules for describing/predicting the SQL process. These descriptive rules translate directly into coding rules. These simple rules explain how to code Proc SQL queries.

Audience for both sections of the morning seminar: *Parts of this presentation have won two international awards.* Students with very little SAS experience, and SAS programmers with a few years experience, can benefit from this seminar. *People new to SAS should feel free to attend. This seminar is especially helpful for people with less than a year of Proc SQL.*

Sat: May 8th: 12:30 until 5 PM SAS® MACRO Training: Productivity via the SAS Macro Language

This half-day seminar will cover all the material that is in the 1 ½ -day, 1,000 dollar, SAS training course on SAS macros.

This seminar is presented to help students transition from doing analysis in SAS *as a student* to doing analysis in SAS *as a working professional*. Students often spend 90% of their time in statistical procedures. Working SAS professionals spend 90% of their time in the data step and the macro language. Macros are used in almost every SAS corporate and consulting environment. Most commonly, macros are used to make SAS code simpler and easier to maintain. Additionally, macros are used to automate processes and make them “production”.

Learning the SAS macro language is often a time consuming, and stressful, part of transitioning into the working world. Without knowledge of SAS macros, a new employee cannot maintain, or sometimes even read, legacy SAS code (legacy code is code written by the last person who last had your job or who sits in the next cube). Not being able to read code is a very unpleasant situation, with severe career implications.

The half-day seminar (12:30 to 5:00) will cover.

The SAS Supervisor

Tokenization

The Macro Catalog and the Macro Symbol Table

% let and &

Evaluating the &&&

Call Symput, Symget and Call Execute

Automating a process - two common ways to make a program “Data Driven”

1000+ lines of SAS macro examples (all examples in Seminar) “Self Test on Macros” Code

Audience for the afternoon seminar: This will NOT teach “basic SAS” and is NOT for people with less than 3 months (preferably 6 months) of SAS experience. Experienced programmers will see a graphical model of SAS that greatly simplifies thinking about macros. It is expected that this half-day program will reduce, by 200 man-hours, the time needed to learn macros.

Instructor information: Russ Lavery a certified SAS programmer and SAS Alliance member. He is a frequent, and multiple award winning, presenter at SAS conferences. He has presented at conferences & companies all over America, in Europe and in Asia.