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What's New in SAS® Training for SAS® 9.2
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ABSTRACT

SAS® Education has spent the past year updating the entire curriculum for SAS® 9.2 and aligning offerings around the world. Since it was a unique opportunity to touch every course, years of student evaluations were studied and customer focus groups were held, which resulted in some sweeping changes driven by customer requests including more interactivity, leveled exercises, and an overhaul of the data used in courses. New media were also introduced including audio-based e-Courses and short topic e-Lectures. Learn how the new media and updated courses can help you train your new and your experienced SAS users and gain a better understanding of what you need to know to transition to SAS 9.2.

GENERAL PHILOSOPHY & CHANGES

GLOBALIZATION AND MULTIMEDIA

Over the past thirty or so years, training classes have evolved in different parts of the world as the SAS office in each country reacted to the needs of their customers. The bulk of the materials were written in the Cary headquarters but each country office could change or add courses. While this approach works well for meeting local needs, it makes it harder to offer global training plans to large customers or support global programs like certification. So as we were learning about the features coming in SAS 9.2 and realizing we needed to make updates to some courses and completely re-think others, we decided to hold curriculum summits to gather as much input as possible, as well as gain global adoption of the new courses.

These summits were held with customers to understand how they used the different media for different audiences. In particular, we heard from the customer discussions that they had a student population who preferred intensive, longer courses rather than short courses over longer times. Therefore, the fast track idea was born. In several curricula, we now offer our standard one- to three-day courses but also offer a five-day fast track option to get through all of the material in one week.

The customers also told us that they needed content in multiple media to meet the variety of learning styles represented by their students. Our response is the "like to like" design of our core courses where the same content is presented in the classroom, via Live Web, and in our new e-Courses, which are self-paced e-Learning. The following courses are already available in all of these media:

- SAS Programming Introduction: Basic Concepts
  This course helps students who have no programming experience get ready for Programming 1.

- SAS Programming 1: Essentials
  This course teaches students to read, manipulate, and analyze data. It is the foundation how-to-use SAS course.

- SAS Programming 2: Data Manipulation Techniques
  This course expands upon the basics taught in Programming 1, digging into the power of the DATA step and understanding the robust data processing you can do.

We plan to round out the "like to like" offerings with the Macro, SQL, and Programming 3 courses by the end of the year. The new e-Courses represent a complete change in the self-paced media. They are audio-based and use Flash animations to illustrate key concepts. The interactivity and depth of these courses have already won industry awards.

Customers were also looking for quick help, such as short training segments on specific topics that can be accessed as they are needed. E-Lectures were created to meet this need. An e-Lecture is a short, fifteen to forty-five minute recording of a SAS instructor lecturing on a specific topic. Unlike our other offerings, there is no interactivity in this medium. Instead it is as if you have asked an expert a question and they are telling you what they know. We plan to

continually add new topics to the e-Lecture library. Of interest to experienced SAS users are the following e-Lectures that cover some of the new features in SAS 9.2:

- SAS 9.2 Changes and Enhancements for Base SAS, Session 1: New and Enhanced Procedures and Statements
  This course is available free of charge on the Web. It provides an example of what an e-Lecture is like, and it is a way to learn about the new features in Base SAS.

- SAS 9.2 Changes and Enhancements for Base SAS, Session 2: The Macro Facility

- SAS 9.2 Changes and Enhancements for Base SAS, Session 3: SAS XML LIBNAME Engine and ODS

Curriculum summits were also held internal to SAS Education where subject matter experts and instructors from around the world were invited to participate. We reached agreement on what courses would be offered in all offices, which are now reflected in the learning paths on the Web and in detail later in this paper. Each country office still has the ability to offer courses specific to their local needs, but the core of each curriculum is the same regardless of where a customer takes the training.

