

# Data Analysis Fundamentals using Excel

## Dual Certification Option with the Lean Six Sigma Yellow Belt

Empower your team with the skills to analyze raw data making sense of it finding trends and patterns. Unlock their potential to contribute to teams solving problems and making improvements to your day-to-day operations.

Our comprehensive 8-hour course fuses technology with a proven data analysis and problem-solving methodology.



### Outcomes:

- Understand how to identify, collect, and format data
- Employ basic charts, functions, and formulas
- Apply statistical analysis fundamentals
- Perform basic trend analysis and quality control visualization and interpret the results

### Prerequisites:

- Basic knowledge of computer systems and MS Excel
- Complete the instructor provided pre-work prior to the beginning of the course

### Certification:

- Data Analysis Fundamentals using Excel
  - Attend training and pass assessment(s)
- Lean Six Sigma Yellow Belt
  - Attend training and pass assessment(s)

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## Curriculum

### Module 1: Introduction to Problem Solving

- Overview, Philosophies, and History
- DMAIC Methodology
- Value Stream Map Introduction
- Systems, Quality, Culture Introduction
- Problem brainstorming

### Module 2: Define Phase

- Introduction to Problem Formulation
- Problem Statement
- Project Charter
- Team Roles (Champion, Process Owner, etc.)
- SIPOC Diagram
- Voice of the Customer Fundamentals
- Stakeholder Analysis and Change Management Fundamentals (ADKAR, RACI, etc.)

### Module 3: Measure Phase

- Baseline Measure with Data Collection and Formatting (Excel)
- SMART Goals and Goal Setting
- Trend Analysis using a Time Series Chart (Excel)
- Quality Analysis using a Pareto Chart (Excel)

### Module 4: Analyze Phase

- Descriptive Statistics (Excel Functions & Data Analysis Tools)
- Root Cause Analysis: Spaghetti Diagram, Flow Chart, Cause & Effect Diagram, 5-Whys
  - Utilize Excel and IoT applications
- Gemba Walk Fundamentals
- Root Cause selection

### Module 5: Improve Phase

- Fundamentals of Lean Analysis: Waste Analysis, Mistake Proofing (Poka Yoke), 5S
- Innovation Integration
- Brainstorming
- Solution Selection (Excel Formulas & Functions)
- Action Plan

### Module 6: Control Phase

- Calculate Results (Excel)
- Introduction to Standard Work
- Control Plan