

# Motorola University Quality Open Training Program

# Course Name

# 8D for Integrated Supply Chain (CIC3350) / 1 day

### **Course Description**

This course is part of the Quality IQ curricula for Sourcing and Manufacturing for Individual Contributors.

This course provides employees working in Sourcing and Manufacturing with ability to use 8D to permanently fix problems in their products or processes (including supplier's processes).

Target Population: Component Technology Engineers, Supplier Development Engineers, and various other sourcing roles. Manufacturing and Quality Engineers.

The structured problem solving approach will be taught that starts with good problem definition, uses data to get to root cause, chooses the best solution, implements, and modifies the system to prevent recurrence. Drill deep and wide concepts will also be covered to address systemic issues. The detailed steps are as follows:

D0 -- Decide whether 8D is appropriate and if an Emergency Response Action (ERA) is needed.

D1 -- Establish the team.

D2 -- Define the problem and use is / is not, cause and effect, and graphical tools to understand where to focus.

D3 -- Define, verify, and implement Interim Containment Actions (ICA?s) to protect the customer.

D4 -- Use data and cause and effect tool to drill down to root cause.

- D5 -- Select best Permanent Corrective Action (PCA)
- D6 -- Plan and implement PCA and remove ICA

D7 -- Identify and modify the policies, methods, procedures and systems to prevent recurrence.

D8 -- Update and publish report and recognize team

# Course Objectives

The learner will be able to apply concepts to identify and manage risks in their processes, identify actions, and to incorporate into their control plans

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Leadership, Learning & Performance

# Course Name

### SPC & Capability (CIC3640)/ 1 day

#### **Course Description**

This course covers Basics of SPC, Variability, Stability & Capability, Selection of Control Charts, and Control Charts for Variables, Assumptions, Interpretation of Control Charts, and Control Charts for Attributes, Out of Control Action Plan (OCAP) and Process Capability Assessment.

Basics of SPC: Natural and assignable causes, anatomy of control chart Variability, Stability and Capability: Definition of variability, stability and capability, stable vs unstable process, control limits vs specification limits

Selection of Control Charts: Introduce variable and attribute control charts, different types of variable and attribute control charts, flow chart to select appropriate control chart.

Control Charts for Variables: XbarR and IMR charts, within and between variability, construction of control limits using Minitab Assumptions: Independence and normality assumptions, checking of independence and normality.

Interpretation of Control Charts: Out of Control detection, Western Electric Rules Control Charts for Attributes: p,np, c and u charts, construction of charts using Minitab

Out of Control action Plan (OCAP): Need for OCAP, developing OCAP Process Capability Assessment: Definition of Cp & Cpk, assumptions, computing Cp & Cpk using Minitab, short terms and long term capability

# **IMPORTANT - For participants who choose to enroll into an instructor led session**

This course has hands-on actives that require computers. Unless your class is scheduled in a LAB, please plan to bring your Laptop computer to class with Minitab software install.

### **Course Objectives**

Participants will be able to apply concepts to control processes (manufacturing), select appropriate charts, and assess capability.

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Leadership, Learning & Performance

# Course Name

### Control Plans (CIC3620)/ 1 day

### **Course Description**

This course will cover how to identify the key levers that have the most impact on customer satisfaction, understand how the process is performing, and identify when the process is not operating to plan. The student will learn to document and incorporate these items into a control plan including.

- Listing critical characteristics and the specification limits
- Use FMEA to help identify the critical characteristics

- Identifying how data is to be collected on these critical characteristics, and the sample size

- Include a reaction plan that identifies what to do if a characteristic is out of specification

Target Population: This course can be taken by all salaried/professional employees in supply chain organization, particularly Manufacturing Engineers, Quality Engineers, Component Technology Engineers, Supplier Quality Engineers, various other sourcing roles.

### **Course Objectives**

The learner will be able to apply concepts to create a control plan and a reaction plan for out of control indicators.

### Service

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