AUTOMOTIVE TRAINING PROGRAM

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Plexus training courses are worldwide recognized, as the result of the collaboration with international organizations, such as:

- **IATF (International Automotive Task Force)**
- **AIAG (Action Group for the Automotive Industry)**
- **IAQG (International Aerospace Quality Group)**

Automotive IATF 16949 and Quality Core Tools courses are developed by Plexus International in collaboration with AIAG.

The training program on IATF 16949, Quality Core Tools and CQI Special Process Assessment is validated by AIAG and recognized worldwide.

The "APQP PPAP Harmonized Stellantis v2022" and the "CTF&PIS: Product & Process conformity monitoring" courses are validated and recognized by Stellantis.

Plexus Management Systems is an AIAG Certified Training Provider and provides the Plexus International Training Program throughout Europe.

Training courses can be provided **at customer's location**, if minimum conditions are achieved (minimum 6 participants).

Taylored training solutions can be designed according to the customer needs.

All Plexus training courses can be also provided **online via Zoom web-platform**.

Plexus global partnership with AIAG

AIAG

Letter of Recognition
Certified Global Training Provider

Introduction:
AIAG is a not for profit trade association of automotive vehicle manufacturers and suppliers. The AIAG mission is to improve the productivity of its members and the automotive industry by providing and organization to:

- Foster cooperation and communication between customers and their suppliers to improve business processes.
- Identify, prioritize and address existing and emerging common issues and apply new and current technology to increase industry efficiency.
- Promote a sense of urgency in adopting developed business practices
- Cooperate and communicate with other industry, government, educational and technical organizations to facilitate their efforts.
- Provide industry guidelines, education and training
- Participate in major standards bodies and recommend industry direction as standards evolve and new technology is developed

Plexus International is a global leader in providing training, assessments, consulting services and document distribution for organizations to attain quality management systems excellence. Plexus has worked closely with associations representing various industries including: Automotive, Environmental Management, Higher Education, and Laboratory Management.

As a result of our automotive collaborative relationships with OEMs, suppliers, and industry associations such as AIAG and IATF, we have gained a unique insight into industry-wide performance expectations, leveraging that insight to maximize the value we provide to the industry.

Authorization:
AIAG confirms through this letter that Plexus International is the **Global Certified AIAG-Training Provider** delivering the AIAG Quality Training Services including all trainings related to:

- IATF 16949
- Automotive Core Tools
- AIAG's CQIs
- 8D
- Problem Solving
- Lean Manufacturing
- Six Sigma
- GD&T

AIAG is proud of our global association with Plexus International and all of its global affiliates.
If you have any questions, please call me direct 248.213.4670 or email: jkarczewski@aiag.org or Stacy Ward at 248.358.9762 or email: sward@aiag.org

Best regards,

Joel R. Karczewski
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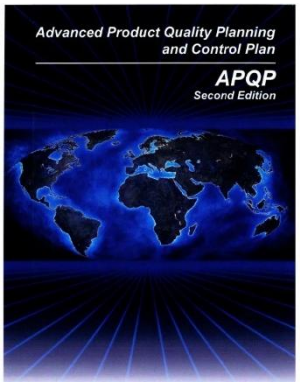
Course: A1

APQP, Control Plan & PPAP



Training description: APQP is the structured method required by most carmakers to plan and manage new product and processes development. The course, according to the guidelines defined in the **AIAG "APQP – Advanced Product Quality Planning" Reference Manual (3rd edition), in the AIAG "Control plan" Reference Manual (1st edition) and in the AIAG "PPAP-Production Part Approval Process" Reference Manual (4th edition)** will introduce the participants to a full comprehension of the operative tools that the APQP process requires the multifunctional team to apply.

Combining team and individual tasks, participants will simulate an APQP process, applying the quality methods and techniques needed for an effective program.

Training course outline:

- **Plan and define program:** the benefits of an appropriate planning process with a multidisciplinary approach, the key role of the customer expectations and requirements, the definition of the project goals
- **Product design and development:** Design FMEA, design verification, design review, definition and engineering release of the product (drawings, CAD, technical specifications, etc.), special characteristics identification, control plan, feasibility study
- **Process design and development:** manufacturing process definition, including flow chart, Process FMEA and control plan (including Safe Launch). Production process development and process capability evaluation (preliminary statistical study, control charts, analysis of data, etc.)
- **Product and process validation:** internal process and product validation, initial sampling submission to the customer according to PPAP manual (requirements and operative guidelines)
- **Feedback, assessment and corrective action:** product and process control and continuous improvement in order to achieve the final customer satisfaction
- **Control plan:** scope, control plan phases, control plan development, effective use of control plans in relationship with other quality core tools and best practices.

