

DAY 1

The Importance of Data Collection

- Historical Context
- Data Sources
- Defining the Data Collection Plan
- Determining the Sample Size Required
- Project Charter
- Common Sources of Data

DAY 2

Collecting Data

- Most Common Data Collection Techniques
- Conducting an Interview
- Using Questionnaires and Surveys
- Observations and Focus Groups
- The Aspects of Big Data
- Automated Techniques for Data Collection
- Data Management Strategy

DAY 3

Examples of Use of Data Collection Techniques

- Planning and Conducting an Interview
- Planning and Creating a Survey
- Determining Survey Scales
- Conducting Experiments
- Plan and Use Online (*electronic*) Surveying Tools
- Sources of Secondary Data
- Use and Referencing of Secondary Data

DAY 4

Big Data Concepts

- Big Data Fundamentals
- Five V's of Big Data
- Enterprise Technologies for Big Data Collection and Analysis
- Big Data Storage and Processing
- Big Data Analytics
- Big Data Strategy
- Preserving Privacy with Big Data Applications
- Data Quality (*completeness, uniqueness, timeliness, validity, accuracy, consistency*)

DAY 5

Real-time Data Gathering and Its Application

- The Meaning of Real-time Data Gathering
- Gathering Data from RFID
- Gathering Geolocations of Mobile Phones and its Use in Urban Planning
- Multimedia Data
- Data Gathering for Risk and Uncertainty Management
- Errors and its Mitigation in Real-time Data Gathering
- New Concepts, Methodologies and Way Forward