



## **QTECH-SOL PROFESSIONAL DEVELOPMENT CENTER**

### **Job Focused Clinical Science Courses**



#### **Clinical Trial SAS Programming**

**CDAR**

**SAS Functional  
Clinical Trials  
Phase I thru IV**



***For Career opportunities in clinical domain as SAS Programmer***

If you are SAS certified professional, have strong SAS skills, and are interested in supporting the clinical trial drug projects? You should consider joining the training program that will prepare you for daily tasks completion required from clinical SAS programmers. The QPDC offers Clinical Trial Data Analysis and Reporting (CDAR) Training, which emphasizes on clinical trial data analysis and reporting for regulatory submissions using SAS Software.

## **Self-Paced Online Training**

### **Our Mission**

Our mission is to provide the best-in-class job oriented certification and skill based courses towards Clinical research, Drug Safety, Pharmacovigilance, Clinical Data Management, Clinical SAS Data Analytics and Healthcare business. We offer Entry-Mid and Senior programs for students and professionals, looking for skills refresh or career advancement

## **CAREER FOCUSED PROGRAM**

(Learning for Job)

# OVERVIEW OF THE TRAINING AGENDA

Designed by highly experienced SAS programmers for students and young professionals interested in pursuing further career as clinical SAS programmers

## SAS Functional

- Elementary SAS Concepts
- SAS Efficiency Programming
- Introduction to Clinical Trials
- Types and Data in Clinical Trials
- Clinical Trial Protocol Development
- Elements of CRF Design
- Electronic Data Capture (EDC)
- Good Clinical Practices
- Good Documentation Practices
- Work Flow Instruction Request
- Documentation Templates
- Introduction to Data Validation
- Data Based Validation
- Protocol Based Validation
- Basic of Statistics
- Statistical Analysis Planning
- Elements of Hypothesis Testing
- Basic of Efficiency
- Integrated Summary of Effectiveness (ISE)
- Integrated Summary of Safety (ISS)
- Clinical Data Interchange Standards Consortium
- Preparing Analysis Data sets
- Creating Tables Listing and Graphs (TLG)
- Understanding Various Therapeutics Areas
- Data Based Therapy
- Introduction to Phase I Studies
- Oncology Project
- Introduction to Phase II Studies
- Ophthalmology Project
- Introduction to Phase III Studies
- Cardiology Project
- Introduction to Phase IV Studies
- Central Nervous Systems (CNS) Project
- Introduction to Pharmacovigilance
- Pharmacovigilance Reporting
- Aggregate Reporting Process :PSUR, PUR, ADR, Signaling, etc.)

## SAS Base

- About SA Institute
- Introduction to SAS
- Components of SAS Program and Code Writing
- Running SAS Programs
- Mastering Fundamental Concepts
- Diagnosis and Correcting Syntax Errors
- SAS Options
- Types of Input Statements
- SAS Format and Informats

- Using Advanced Input Techniques
- SAS Date and Time
- Subsetting, Combining and Sorting Datasets
- Merging and Updating Data
- Performing Conditional Processing
- Performing Iterative Processing – Looping
- Creating Customized List Reports
- Arrays
- Creating Enhancing List and Summary Reports
- Creating Proc Tabulate

## SAS Macros

- Fundamentals of Macros
- Macro Application
- Macros Program Structure
- Macros Statements
- Macro Variables
- Macro Functions
- Writing Macro Programs

## SAS SQL

- Introduction to the SQL Procedure
- Retrieving Data from a Single Table
- Retrieving Data from Multiple Tables
- Creating and Updating Tables and Views
- Programming with the SQL Procedure
- Practical Problem-Solving with PROC SQL

## SAS Stat

- Introduction to Statistics
- Hypothesis Testing
- One-Sample T-tests
- Paired T-tests
- Two-Sample T-tests
- Analysis of Variance (ONE-WAY)
- Analysis of Variance (TWO-WAY)
- Linear Regression
- Multiple Regression
- Regression Diagnostics
- Categorical Data Analysis

## SAS Graphs

- Producing Bar and Pie Charts
- Enhancing the Output in the Graphs
- Producing Plots
- Ods (Output Delivery System)
- Creating 3rd and Geographic Reports

## Clinical Trial SAS Programmer Course

The Clinical SAS Programmer or SAS Data Analyst will develop and manage core area of clinical data obtained thru clinical trials or post marketing surveillance for data analysis and reporting needs. The person gets involved in SAS Efficiency Programming, Analysis and Validation of CRF data captured. Applies Good Clinical Practices, GxP regulations, Documentation using CRF Part 11 and SOP concepts, Performs Data Validation based on data types and protocol. participates to develop Statistical Analysis Planning and Hypothetical testing, Efficacy Data analysis using ISE and ISS concepts. Applies Clinical Data Interchange Standards Consortium (CDISC) concepts and creates datasets for reporting data as Tables Listing and Graphs (TLG). This program includes around 11 projects covering phase-wise clinical trial data towards Oncology, Ophthalmology, Cardiology and Central Nervous Systems (CNS) therapeutics areas. Also includes Pharmacovigilance and aggregate reporting concepts.

### Hiring Clinical SAS Programmers:

99% of the employers choose candidates with **biostatistics** degree  
80% of the employers choose candidates with **bioinformatics** degree  
75% of the employers choose candidates with **biotechnology** degree  
75% of the employers choose candidates with **public health** degree



### Contact Information

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