Who should attend: Department Managers (Quality, Production, R&D / Engineering, Sales, Purchasing, Supplier Quality, Logistic)

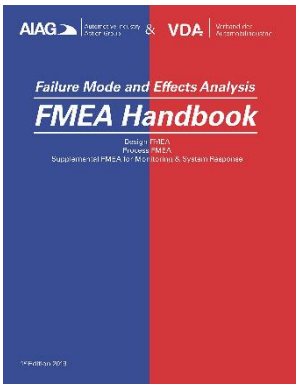
Length: 2 days (16 hours)

Cost: € 650,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A2

AIAG & VDA Design FMEA: Transitioning for Practitioners



Training description: This course will assist you in transitioning **from the AIAG FMEA 4th Edition to the AIAG & VDA FMEA Handbook.** Learn to execute Design FMEA according the new handbook by achieving a deeper understanding of the explicit and subtle changes, along with high impact benefits that will bring your organization's DFMEA to the next level of product design robustness. By the end of this training you will be able to describe, analyze, exemplify and apply the improvements in the AIAG & VDA FMEA Handbook. Additionally, you will gain the skills necessary to evaluate the consistency of DFMEA application, measure its effectiveness and efficiency within your organization, and develop a Transition Implementation Plan from the AIAG FMEA 4th Edition methodology to the 7-Step approach recommended by the AIAG & VDA FMEA Handbook.

Training course outline:

- **Risk management and IATF 16949:** brief overview of risk-based thinking principles according to the automotive standard and application examples about the product design. Summary of the IATF 16949 clauses linked to the application of FMEA methodology
- **The main improvements introduced by the new AIAG & VDA FMEA Handbook.** Detailed introduction aimed to highlight the foundations for the development of a robust FMEA
- **The 7-Steps approach:** a more instrumental, and error-proofing driven method to develop FMEAs while integrating lessons learned
- **DFMEA 1st Step** – Planning and Preparation
- **DFMEA 2nd Step** – Structure Analysis
- **DFMEA 3rd Step** – Function Analysis
- **DFMEA 4th Step** – Failure Analysis
- **DFMEA 5th Step** – Risk Analysis
- **DFMEA 6th Step** – Optimization
- **DFMEA 7th Step** – Communication
- **Linkages between Design FMEA and Process FMEA**
- **Comparing** a DFMEA prepared using AIAG FMEA 4th Edition Manual to a DFMEA prepared using the AIAG & VDA FMEA Handbook
- **Introduction to FMEA for Monitoring and System Response (FMEA-MSR)**
- **DFMEA effectiveness, efficiency, and linkage to the Cost of Poor Quality (COPQ)**

Who should attend: Department Managers (Quality, R&D / Engineering, Supplier Quality, Production)

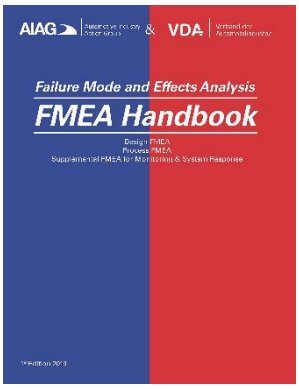
Length: 2 days (16 hours)

Cost: € 650,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A3

AIAG & VDA Process FMEA: Transitioning for Practitioners



Training description: This course will assist you in transitioning **from the AIAG FMEA 4th Edition to the AIAG & VDA FMEA Handbook.** Learn to execute Process FMEA according the new handbook by achieving a deeper understanding of the explicit and subtle changes, along with high impact benefits that will bring your organization's PFMEA to the next level of process design robustness. By the end of this training you will be able to describe, analyze, exemplify and apply the improvements in the AIAG & VDA FMEA Handbook. Additionally, you will gain the skills necessary to evaluate the consistency of PFMEA application, measure its effectiveness and efficiency within your organization, and develop a Transition Implementation Plan from the AIAG FMEA 4th Edition methodology to the 7-Step approach recommended by the AIAG & VDA FMEA Handbook.

