CLINICAL STUDY ACADEMY

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Introduction

➢ Introduction of SAS software.
➢ Industries using SAS
➢ Why SAS and why not R or Python
➢ SAS access and Installation
➢ Introduction to SAS Windows.

Data & Library

➢ Types of Data
➢ Overview of SAS Data Sets.
➢ Basic rules in SAS
➢ Library & Types of Libraries.
➢ Creating and managing SAS Libraries.
➢ Referencing SAS files.
➢ Working of PDV

*********** Base SAS Topics ***********

Creation database from raw data

➢ Steps to create a SAS dataset.
➢ Creating SAS dataset using text file.
➢ Creating SAS dataset using text file with delimiters.
➢ Creating SAS dataset using Excel file.
➢ Creating Raw Datasets using various input methods.
➢ Use of INFILE Statement and Its options
➢ Output Delivery System (ODS)
➢ Output of ODS in different format.

Functions

➢ Character function
➢ Concatenation function
➢ Numerical function
➢ Mathematical function
➢ Date & Time Function

Combining the datasets

➢ Horizontal
➢ Vertical

Loops in SAS: Do Loops

➢ Iterative Do Loop
➢ Conditional Do Loop

Array
➤ Definition of array
➤ Example of array

Procedures
➤ Procedure Means.
➤ Procedure Freq.
➤ Procedure Format.
➤ Procedure Transpose.
➤ Procedure Import.
➤ Procedure Export.
➤ Procedure Contents.
➤ Procedure Report.
➤ Procedure Append.
➤ Procedure Compare.
➤ Procedure Datasets.
➤ Procedure Chart.

*********** Advanced SAS Topics ***********

Proc SQL
➤ Introduction to Proc SQL Statements.
➤ Functions in Proc SQL.
➤ Creating Datasets using different methods.
➤ Conditional Processing in Proc SQL.
➤ SQL Joins.
➤ Compare solving a problem using the SQL procedure versus using traditional SAS programming techniques.

Macro
➤ Create and use user-defined and automatic macro variables within the SAS Macro Language.
➤ Ways to Create macro.
➤ Difference between Positional Parameters and Keyword Parameters.
➤ Automate programs by defining and calling macros using the SAS Macro Language.
➤ Understand the use of macro functions.
➤ How to debug SAS Macros.
➤ How to call SAS Macro from External Location.

*********** Clinical SAS Topics ***********

Introduction of SAS and Clinical research
- ➢ SAS role in Clinical Research.
- ➢ Clinical Trial Phases
- ➢ Protocol in Clinical Research
- ➢ Case Report Form (CRF) and Annotated- Case Report Form (aCRF)?
- ➢ Introduction to Specification (SDTM-Spec & ADaM-Spec)
- ➢ Statistical Analysis Plan (SAP) and its purpose

CDISC Standards
- ➢ Introduction to CDISC
- ➢ CDISC Standards for Statistical Programmer
- ➢ Study Data Tabulation Model (SDTM)
  - o Introduction to SDTM
  - o SDTM Implementing Guideline
  - o SDTM Datasets
  - o Study Data Reviewer's Guide (SDRG)
- ➢ Analysis Data Model (ADaM)
  - o Introduction to ADaM
  - o ADaM Implementing Guideline
  - o ADaM Datasets
  - o Analysis Data Reviewer's Guide (ADRG)
- ➢ Table, Listing
- ➢ Describe contents and purpose of define.xml

Project-work
- ➢ Description to project
- ➢ Creation of SDTM datasets
- ➢ Creation of ADaM datasets
- ➢ Tables and Listings

*********** Additional Activities ***********

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Activities List
- ➢ Sessions to Improve Communication skills.
- ➢ Tips to clear an Interview
- ➢ Common Interview questions and answers
- ➢ SAS Interview Questions and Answers
- ➢ Resume Building Guide
- ➢ Statistical Programmer Role & Responsibility from fresher to vice-president
- ➢ How to effectively apply for Jobs.
- ➢ Regular Doubt clearing sessions.
- ➢ Global SAS Certification Exam Preparation.
- ➢ Tracker for monitoring progress

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