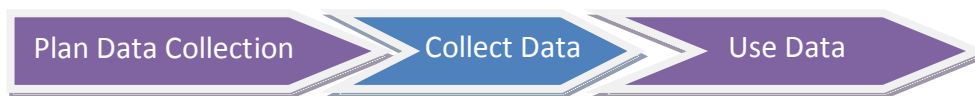


Understanding Process Performance using Minitab

3days

Businesses need to be able to measure, understand and communicate the true performance of their processes to enable process control, improvement and decision making. Using data is itself a process which breaks into three stages:



1. Planning the data collection - ensuring the measurement system is reliable and the sampling approach is appropriate (so we can trust the data)
2. Managing the data collection process
3. Interpreting and presenting the data once it has been collected to enable correct decision making

As well as building proficiency in the use of Minitab, this intensive course provides a solid grounding in these essential techniques:

- Process sampling
- Assessing measurement system performance
- Using Statistical Process Control Charts (SPC) to display and interpret the data
- Process Capability Analysis (Cp/CpK)
- Graphical Data Analysis
- Basic Statistics
- Statistical Concepts necessary to correctly apply the above

Detailed training materials and data files are provided.

Who is the course for?

- Anyone who needs to learn best practice for measuring and understanding process performance to enable effective data based decision making in the business. No prior Minitab experience is necessary.

Learning Outcomes

- You will be able to apply the correct techniques to measure, interpret and communicate process performance.
- You will have a sound working knowledge of key data techniques and be able to apply them using Minitab

Next Steps

A follow on programme – **Data Analysis Using Minitab** - is available which develops the delegates' statistical capability focusing on Hypothesis Testing and Regression techniques.

Course Contents

Minitab Basics

- Minitab overview
- Entering and importing data
- Project and worksheet files
- Data types in Minitab
- Manipulating worksheets and data
- The Minitab calculator
- Help functions
- Basic Statistics—turning data into information
- Histograms, Dot Plots, and Box Plots
- Scatter Plots and Matrix Plots
- Plotting Data versus Time
- Pareto and Pie Charts
- Barcharts
- Review - case study exercise

Understanding Process Performance

- Determining the right things to measure
- Data Types
- Developing Process Measures
- Operational Definitions
- Assessing the capability of the measurement process
- Gauge R&R Study
- Attribute Agreement Analysis
- Process sampling
- Systematic Sampling
- Subgroup Sampling
- Planning and Managing Data Collection
- Summarising and presenting data
- Understanding Variation
- Statistical Process Control using the Individuals Chart
- Process Capability Analysis (Cp/Cpk)

The course is 100% hands-on from the outset so delegates will need to have at least the 30 day Minitab demo installed on their pc.

Catalyst offers Minitab statistical analysis training at introductory and advanced level in topics including Statistical Process Control, Capability Analysis (Cp/CpK), Hypothesis Testing, Regression Analysis, Measurement Systems Analysis, Design of Experiments.