Training course outline:

- **Risk management and IATF 16949:** brief overview of risk-based thinking principles according to the automotive standard and application examples about the process design. Summary of the IATF 16949 clauses linked to the application of FMEA methodology
- **The main improvements introduced by the new AIAG & VDA FMEA Handbook.** Detailed introduction aimed to highlight the foundations for the development of a robust FMEA
- **The 7-Steps approach:** a more instrumental, and error-proofing driven method to develop FMEAs while integrating lessons learned
- **PFMEA 1st Step** – Planning and Preparation
- **PFMEA 2nd Step** – Structure Analysis
- **PFMEA 3rd Step** – Function Analysis
- **PFMEA 4th Step** – Failure Analysis
- **PFMEA 5th Step** – Risk Analysis
- **PFMEA 6th Step** – Optimization
- **PFMEA 7th Step** – Communication
- **Linkages between Design FMEA and Process FMEA**
- **Comparing** a PFMEA prepared using AIAG FMEA 4th Edition Manual to a PFMEA prepared using the AIAG & VDA FMEA Handbook
- **PFMEA effectiveness, efficiency, and linkage to the Cost of Poor Quality (COPQ)**
- **Transition Implementation Plan** from AIAG FMEA 4th Edition to AIAG & VDA FMEA Handbook

Who should attend: Department Managers (Quality, R&D / Engineering, Production, Maintenance, Logistic)

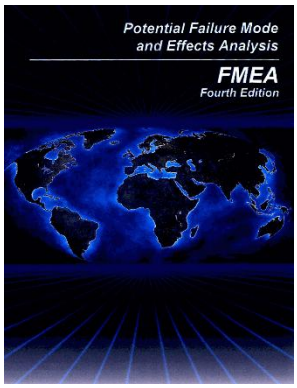
Length: 2 days (16 hours)

Cost: € 650,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A4

FMEA - Failure Mode and Effects Analysis (AIAG 4th Edition Reference Manual)



Training description: This course, according to the guidelines defined in the **AIAG "FMEA - Failure Mode and Effects Analysis" Reference Manual (4th edition)**, will allow the participants to achieve a deep understanding of the FMEA process combining group and individual activities.

The participants will learn the benefits of an effective FMEA in the product and process design and will gain the skills to manage the FMEA development process.

Training course outline:

- **Design FMEA and Process FMEA:** definitions and differences, scope and goals of the prevention and risk analysis tools
- **FMEA core tool:** structure and operative instructions, severity, occurence and detection rankings, planning and implementation of corrective actions in case of identification of high risks
- **Design FMEA development:** in teams, participants will prepare a Design FMEA example starting from a case study, with the aim to apply the fundamentals previously introduced
- **Process FMEA development:** in teams, participants will prepare a Process FMEA example starting from a case study, with the aim to understand differences and linkages with the Design FMEA
- **AIAG Reference Manual risk assessment methodology:** severity, occurence and detection ranking tables, risk evaluation criteria for new products and processes, DFMEA and PFMEA templates and alternative risk evaluation criteria for automotive applications

Who should attend: Department Managers (Quality, R&D / Engineering, Supplier Quality, Production, Maintenance, Logistic)

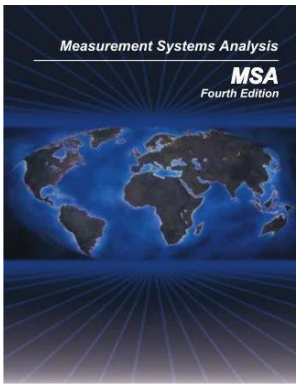
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A5

MSA - Measurement Systems Analysis



Training description: Manufacturing process management decisions are based on measurements and data. Measuring equipment, measuring method, appraisers and environment are just some of the sources of variability that may affect measuring data.

Consequently, evaluation of the variability in measuring systems is a key task in order to ensure an appropriate level of reliability in the measurement outputs. This course, according to the guidelines defined in the **AIAG "MSA – Measurement Systems Analysis" Reference Manual (4th edition)**, will lead the participants to a deep understanding of MSA, through several team and individual activities.

Special care will be paid to **gain the skills necessary to evaluate the MSA study results**, with the aim to manage the continuous improvement of the measurement systems according to the experimental data collected.

