

# Core Tools: APQP and PPAP

Course Duration: 2 Day

## Course Description

This two-day interactive course will equip participants with the knowledge and skills needed to complete required areas of the organization's APQP (Advanced Product Quality Planning) conformance. This includes the activities surrounding the FMEA (Failure Mode and Effects Analysis) process, as well as the applicable required activities and submissions involved in PPAP (Production Part Approval Process).

## Advanced Product Quality Planning (APQP): The purpose and intent and content of the APQP including

- **APQP Second Edition Introduction**
  - What Is APQP?
  - Quality Systems And APQP
  - Organizing The APQP Team
- **Chapter 1 - Planning & Defining the Program**
  - Discussion Of Typical Activities
- **Chapter 2 - Product Design and Development**
  - Discussion Of Typical Activities
  - Discussion of Design FMEA
- **Chapter 3 - Process Design and Development**
  - Discussion Of Typical Activities
  - Understand Process FMEAs
- **Chapter 4 - Product and Process Validation**
  - Discussion Of Typical PPAP Activities
- **Chapter 5 - Feedback, Assessment and Corrective Action**
  - Warranty issues, complaints
- **Chapter 6- Control Plans**
  - Types Of Control Plans
  - Process Analysis
- **Control Plan Form**

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## Key Planning activities are covered in Workshop:

- **Phase 1 of planning covers** - Voice of the Customer, Business Plan/Marketing Strategy, Product/Process Benchmark Data, Product/Process Assumptions, Product Reliability Studies, and Customer Input, Design Goals, Reliability and Quality Goals, Preliminary Bill of Material, Preliminary Process Flow Chart, Preliminary Listing of Special Product and Process Characteristics, Product Assurance Plan
- **Phase 2 of planning covers** - Design Failure Mode and Effects Analysis (DFMEA), Drawing and Specification Changes, Design for Manufacturability and Assembly, Material Specifications, Design Verification, Design Reviews, Prototype Build, Engineering Drawings, Engineering Specifications
- **Phase 3 of planning covers** - Packaging Standards, Product/Process Quality System Reviews, Process Flow Chart, Floor Plan Layout, Characteristics Matrix, Process Failure Mode and Effects Analysis (PFMEA), Pre-Launch Control Plan, Process Instructions, Measurement Systems Analysis Plan, Preliminary Process Capability Study Plan, Packaging Specifications, Management Support
- **Phase 4 of planning covers** - Production Trial Run, Measurement Systems Evaluation, Preliminary Process Capability Study, Production Part Approval, Production Validation Testing, Packaging Evaluation, Production Control Plan, Quality Planning Sign-Off and Management Support
- **Phase 5 of planning covers** - Feedback from the customer and ultimate customer, assess that feedback, Take Corrective Actions, Improve

### **Production Part Approval Process (PPAP):**

During Phase 4 the class begins to discuss and do exercises concerning activities required of PPAP (Production Part Approval Process). Exercises involve dimensional checks, and capability analysis.

### **Control Plans:**

Control Plans are used to document the Planning or APQP process. An exercise on completion of a Control Plan is then done using the fictitious company of Michigan Molded Tubes & Caps

## Learning Outcomes:

After attending this course, participants will have the tools needed to objectively evaluate the effectiveness of their planning (APQP and PPAP) process.

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## Participants will be able to:

- Describe the recommendations of the APQP guideline
- Apply the activities
- Do an FMEA for design or process situations
- Complete a PPAP warrant, dimensional study or other activity required
- Apply the planning results to a Control Plan

## Other Details:

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