



## Course Title

# Advanced Product Quality Planning (APQP) / PPAP– A Project Management Approach

## Overview

This activity-based course will provide an understanding of the APQP tools and links between process flow charts, Failure Mode and Effect Analysis (FMEA), control plans and Production Part Approval Process (PPAP).

The goal of this course is to show why APQP deliverables are important and how to implement them for a successful program launch. Participants will be able to construct a mock APQP using their own products from Phase 1 through Phase 5, with the intensive group activities.

## Learning Outcomes

This course is designed to enable participants to:

- Define the purpose of APQP
- Describe the relationship between key APQP deliverables
- Demonstrate why each of the key APQP deliverables are important
- Identify APQP processes and phases and the corresponding milestones
- Identify examples of required input for each phase and the corresponding outputs
- Identify appropriate activities for each phase of APQP
- Explain the relationship of APQP and IATF16949 elements the PPAP requirements

## Who must attend

Managers, supervisors, team leaders, and other professionals involved in planning, design, or implementation of a system, product, or manufacturing process and want to improve their ability to lead a proactive change and improvement to their operate

## Methodology

Case studies, small group practical exercises, small group discussion, facilitator presentations, skill practices, application planning and walk-through simulations. **Pre-test and post-test will be used to measure effectiveness.**

## Course Outline

- Introduction to Advanced Product Quality Planning
- Introduction to Macro-Level Innovation “Pipe-Line” and 5-Levels of Innovation Strategies
- APQP roles in manufacturing innovation strategies – aligning with new product development / introduction
- Overview of Project Management
- 5 Phases of APQP
- Benefits of APQP Process compared to conventional methodology – linking to DFA and DFM
- Barrier to successful implementation of APQP :  
people/processes/plant/system/
- 3 P’s – Purpose, People, Process
- Phase 1 : Planning
  - Inputs and outputs
  - Getting the input from customers and market – the feasibility analysis

- Phase 2 : Product Design & Development
  - Inputs and outputs
- Phase 3 : Process Design & Development
  - Inputs and outputs
- Phase 4 : Process Design & Development
  - Inputs and outputs
  - Production Parts Approval Process (PPAP)
  - Purpose of PPAP
  - Documents of PPAP
  - New changes in PPAP 4<sup>th</sup> Edition
  - Who must do PPAP?
  - Notification and Submission of PPAP
  - Requirements of PPAP
  - Submission levels of evidence.
  - Submission status / levels
  - Record retention requirements.
  - PPAP document requirements.
  - PPAP problems
  - Type of Control Plans
  - Submission of Control Plans in PPAP
- Phase 5 : Feedback and Corrective Action
  - Inputs and outputs
- APQP and core tools relationships – FMEA, SPC, MSA, Control Plan

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