Advanced Problem-Solving with DMAIC Training Course

Professional Development Training Course Outline

Category	Quality Assurance and ISO standards	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today?ÇÖs competitive business environment, organizations are expected to consistently deliver high-quality products, streamlined services, and sustainable operational performance. Advanced problem-solving skills have therefore become essential to ensure cost reduction, process improvement, and customer satisfaction. Advanced Problem-Solving with DMAIC Training Course on Advanced Problem-Solving with DMAIC equips participants with practical techniques to identify root causes, eliminate inefficiencies, and implement structured solutions for long-term impact. By applying the DMAIC methodology, organizations can adopt a disciplined, data-driven approach that ensures process optimization and measurable results.

This course is designed to help professionals transform challenges into opportunities through the Define, Measure, Analyze, Improve, and Control framework. With its focus on Lean Six Sigma principles and real-world case studies, the training strengthens analytical thinking, boosts problem-solving capabilities, and fosters innovation. Learners will gain hands-on experience, practical tools, and proven strategies to enhance their confidence in tackling complex problems. This course supports professionals in achieving operational excellence, increasing productivity, and maintaining a culture of continuous improvement.

Programme Curriculum

Advanced Problem-Solving with DMAIC Training Course

Introduction

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Course Objectives

1. Understand the principles of DMAIC methodology and Lean Six Sigma.
2. Apply structured problem-solving techniques to complex challenges.
3. Learn data-driven decision-making and analytical thinking.
4. Identify and eliminate process inefficiencies effectively.
5. Conduct accurate root cause analysis using advanced tools.
6. Improve organizational productivity and customer satisfaction.
7. Master the Define, Measure, Analyze, Improve, Control framework.
8. Implement continuous improvement strategies for long-term results.
9. Develop practical skills in advanced statistical problem-solving tools.
10. Strengthen leadership skills in managing improvement projects.
11. Gain hands-on experience through real-world DMAIC case studies.
12. Foster innovation and creativity in process optimization.
13. Build confidence in achieving measurable business transformation.

Organizational Benefits

1. Improved operational efficiency and reduced costs.
2. Enhanced organizational problem-solving culture.
3. Increased customer satisfaction and loyalty.
4. Faster identification and resolution of business challenges.
5. Stronger competitive advantage in dynamic markets.
6. Streamlined workflows and reduced waste.
7. Consistent delivery of high-quality products and services.
8. Improved employee engagement in improvement initiatives.
9. Sustained business growth through continuous improvement.
10. Greater alignment of business processes with strategic goals.

Target Audiences

1. Quality Managers and Quality Assurance Professionals
2. Project Managers and Project Leaders
3. Process Improvement Specialists
4. Engineers and Technical Experts
5. Operations and Production Managers
6. Business Analysts and Data Analysts
7. Supervisors and Team Leaders

8. Professionals aspiring to develop advanced problem-solving skills

Course Duration: 5 days

Course Modules

Module 1: Introduction to Problem-Solving and DMAIC Framework

- Understanding the importance of structured problem-solving
- Overview of Lean Six Sigma and DMAIC methodology
- Identifying business challenges that require DMAIC
- Key problem-solving principles and concepts
- Practical introduction to real-world applications
- Case study: A manufacturing process inefficiency

Module 2: Define Phase ?Çô Clarifying the Problem

- Defining project goals and scope
- Understanding customer requirements (VOC)
- Creating problem statements effectively
- Tools for project charter development
- Identifying stakeholders and roles
- Case study: Service delivery delays in a bank

Module 3: Measure Phase ?Çô Collecting and Validating Data

- Selecting relevant process metrics
- Gathering reliable data for analysis
- Understanding baseline performance levels
- Measurement system analysis techniques
- Tools for data visualization
- Case study: Quality issues in a packaging process

Module 4: Analyze Phase ?Çô Identifying Root Causes

- Using analytical tools to explore data
- Root cause analysis with cause-and-effect diagrams
- Statistical analysis methods for accuracy
- Identifying key drivers of process issues
- Prioritizing problems for resolution
- Case study: Supply chain bottlenecks in retail

Module 5: Improve Phase ?Çô Developing and Testing Solutions

- Brainstorming and creative problem-solving tools
- Designing and piloting process improvements
- Using Lean tools for waste reduction
- Implementing process changes effectively
- Evaluating improvement outcomes
- Case study: Reducing defects in production lines

Module 6: Control Phase ?Çô Sustaining Improvements

- Standardizing improved processes
- Monitoring performance with control charts
- Establishing process ownership and accountability
- Building a culture of continuous improvement
- Documenting lessons learned and best practices
- Case study: Long-term sustainability of a logistics solution

Module 7: Advanced Problem-Solving Tools and Techniques

- Regression analysis and hypothesis testing
- Failure Mode and Effects Analysis (FMEA)
- Advanced brainstorming and TRIZ methodology
- Value stream mapping for process optimization
- Decision-making frameworks for leaders
- Case study: Healthcare process efficiency improvements

Module 8: Real-World Application and Project Integration

- Integrating DMAIC in organizational projects
- Aligning problem-solving with strategic objectives
- Leading cross-functional teams for results
- Overcoming resistance to change
- Delivering measurable project outcomes
- Case study: Transforming customer service performance

Training Methodology

- Interactive instructor-led sessions for concept clarity
- Hands-on group exercises and simulations
- Real-world case study analysis and discussion
- Step-by-step application of DMAIC tools and techniques
- Practical project-based assignments to reinforce learning
- Continuous feedback and performance evaluation

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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