THE CLASSROOM EXPERIENCE

Several design elements were incorporated into the core course revisions that will enhance the student experience but that a student would not necessarily notice. Multi-level exercises were introduced to help engage the many levels of students in each class. Every class contains students who are facing new concepts and struggle to complete an exercise. These students might be sitting next to students already familiar with a topic and bored at the end of each workshop period. We have added "leveled" exercises so each student can pick what is appropriate for their skill level. Exercises are offered at three levels:

1. Problems that are just like what the instructor demonstrated during lecture time.

2. Problems that are a little harder and require the student do more on their own, deviating from what the instructor did during lecture time.

3. Problems that show the student a result and have them work toward that result by using what they learned during the lecture and by going out to the Help Facility. This helps prepare students for being on their own after class.

The goal is for the student to be challenged but also satisfied at the end of the workshop that they have mastered the topic to the best of their ability. Students will also be given access to a post class Web site for many classes that will allow them access to the course data and provide links to information that might be helpful to them after class such as white papers, extra exercises, a course case study, and additional topics documents.

SPECIFIC CURRICULUM UPDATES

ENTERPRISE INTELLIGENCE PLATFORM CURRICULUM

The SAS® Enterprise Intelligence Platform (EIP) curriculum has historically grouped courses from the Business Intelligence (BI), Data Integration (DI), and Platform Administration (PA) areas. The curriculum has been completely rewritten to include SAS 9.2 features but to also align the courses with common job responsibilities rather than focus on specific software applications. The courses within each job role were named, where possible, using a numbering scheme to make it more clear how a student might progress through the curriculum. As well, where possible, intensive fast track courses are offered to allow students to take the material normally presented in multiple classes in one sitting. These fast track courses condense more than five days of training into one week and are not typically suggested for beginners. Students can choose to take the individual courses when they want to spread their learning

over time or only need material presented in one or two courses. Here are a few examples of the SAS 9.2 learning paths by job role:

Business Analyst
"I understand my organization's data and the applications I need to create reports and analyses. I use SAS[®] Enterprise Guide[®] as well as OLAP methods and may create stored processes and information maps."
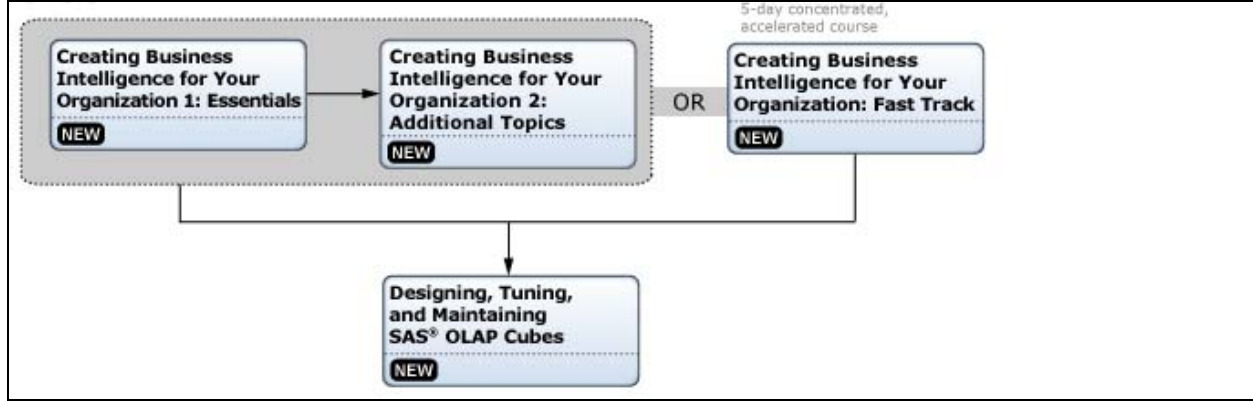

