

Boston Area SAS® Users Group (BASUG) Half-Day Training Announcement

**Friday June 21, 2019
1:00 PM – 5:00 PM**

BASUG is proud to offer a training course led by SAS expert and author, Troy Martin Hughes. Students will learn the benefits of using data-driven design to solve real-world programming problems. All students will receive a complimentary copy of Troy's upcoming 2019 book, *SAS Data-Driven Development: From Abstract Design to Dynamic Functionality*, a \$40 value!

Please join us for this informative training, and consider coming to our morning quarterly meeting as well (separate event). For information on the morning meeting, please visit the [Meeting Announcement](#).

BASUG is hosting an informal light buffet lunch prior to the training. We hope you can join us for this opportunity to network and socialize with your fellow SAS users.

Course Description

SAS Data-Driven Design: Developing More Dynamic, Flexible, Configurable, Reusable Software

Students will receive a **complimentary copy** of Troy's upcoming 2019 book *SAS® Data-Driven Development: From Abstract Design to Dynamic Functionality*, a \$40 value! The course follows the book's outline and teaches data-driven techniques in which software customization, configuration, business rules, data models, data cleaning/validation, report style, and other dynamic elements are maintained in external data structures – NOT in the underlying code. Data-driven development techniques allow software to adapt flexibly to various organizations, environments, and objectives. This design facilitates highly configurable (i.e., "codeless") software whose functionality can be modified by changing only the underlying control data – the control tables, configuration files, parameters, and user-specified options rather than the code itself.

All examples are demonstrated in Base SAS 9.4, so the course is ideal for SAS practitioners seeking to expand their skills. All students will walk away with an understanding of how data-driven design minimizes software maintenance and modification, as well as proven data-driven development techniques that can be immediately implemented.

In the first half of the course, students will learn the basics of data-driven design and data structures (i.e., control data):

- Compare data-driven software design with functionally equivalent code-driven design.
- Identify dynamic elements within software and learn the benefits of controlling them remotely.
- Create and read various file types that contain dynamic data elements, including batch files, configuration files, control files/tables, decision tables, business rule repositories, hierarchical taxonomies, and other data models.

- Create and read various control data file formats, such as Excel spreadsheets, SAS data sets, XML files, CSS files, custom-formatted text files, and directory/folder contents.

In the second half of the course, students will learn to use data-driven methods to solve real-world problems:

- Learn SAS-specific components that support data-driven development, such as the CALL EXECUTE statement, CNTLIN statement in PROC FORMAT, SYSPARM option, SAS dictionary tables, CSSSTYLE option in PROC REPORT, and SYMGET and SYMPUT functions.
- Write batch files that parameterize dynamic elements to initiate and execute software using customized user specifications.
- Clean, standardize, and categorize data using dynamic data formats and dynamic data models.
- Create quality control exception reports that use dynamic data dictionaries to identify erroneous data.
- Transform data using dynamic business rules and conditional logic maintained outside of software.
- Create “checkpoint” control tables that validate program/process success or indicate program/process failure.
- Customize the style (e.g., format, font, color scheme, graphics, etc.) and content of data products.

Instructor



Troy Martin Hughes has more than 20 years of experience leading SAS teams and projects in support of federal, state, and local government initiatives. Since 2013, he has given more than 90 presentations, trainings, and hands-on workshops at SAS conferences, including at SAS Global Forum, SAS Analytics Experience, WUSS, SCSUG, SESUG, MWSUG, and PharmaSUG. Additionally, he has authored two books that model design and development best practices:

- *SAS Data Analytic Development: Dimensions of Software Quality (2016)*

- *SAS Data-Driven Development: From Abstract Design to Dynamic Functionality (2019)*

Troy has an MBA in information systems management and numerous certifications including SAS Base, SAS Advanced, SAS Clinical Trials, PMP, PMI-RMP, PMI-PBA, PMI-ACP, CISSP, CSSLP, ITIL, CSM, CSD, CSPO, CSP-SM, and CSP-PO. He is a US Navy veteran with two tours of duty in Afghanistan.

Event Details

<p>When</p>	<p>Friday, June 21, 2019 1:00 PM – 5:00 PM (join us for lunch at noon!)</p>
<p>Where</p>	<p>The Link ¹ 255 Main Street, 8th Floor Cambridge, MA 02142 617-945-2562</p> 
<p>Directions</p>	<p>Please visit the meeting site directions page. There is no on-site parking. The Link is next to the Kendall Square Red Line station. There are also public parking lots in Kendall Square.</p>
<p>How to register</p>	<p>Individual, on-line registration required. Please visit the event registration page</p> <p>Registration closes at NOON on Wednesday June 19th! NO WALK-INS! On-line pre-registration is required for all attendees!!</p> <p>Please register early! Seating is limited.</p>
<p>Pricing</p>	<p>\$155 – if paid on-line by Tuesday, June 11 \$180– if paid on-line by NOON on Wednesday, June 19th \$195 – pay-at-the-door (checks only) – but pre-registration is required!</p>
<p>Payment Methods</p>	<p><u>Credit Card</u>: We urge you to pay by credit card, using our online registration system. Make sure to purchase your ticket by June 11 to receive the early-bird price.</p> <p><u>Check</u>: Do NOT mail a check to us prior to the workshop. Pre-register online, and bring a check with you for the pay-at-the-door-price.</p> <p><u>Full payment</u> is due by the day of the class, June 21st. There will be NO EXCEPTIONS. We do NOT accept cash. We do accept credit card payments – but only through our online registration service.</p>
<p>Refund Policy</p>	<p>To receive a full refund for the training, please send an email to our Event Organizers by 5PM on Tuesday, June 11. After that date we will refund your payment (less a \$10 processing fee) only if we can fill your seat with another attendee.</p>
<p>Contact</p>	<p>If you have questions about the meeting, contact our meeting organizers: Lori Goldman and Quentin McMullen at: Event Organizers.</p>



BASUG Contacts

Mailing Address:

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Email the [BASUG Webmaster](#)

- (1) The Link serves as a connection between the innovation economy of Kendall Square and Greater Boston, and underrepresented job seekers. It was championed and developed by the Cambridge Redevelopment Authority and Boston Properties as a workforce training and employment solution, in keeping with the innovative and entrepreneurial spirit of Kendall Square. Operated by TSNE MissionWorks, the developer of The NonProfit Center in Boston, The Link welcomes a variety of organizations to use its event facilities, classrooms and meeting spaces for training, education, and gatherings. The Link is home to a host of nonprofits who offer career development and technical training programs.