Certified Quality Professional - Level 1

Target Audience : Quality Process Analyst, Quality Process Engineer, Quality Auditor, Lead Auditor, Data Analyst, Metrologist, Any personnel in QMD holding a senior-level position

Prerequisite : None

Module No.	Course Title	Duration (No. of Hours)
1	Introduction to Quality Models and Standards (Building and Maintaining Quality Systems)	12
2	Essentials of Process Management	12
3	Solving Problems in the Digital Age (Identifying Business Needs & Defining Solutions in the Digital Age)	20
4	Developing Measurement Systems	12
5	Graphical Toolbox for Data Interpretation & Analysis	16
6	Basic Statistical Process Control (Quantitative Analysis Using SPC - The Practical Approach)	16
	Total	88

Introduction to Quality Models and Standards (Building and Maintaining Quality Systems)

The course presents the value of quality frameworks and standards and present how to synergize these frameworks to obtain optimum results. The course intends to provide a hawk's eye view of these frameworks to equip the professional with the right knowledge of assessing the quality maturity of an organization and be able to design an appropriate quality program for governance. This course aims to build professionals the Championship role of diagnosing the right Quality Pathway that will affect largely the organization's commitment to customer satisfaction and further be translated to the bottom line.

Training Objectives

At the end of the module, the participant should be able to:

1. Identify various quality models to be used in the organization.
2. Integrate seamlessly the quality models for maximum benefits.

Topics

I. Thrust of Enterprise Quality
II. Quality Maturity
III. Enterprise Quality Models
IV. Process-based QMS
V. Considerations to Quantify Performance
VI. Effective Metrics System Linked to Profit (Introductory to Metrics)
VII. Continual Improvement Programs

Flexible on the topics

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Essentials of Process Management

This course covers comprehensive principles and applications of process management. This course discusses techniques and methods to fully equip anyone who will be involved in problem solving or quality improvement initiatives. This course sets the baseline of process-orientation and opens up the world of process management and process optimization. A strategic framework for developing business transformation roadmap and planning process change are presented.

Training Objectives

At the end of the course, the participants will be able to:

1. Determine appropriate process management approaches, preventive and corrective actions.
2. Use process analysis, design, review and documentation tools/techniques.
3. Prepare process maps.

Topics

1) Process Management Concepts
   a) Various Meanings of Quality
   b) Quality Maturity Model
   c) Definitions of Process Terms
   d) Principles of Process Management
2) Using SIPOCO Diagram
   a) How to model a SIPOCO diagram
   b) Value of a SIPOCO diagram
3) Process Analysis, Design & Documentation
   a) Importance of Process Mapping
   b) Process Mapping Using flowcharts
   c) Process Mapping Using UML – Activity Diagram
4) 6S: A Plan for Neat and Clean Workplaces
5) Lean Kaizen in the 21st Century
   a) Kaizen
   b) Poka-yoke (Mistake Proofing)
   c) Mistake Proofing the Process
   d) Poka-yoke's in Software

Solving Problems in the Digital Age (Identifying Business Needs & Defining Solutions in the Digital Age)

Recognition of a structured requirements definition is critical in a world where information is highly accessible and the losses that accompany failure are even more devastating.

Simple business needs fit into a linear (straightforward) problem solving model while complex requirements have multiple and complex components and variables, difficult to define, data is not readily available, and there are no known solutions or easily applied rules of thumb for solving the problem. This course focuses on the techniques/tools needed to succeed in defining simple and complex organizational requirements and how to ideate solutions beyond traditional approaches.

Topics

I. CQPA Body of Knowledge
II. Quality Process Analysis Profiles
III. Requirements-Concepts, Principles, and Classifications
IV. Requirements Analysis & Design Definition
V. Solution Assessment and Validation for Continual Improvement
VI. Logical Thinking Process
VII. Creative Thinking Techniques

Training Objectives

At the end of the course, the participants will be able to:

1. Explain the knowledge areas of Quality Process Analysis.
2. Define the scope and responsibilities of a quality process analyst.
3. Present distinction amongst levels of requirements.
4. Write good requirements based on international standards.
5. Describe the solution ideation roadmap.

Developing Measurement Systems

Garbage IN Garbage OUT; a metrics system that is designed improperly will be meaningless to provide signal against capability of achieving customer requirements. Thus, this course is focused on providing a framework in building reliable metrics that will be reflective of how you meet the needs of the customer and controlling your process performance. This course will go through formulation of metrics, diagnosing current metrics reporting scheme, calculating right sample size and designing a data collection plan. Moreover, this course will also walkthrough the right ways of calculating for commonly used metrics on: Delivery Performance & Timeliness, Accuracy, Quality Yields, Manpower Utilization, Non-compliance and Complaint Incidences and Cost of Poor Quality (CoPQ).

