

## Motorola Design for Six Sigma® Black Belt Training and Certification Program



### Program Participants

Managers, Project Leaders, Senior Engineers, and Black Belt Candidates from Product Development, or New Product Introduction are ideal candidates for this program. This program is also for any potential participant who wishes to learn and experience the structured methodology and comprehensive sets of tools in product development. No previous Six Sigma experience is required.

### Program Overview

Motorola University's Design for Six Sigma (DFSS) is a methodology for driving breakthrough performance in new product development.

This program is structured around the DMADV model - a five phase model similar to the more traditional DMAIC model. DMADV is about "designing in" quality, cost savings and faster time-to-market. Participants will learn this structured methodology and comprehensive set of tools especially for new product development. Motorola University's approach to developing Design for Six Sigma experts is based on an Action Learning Model. This model combines classroom instruction with real-time project implementation and application coaching. Your journey to becoming a Design for Six Sigma expert will span three months, alternating between spending one week in training, and three weeks back on the job applying the tools and techniques you have learned to complete your project.

### Upon Completion, the Participant Will Be Able To:

- . Understand and quantifying market needs and customer needs
- . Translate customer needs into product specifications
- . Quantify allowable variability
- . Delivering innovative design solution
- . Applying robust design techniques

#### Program Length

15 days (5 days/week, 1 week/month)

#### Certification

We offer the option of formal Black Belt certification. It requires that your Black Belt candidates complete training, pass a test, lead and successfully complete one Black Belt project. Project will be assessed for business impact (financial and/or "soft-dollar" impact) as well as Six Sigma Design skill demonstration.

#### Software

Participants need to bring a laptop computer preloaded with Microsoft Excel ( Windows 98 or higher ) and MINITAB®. They will receive Excel add-ins for additional statistical functionality.

#### Location

This program is available either as open enrollment training at a Motorola site or as onsite training at a location of your choice.


## Motorola Design for Six Sigma® Black Belt Training and Certification Program Content

<p><b>Define Requirements - What do our customers need?</b></p> <p>Validating Business Opportunity Introduction to Monte Carlo Simulation Define Customer Requirements Basic Statistics MINITAB®</p>	<p><b>Measure Performance - What are our metrics?</b></p> <p>Identify Functional Requirement Evaluate Measurement Systems Perform Process Capability</p>
<p><b>Analyze Relationship - How can we meet customer requirements?</b></p> <p>Quantify Issues &amp; Determine Significant Factors Quantify Impact of Design Factors on Critical Customer Requirements Quantify Design Relationships Identify and Prevent Potential Design Failure Modes Identify Design Alternatives</p>	<p><b>Design Solution - What are our design alternatives?</b></p> <p>Design for X Validate and Refine Transfer Function Models Optimize Parameter Selection Making Our Design Robust Tolerance Analysis</p>
<p><b>Verify Functionality - How will we demonstrate success?</b></p> <p>Predict Product Life Characteristics Demonstrate Attainment of Design Goals and Critical to Quality Demonstrate Critical Customer Requirements Fulfillment</p>	



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