

# Fundamentals of APQP Course Outline

## Lesson 0 | Overview of APQP

- Overview of the five phases of the APQP Process.

## Lesson 1 | Phase 1: Plan and Define the Program

- Information and data are compiled to build a business case.
- The output of this phase defines specifically what product will be studied.

## Lesson 2 | Phase 2: Product Design and Development

- The design of the product is fleshed out.
- After the design is verified, a prototype is built, specifications developed and inputs for the process design are generated.

## Lesson 3 | Phase 3: Process Design and Development

- The manufacturing process for the product is designed.
- Major outcomes include development of the process flow and layout.
- Additionally, a Characteristics Matrix, PFMEA, Pre-Launch Control Plan and Process Instructions are developed.

## Lesson 4 | Phase 4: Product and Process Validation

- The process and the product design are validated.
- The output product from the production run is used to evaluate the measurement system and check the process capability.

## Lesson 5 | Phase 5: Feedback Assessment & Corrective Action

- Start the cycle of continuous improvement.
- Control charts can be used to identify special causes of variation, capability studies and the use of design of experiments can help reduce common cause variation.
- Work to ensure the product fully meets customer's needs.

## Lesson 6 | (Unofficial) Phase 6: Control Plans

- Identify control factors, control points and control methods for the product and its corresponding manufacturing process.
- Develop a comprehensive Control Plan.

## Challenge

- An assessment of the learner's progress in this course.