Training course outline:

- MSA terms and references
- The measurement process and the sources of variability
- Planning and study of a measurement systems
- Stability
- Bias
- Type 1 Study: Cg / Cgk index calculation and evaluation
- Linearity
- Repeatibility
- Reproducibility
- Variable Measurement System Study: Average and Range Method Gage R&R. Graphical and numerical evaluations
- Attribute Measurement Systems Study: Hypothesis Test Analysis. Numerical evaluations

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Engineering, Supplier Quality, Production)

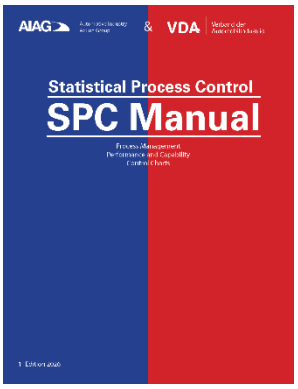
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Corso: A6

SPC: Understanding and Implementing



Training description: Variation sources may affect the process output and need to be deeply known and managed. Process variation may be properly monitored according to the statistical tools commonly applied in the automotive industry. An appropriate statistical application may lead to a preventive approach to process control instead of a more expensive and less effective detection approach.

This course, according to **the fundamentals of the statistical process control and the guidelines defined in the AIAG & VDA "Statistical Process Control" Manual (1st edition)**, will introduce participants to basic statistical concepts and their application for the process control.

Training course outline:

- **Introduction to statistical process approach**: rationale & benefits. Prevention vs. Detection approach. The loss function model applied to the statistical process control approach
- **Statistical process distribution:** fundamentals of normal distribution
- **Process variation sources:** common causes & special causes of process variation. Impact on process output
- **Variables control charts:** definition, preparation, application and interpretation
- **Attributes control charts:** definition, preparation, application and interpretation
- **Process capability evaluation:** key indicators, definition and realization of a process capability study. Common process capability indexes: Cm/Cmk, Pp/Ppk, Cp/Cpk. Calculation and interpretation for process improvement

Who should attend: Department Managers and Operators (Quality, Quality Control, Engineering, Supplier Quality, Production)

Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A7

IATF 16949:2016 Overview

AUTOMOTIVE
QUALITY MANAGEMENT
SYSTEM STANDARD

IATF 16949

Quality management system requirements for automotive production and relevant service parts organizations

International
Automotive
Task Force

1st Edition
1 October 2016

Training description: This course is designed in order to provide a general overview of the fundamentals and requirements of the **IATF 16949:2016 standard.**

The initial part of the training will focus on the process approach and risk-based thinking impact on the organization.

Afterwards, participants will be driven to a detailed analysis of the IATF 16949:2016 requirements, learning how to implement them in daily activities with the aim of process effectiveness and efficiency.

Training course outline:

- **Introduction to IATF 16949:2016 standard:** history, stakeholders and targets of the Automotive Quality Management System standard in the global scenario. The added value of the certification scheme with the aim of waste reduction and continuous improvement in the automotive supply chain
- **Context definition and risk-based thinking:** introduction to these fundamentals of IATF 16949 standard. Impact of process risks / opportunities evaluation on daily process management activities
- **Process approach:** definition and classification of company processes. Introduction to the automotive turtle diagram for process definition, process input / output relationship, process stakeholders, infrastructures and resources, support documents, indicators and performance monitoring
- **Understanding and application of IATF 16949:2016 standard:** requirements, key-role of the customer needs and expectations, critical issues, impact on the organization processes, process effectiveness and efficiency monitoring, continuous improvement. The role of Customer Specific Requirements (CSRs) and Quality Core Tools
- **IATF 16949 Sanctioned Interpretations (SI) and Frequently Asked Questions (FAQ):** overview and impact of the changes introduced by the SIs and FAQs released by IATF

This course will include introduction to both ISO 9001 and IATF 16949 requirements.

Who should attend: Department Managers

Length: 2 days (16 hours)

Cost: € 650,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A8

IATF 16949 Lead Auditor Training (AIAG SACT – Supplier Auditor Certification Training)

AUTOMOTIVE
QUALITY MANAGEMENT
SYSTEM STANDARD

IATF 16949

Quality management system requirements for automotive production and relevant service parts organizations

International
Automotive
Task Force

Training description: This course, **world-wide recognized through the agreement between Plexus and AIAG**, is designed to provide the participants with a rigorous management process of internal audits.