Figure 1. Business Analyst Curriculum

Data Integration Developer
"I collect, store, and cleanse data in preparation for reporting and analysis. I use applications such as SAS[®] Data Integration Studio, the SAS[®] Data Quality solution, and SAS[®] Information Map Studio. I may also use OLAP techniques and write SAS code."
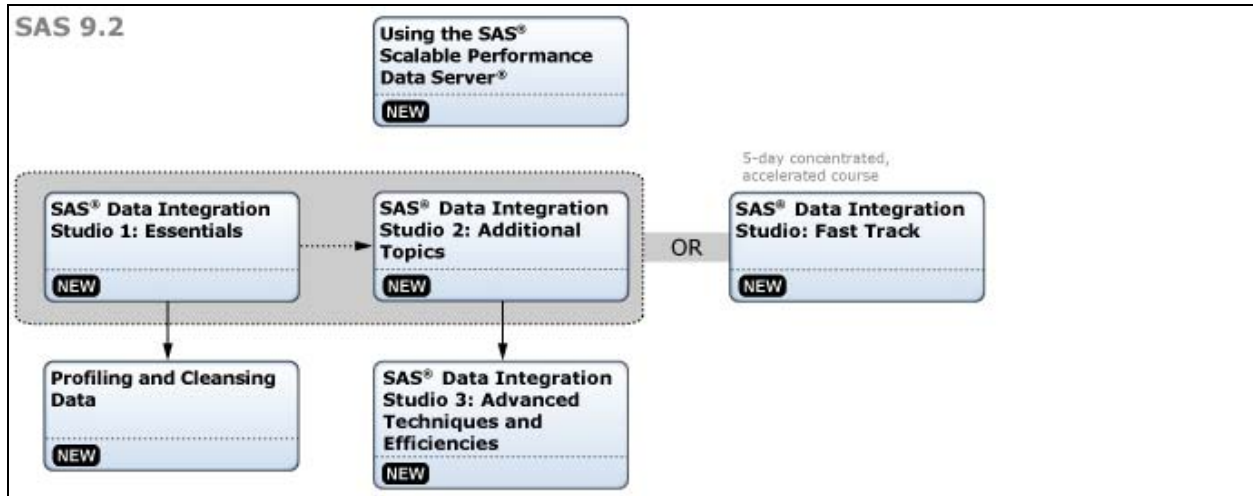

Figure 2. Data Integration Developer Curriculum

Platform Administrator
"I'm responsible for installing and maintaining the SAS infrastructure. I need to understand how to install, configure, and administer the SAS Enterprise Intelligence Platform."
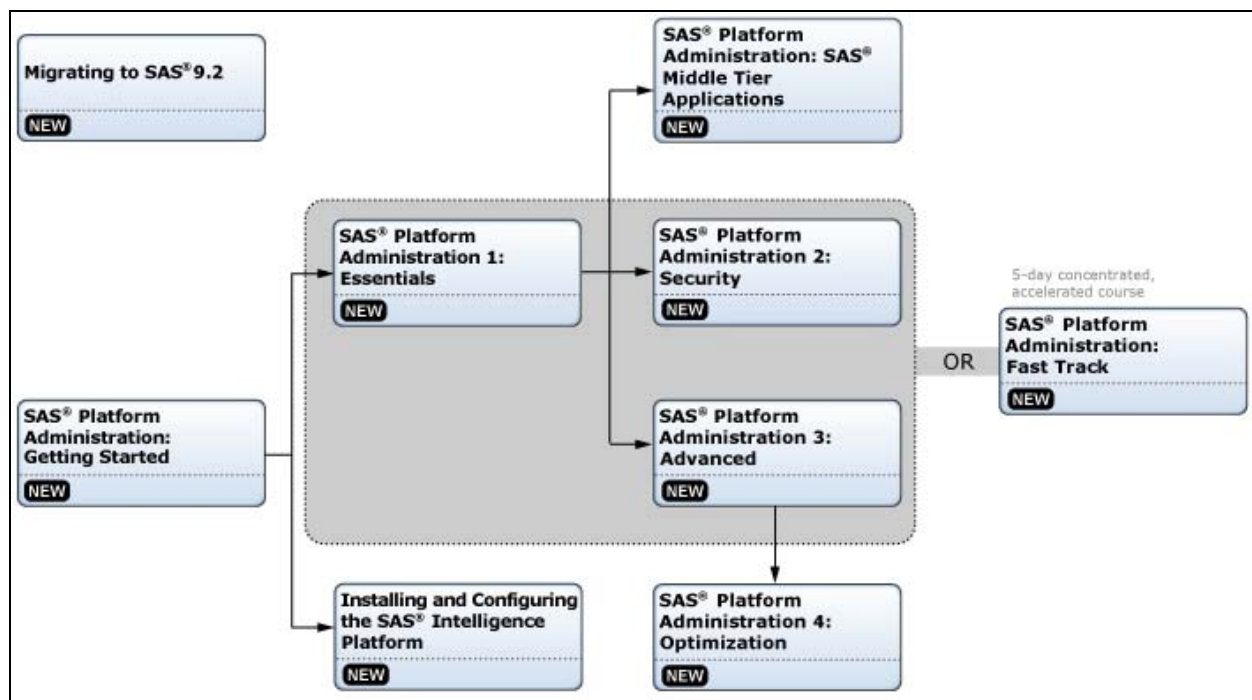

