



# Understanding Core Tools (APQP/PPAP, DFMEA, DVP&R, SPC and MSA) Following the AIAG-VDA FMEA 1st Edition Methodology



Course Duration: 5 Days - 8 Hours/day

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### **Seminar Content**

Omnex is not presently a VDA licensee. If the VDA auditor "card" is required by a customer for their suppliers' auditors, attendees should confirm with a licensed provider if they can take the official exam after this course. Omnex auditor certification is the technical equivalent of the VDA (6.3) training. Many customers do not require the VDA auditor credential.

Collectively, this five-day series of seminars are intended to provide a basic understanding of the Advanced Product Quality Planning (APQP) Core Tools and their use in New Product Development to ensure a successful launch and capable serial production. These Core Tools play a significant role in the planning, development, and launch of new products and processes.

These Core Tools include the following:

- 1. The five phases of APQP itself
- 2. Production Part Approval Process (PPAP)

3. Design Failure Modes and Effects Analysis (DFMEA) and Design Verification Plan & Report (DVP&R)

- 4. Statistical Process Control (SPC)
- 5. Measurement Systems Analysis (MSA)

Please note, only DFMEA or PFMEA can be taken in a single, one-week session. These courses will cover the AIAG-VDA FMEA 1st Edition methodology.

### Learning Objectives

- Understand the five phases of APQP for New Product Development and its relationship to program management and the knowledge and skills needed to participate in an APQP team
- Understand the PPAP protocol, elements, deliverables, and submission/approval process
- Understand how to develop and use DFMEA and DVP&R to identify and address design risk during the product development process and in support of the manufacturing process development process
- Understand the use of SPC to monitor and measure variation in manufacturing processes ad to identify and the correct problem where they arise
- Understand MSA and the statistical tests employed to determine measurement variation and measurement uncertainty for the effective management of measurement systems

## Seminar Outline

#### Weekly Agenda

- Day 1: APQP and PPAP
- Days 2 and 3: DFMEA
- Day 4: SPC
- Day 5: MSA

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## Who Should Attend

This seminar is designed for Internal Auditors, Management Representatives, ISO 9001 and IATF 16949 Implementation Teams, and others who would like to develop judgment and decision-making in ISO 9001, IATF 16949, and to learn how to effectively audit the New Product Development activities.

## **Seminar Materials**

Each participant will receive a seminar manual. All concepts will be introduced using examples. Group exercises will make use of an example product and process.

## **Pre-Requisite**

Participants should possess a working knowledge of, as well as some experience in ISO-based quality management systems, as well as a firm understanding of basic quality tools.

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