# AIAG-VDA DFMEA (SFMEA and DFMEA) for Practitioners and Facilitators



## Course Duration: 2 Days - 8 Hours/day

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## Seminar Content

Join Omnex for this important industry approach integrating AIAG and VDA FMEAs. Omnex's FMEA experts, many of whom are writers of the FMEA standards, have worked extensively with both AIAG and VDA FMEAs formats. They will show you how to manage your existing AIAG or VDA FMEAs and the steps to transition to the AIAG-VDA FMEA approach.

Omnex will share best-in-class practices to get the most of the AIAG-VDA PFMEA including managing requirements, integrating PPMs and Warranty History, and creating a product and process architecture for managing FMEAs. Get the greatest savings by employing Process Reuse and also linking PPM and Warranty History with AIAG-VDA PFMEA. Most of all, get hands on real world experience working with AIAG-VDA DFMEA at our Open Enrollment or on your product onsite.

This 2 day (open enrollment) or 3-day seminar addresses all of the elements of the Process Failure Mode Effects Analysis (PFMEA) and Control Planning process and defines it as a process within your organization. This class was designed as a "how-to" for practitioners and facilitators, utilizing a **hands-on approach** to understanding and using the seven steps of the AIAG-VDA PFMEA process that has been modified and improved by Omnex. This course is intended to be a dynamic, hands-on offering with approximately half the class time spent in workshops. This training offers an optional certification exam in addition to an optional one or two days of the workshop to develop your own

process using AIAG-VDA PFMEA (onsite training only).

The training is a hands on approach to understanding and using the seven steps of the AIAG-VDA FMEA process and to understand how it is managed as a process. This course is intended to be a dynamic, hands-on offering with approximately half the class time spent in workshops.

The approaches discussed and employed in this course are consistent with the intent and guidelines in the AIAG-VDA FMEA Handbook (1st edition, 2019) issued by AIAG and VDA, APQP Second Edition, and IATF 16949:2016.

## Learning Objectives

- Provide a hands-on approach to the DFMEA process and its relationship to program deliverables and status reporting to provide the competencies needed to introduce new products and processes smoothly.

- Apply the AIAG-VDA Seven Step Approach to developing SFMEA and DFMEA.

- Apply the major changes, improvements, and benefits of AIAG-VDA DFMEA

- Study the changes and differences between AIAG VDA FMEA and AIAG FMEA 4th Edition.

- How to make the results of both approaches the same?

- Detail best in class methods of AIAG VDA Design FMEA implementations.

- Create a Block Diagram, P Diagram, and

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Interface Diagram

- Link DFMEA with DVPR and use Prevention Checklists
- Link SFMEA, DFMEA, Process Flow, PFMEA, and Control Plans
- Learn how to link DFMEA to failure and warranty history and Cost of Poor Quality (COPQ)
- Hands on "use of AIAG-VDA FMEA software" and understand role of software in AIAG-VDA FMEA
- Implementation of the AIAG-VDA and other Supply Chain Standards
- Use of AIAG-VDA DFMEA Checklist to evaluate DFMEAs completed and to provide consistency when DFMEA is applied.
- Developing AIAG-VDA DFMEA Transition and Implementation Plan.

## Seminar Outline

- Course Overview and Introductions
- Setting the Stage: APQP Overview
- Introduction to Failure Modes and Effects Analysis (FMEA)
- Developing an FMEA
- The Seven Step Approach
- Design FMEA Prerequisites
- The Customer
- Step 1: Scope of Analysis
- Boundary Diagram
- Breakout Exercise
- Step 2: Structural Analysis

- Breakout Exercise
- Step 3: Design Functions – Function Analysis
- Breakout Exercise
- Robust Designs
- P-Diagram
- Interface Matrix
- Developing the Design FMEA
- DFMEA Structure and Form
- Header Information
- Item / Functions and Requirements
- Breakout Exercise
- Step 4: Design Failure Modes – Failure Analysis
- Breakout Exercise
- Potential Causes
- Breakout Exercise
- Step 5: Design Controls - Risk Analysis
- Breakout Exercise
- Step 6:Optimization
- Breakout Exercise
- Step 7:Results Documentation
- Test Planning and Reporting (DVP&R)
- Design Validation
- Noise Factors
- Testing's
- Implications of the AIAG-VDA FMEA
- Summary
- Certification Exam for AIAG-VDA DFMEA – Optional

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## Who Should Attend

Those who have direct responsibility for introducing new manufacturing processes and systems would benefit from this seminar. This includes: program/productmanagers, quality managers, design engineers, manufacturing engineers, APQP team members and others who have direct responsibility for new process development and improvement.

Those directly responsible for PFMEA creation or facilitation should attend this course to upgrade their skills to the AIAG-VDA PFMEA 1st Edition.

## Seminar Materials

Each participant will receive a seminar manual and a workbook including all team breakout exercises.

## Pre-Requisite

No prior knowledge is necessary. However, a mix of students with knowledge of process design & development and/or manufacturing and basic Quality Assurance concepts is preferred.

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