

# Data Analytics

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

- Earn your Data Analytics and Lean Six Sigma Green Belt certifications.
- Become a leader in data-driven improvement.
- Master the tools and methods to turn data into insights, lead impactful projects, and deliver measurable results.

Our comprehensive 16-hour course fuses technology (software, web-based applications, AI, and more) with a proven data analysis and problem-solving methodology. Scan the QR Code to learn about possible funding options through Ohio's TechCred program.



### Outcomes:

- Master data analysis tools like Excel, web-based applications, and AI technologies
- Turn raw data into actionable insights for improved decision-making
- Spot trends and uncover patterns hidden in complex datasets
- Separate noise from true signals to focus on what matters
- Deliver measurable results through a hands-on capstone project

### Prerequisites:

- Data Analysis Fundamentals using Excel
- Lean Six Sigma Yellow Belt
- Complete the instructor provided pre-work prior to the beginning of the course

### Certification:

- Data Analytics
  - Attend training and pass assessment(s)
- Lean Six Sigma Green Belt
  - Attend training and pass assessment(s)
  - Complete a project that delivers measurable improvement

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### Curriculum

#### Module 1: Introduction to Problem Solving

- Overview, Philosophies, and History
- Value Stream Map & Theory of Constraints
- Systems, Quality, Culture

#### Module 2: Problem Formulation

- Elements of a Problem
- Problem Verification
- Types of Problems

#### Module 3: Define Phase

- Project Charter
- SIPOC Diagram
- Voice of the Customer & CTQs
- Stakeholder Analysis and Change Management (ADKAR, RACI, etc.)

#### Module 4: Measure Phase

- Baseline Measure with Data Collection and Formatting (Excel)
- Fundamentals of Probability and Statistics (Excel, Web-Based Applications, AI)
- Trend Analysis Using a Time Series Chart (Excel)
- Quality Analysis Using a Pareto Chart (Excel, AI)
- Understanding Variation with a Histogram (Excel, Web-Based Applications, AI)
- Evaluate Process Performance with Process Behavior Charts (aka Statistical Process Control Charts - SPC)

#### Module 5: Analysis Phase

- Descriptive Statistics (Excel, Web-Based Applications, AI)
- Root Cause Analysis: Spaghetti Diagram, Flow Chart, Cause & Effect Diagram, 5-Whys
- Gemba
- Association Analysis with the Scatter Plot (Excel, web-based applications, AI)

#### Module 6: Improve Phase

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

#### Module 7: Control Phase

- Calculate Results (Excel, Web-Based Applications, AI)
- Standard Work
- Visual Management
- Control Plan