Figure 3. Platform Administrator Curriculum

STATISTICS / ANALYTICS CURRICULUM

SAS/STAT® software has a large addition to the feature set in SAS 9.2 as well as exciting new capabilities for easily creating graphical output from SAS/STAT PROC by using the Output Delivery System (ODS). Since there were so many changes, the statistical training group decided to revamp the entire curriculum and has created new versions of all of their main courses. The courses have been available for on-site training since the autumn of 2008. We will begin teaching the SAS 9.2 courses on our public schedule this summer when more customers have had an opportunity to install SAS 9.2. The updates to the courses were driven by the new software features, as well as input gathered from customers.

The following are a few new courses being developed to take advantage of some of the new features:

- Introduction to Statistical Graphics with ODS

- Fitting Tobit and Other Limited Dependent Variable Models

- Discrete Choice Modeling Using SAS Software

The following are some short Live Web courses for experienced users who are interested in learning about the new features available in SAS 9.2:

- What's New in SAS 9.2 for Categorical Data Analysis

- What's New in SAS 9.2 for Mixed Models Analysis

- What's New in SAS 9.2 for Survival Analysis

- What's New in SAS 9.2 for Basic Statistics

SAS ENTERPRISE GUIDE CURRICULUM

New features in SAS® Enterprise Guide® 4.2, available with SAS 9.2, are driving changes to the Enterprise Guide (EG) curriculum. But an even larger driver is the increased usage of EG. Many customer requests were received to provide more advanced EG training for EG users, as well as cross-over courses to allow EG users to learn SAS programming and SAS programmers to learn EG. The following are highlights of the EG courses:

- SAS Enterprise Guide 1: Querying and Reporting
  Students new to SAS and to EG will want to start with this course.

- SAS Enterprise Guide 2: Advanced Tasks and Querying
  Students will take this course to learn more about the robust features of EG. Students will be graduates of the EG 1 course or experienced SAS programmers who are comfortable with the EG interface.

- SAS Programming for SAS Enterprise Guide Users
  This course allows EG users to quickly transition to the world of SAS programming.

- SAS Enterprise Guide for Experienced SAS Programmers
  This course is an accelerated version of EG 1, and it includes how to use open existing programs, write new programs, edit EG-generated code, and integrate it all together with the point-and-click EG environment.

CONCLUSION

Whether you are a first-time student, new to SAS, or responsible for keeping an experienced staff of SAS current on recent changes, we hope you will find something to meet your needs in the offerings of SAS Education. Your best and most up-to-date source of information is the Web (support.sas.com/training). You can subscribe there to the monthly training newsletter. Don't hesitate to e-mail or call us with questions or suggestions – training@sas.com and 1-800-333-7660. We would love to hear from you!

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