Training Objectives

At the end of the course, the participants will be able to:

1. Identify Critical to Quality attributes.
2. Calculate core metrics focused on the Voice of the Customer, Voice of the Process, and Voice of the Employees.
3. Use the Measurement Design Process in setting up a Metric System.

Topics

I. Context of Building Key Performance Indicators
II. Measurement Fundamentals
III. Metrics Building
IV. Aggregate vs. Transactional Data
V. Building Your Data Collection Plan
VI. Critical to Quality Attributes
VII. Voice of the Customer, Voice of the Process, and Voice of Employees
VIII. Performance Measurement Design

Graphical Toolbox for Data Interpretation and Analysis

Have you ever fell into the pit of graphing several trends in one chart that resulted to a glary analysis or, been presented with multiple bar graphs that only conveys one thing? These and more are the common signals of being in the Graphical Limbo---being at lost towards what graphical tool to use to effectively aid in data interpretation and how to suitably use them most especially in factor comparisons (e.g. Productivity per Shift, Quality Yield per Staff, Timeliness per Work Difficulty). This course shall walk through the mechanics of commonly used Graphical Tools and how they should be suitably used respective of data sets. It will also discuss the don'ts of graphical tools resulting towards poor data presentation and reporting.

Training Objectives

At the end of the course, the participants will be able to:

1. Create chart/graph/diagram as specified in each tool category.
2. Identify appropriate graphical tools to be used in continual improvement efforts.
3. Perform analysis and interpretation of each chart/graph/diagram.

Topics

I. Sampling
II. Scatterplots
III. Stratification
IV. Relations Diagram
V. Repeatability and Reproducibility Study
VI. Requirements-and Measures Tree
VII. Process Capability Study

Basic Statistical Process Control (Quantitative Analysis using SPC)

Fulfilling customer requirements is more than taking the average and compare with the target. Oftentimes, this result towards false alarm improvements---taking actions to situations which are influenced only by few incidences pulling the behaviour up or down, thus they are called outliers. This course shall provide the foundation towards understanding process trending and knowing when or when not to react based on the movement of the process. It will also run through basic analysis of looking into out-of-control points, process shifts, trends, cyclicality or even detecting measurement errors in the process. This is vital towards metrics segmentation such as Productivity or Timeliness Trend, looking into Quality per day or per staff, & counts of complaint incidences. Also, this course will provide the proper way towards calculating how the process is capable against the customer needs. These include calculating capability ratios, yields and also, walk through the individuals on the rationality of sigma level. As part of the synthesis, this course will further link process variation against capability. What if the average is within the target but there are lots of outliers, can we still say that we are capable? Which one should I address first, consistency of behaviour or meeting the target? This course will take you through this.

Training Objectives

At the end of the course, the participants will be able to:

1. Establish SPC Program
2. Determine special vs common causes of variation
3. Describe how to interpret trends and provide recommendations

Topics

I. What is Statistical Process Control
II. Framework in Applying SPC
III. Using SPC to Identify Problems
IV. Analyzing the Process Aspects of your Work
V. Deciding Where to Focus Your Efforts
VI. Planning Your Charting and Measurement System

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Module No.	Course Title	Synchronous Training Time	Asynchronous Training Duration
1	Introduction to Quality Models and Standards (Building and Maintaining Quality Systems)	1:30-3:30PM 1:30-3:30PM 1:30-3:30PM 6 Hours	9:00am - 3:00pm 6 Hours
2	Essentials of Process Management	1:30-3:30PM 1:30-3:30PM 1:30-3:30PM 6 Hours	9:00am - 3:00pm 6 Hours
3	Solving Problems in the Digital Age (Identifying Business Needs & Defining Solutions in the Digital Age)	1:30-3:30PM 1:30-3:30PM 1:30-3:30PM 6 Hours	9:00am - 3:00pm 6 Hours
4	Developing Measurement Systems	1:30-3:30PM 1:30-3:30PM 1:30-3:30PM 6 Hours	9:00am - 3:00pm 6 Hours
5	Graphical Toolbox for Data Interpretation & Analysis	1:30-3:30PM 1:30-3:30PM 1:30-3:30PM 6 Hours	9:00am - 4:00pm 7 Hours
6	Basic Statistical Process Control (Quantitative Analysis Using SPC - The Practical Approach)	1:30-3:30PM 1:30-3:30PM 1:30-3:30PM 6 Hours	9:00am - 4:00pm 7 Hours
	Review & Mock Exam	6 Hours	
	Certification Exam	6 Hours	