Combining individual and team activities, case studies and role plays, the participants will gain the knowledge and the skills for planning and leading the audit activities according to the ISO 19011 guidelines.

Training course outline:

- **Introduction to IATF 16949:2016 standard:** history, stakeholders and targets of the Automotive Quality Management System standard in the global scenario. The added value of the certification scheme with the aim of waste reduction and continuous improvement in the automotive supply chain
- **Context definition and risk-based thinking:** introduction to these fundamentals of IATF 16949 standard. Impact of process risks / opportunities evaluation on daily process management activities
- **Process approach:** definition and classification of company processes. Introduction to the automotive turtle diagram for process definition, process input / output relationship, process stakeholders, infrastructures and resources, support documents, indicators and performance monitoring. Process management according to risk-based thinking criteria
- **Understanding and application of IATF 16949:2016 standard:** requirements, key-role of the customer needs and expectations, critical issues, impact on the organization processes, process effectiveness and efficiency monitoring, continuous improvement. Objective evidence to be collected during the audit with the aim to evaluate conformity, effectiveness and efficiency of the organization processes. Overview and impact of the changes introduced by the SIs and FAQs released by IATF
- **Auditing Core Tools and CSRs**: overview of the AIAG Core Tools fundamentals and impact on the auditing activities. Linkages between IATF 16949:2016 requirements and Customer Specific Requirements, including how to audit the applicable CSRs
- **Auditing skills:** auditor competence profile according to ISO 19011 guideline, verbal and non-verbal communication techniques, conflict management, interview techniques
- **Audit planning based on process approach and risk-based thinking:** audit program management and audit activities according to ISO 19011 guidelines. Process auditing using risk-based thinking
- **Audit applications:** case study, audit simulations, classification and evaluation of audit objective evidence, audit report, corrective action requests

This course will include introduction to both ISO 9001 and IATF 16949 requirements.

During this course, participants will be continuously evaluated through individual and team activities, an audit role play and a written examination.

Who should attend: Internal Auditors, Second-party Auditors
Length: 5 days (40 hours)
Cost: € 1.600,00 + Italian VAT (if applicable)
Upon successful appraisal, participants will receive an AIAG Certificate of Successful Completion.

Course: A9

5S Methodology

Training description: The continuous improvement process in business performances with the aim to eliminate wastes and to achieve the required level of customer satisfaction can be strongly supported by the "5S" methodology.

The acronym "5S" comes from 5 Japanese words:

- **SEIRI - Sort**
- **SEITON - Set in order**
- **SEISO - Shine**
- **SEIKETSU - Standardize**
- **SHITSUKE – Sustain**

In general, all these words mean "to put in order" and indicate a logical path that provides a method and an effective tool for the management of the continuous improvement process, as required and emphasized from ISO 9001:2015 and IATF 16949:2016 standards.

Combining theory and case studies, the participants will gain a deep understanding of 5S methodology and how to apply it in the daily business activities.

Who should attend: Department Managers

Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive a Plexus Attendance Certificate upon completion.

Course: A10

Fundamentals of Metrology

INTERNATIONAL STANDARD

ISO/IEC 17025

General requirements for the competence of testing and calibration laboratories

Training description: This course will allow the participants to gain a deep understanding of the **requirements for testing and calibration laboratories defined in ISO/IEC 17025 standard**.

Combining theory, examples and case studies, the fundamentals of metrology will be introduced. Special focus will be paid to practical impacts on daily laboratory activities in the industry, providing recommendations about procedures and methods for an effective measuring device management.

Training course outline:

- Metrology: terms and definition
- International standards scenario for testing and calibration laboratory management
- Laboratory accreditation scope and benefits
- Laboratory management
- Measuring equipment classification and management
- Metrological traceability
- Measuring equipment calibration: scope and operative instructions
- Calibration error
- Measurement uncertainty
- Metrological confirmation
- Calibration report

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality)

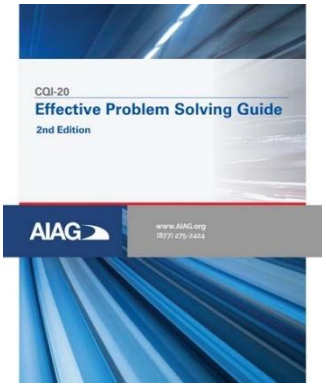
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive a Plexus Attendance Certificate upon completion.

Course: A11

Problem Solving & 8D Approach



Training description: Problem solving and improvement activities management involves all organization's departments, requires appropriate tools and shall be monitored with indicators.

After an initial explanation of the "Plan-Do-Check-Act" cycle steps, this course will provide an overview of the Problem Solving process and its operative tools, according to the guidelines defined in the **AIAG CQI-20 "Effective Problem Solving Guide" Reference Manual** and based on the **8D approach.**

Training course outline:

- D1 - Team contact
- D2 - Problem description
- D3 - Containment action
- D4 - Root causes
- D5 - Corrective actions
- D6 - Verification
- D7 - Prevention
- D8 - Team member / Review & Approval

Problem Solving Tools:

- Problem description: 5W2H
- Brainstorming
- Cause / Effect Diagram (Ishikawa)
- 5 Whys
- Decision Matrix
- Corrective actions plan and implementation
- Corrective actions validation techniques
- Read Across Matrix

Who should attend: All Problem Solvers and Practitioners Responsible

Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive a Plexus Attendance Certificate upon completion.

Course: A12

Maintenance Process Management

Training description: This course will provide a guideline for an effective maintenance process management.

Participants will learn the fundamentals of preventive maintenance, extra-ordinary maintenance and maintenance data management.

Advanced preventive techniques for maintenance management (FMECA) will be introduced.

Effectiveness and efficiency of the maintenance process will be considered, providing an overview of common indicators used for measuring maintenance process performance.

Training course outline:

- Structure and organization of the maintenance department
- Maintenance fundamentals overview
- Maintenance guidelines
- Preventive and productive maintenance
- Spare parts and consumables management
- Advanced predictive techniques (FMECA)
- Data management
- Maintenance KPI – Process effectiveness and efficiency

Who should attend: Maintenance Managers and Maintenance Operators

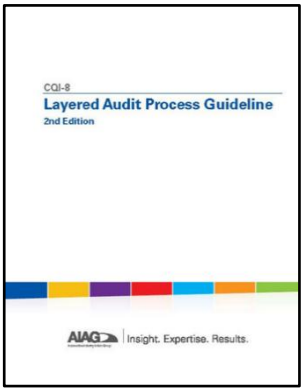
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive a Plexus Attendance Certificate upon completion.

Course: A13

AIAG CQI-8 LPA: Layered Process Audits



Training description: Layered Process Audits (LPA) is one of the most recent tools introduced in the automotive industry with the aim of process continuous improvement.

Focusing on the potential impact on the organization processes and practical guidelines, participants will gain a deep understanding of goals and targets of LPA, according to the guidelines defined in the **AIAG CQI-8 "Layered Audit Process Guideline" Reference Manual (2nd edition).**

A case study will support participants in a simulation exercise of planning, preparation and monitoring of LPA process, promoting considerations and recommendations about how to implement this tool in daily activities.

Training course outline:

- **Introduction** to LPA
- **LPA definition and purpose**: LPA is / is not overview
- **LPA planning:** process owner, planning team, scope, impact of customer specific requirements, process prioritization, audit layers and frequencies, procedures and operative tools
- **LPA deployment:** check list preparation, most common mistakes overview, auditors training, internal communication and project kick-off
- **Conducting LPA audit:** risks and common issues, objective evidence collection and recording, communication
- **Non conformity management:** short-term reaction plan and long-term corrective actions
- **LPA management review and continuous improvement:** KPI review, checklist updating and continuous improvement

Who should attend: All Departments

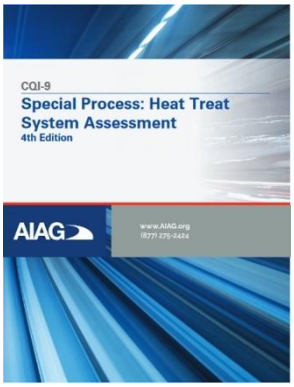
Length: half day (4 hours)

Cost: € 180,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A14

AIAG CQI-9 Special Process: Heat Treat System Assessment



Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-9 "Special Process: Heat Treat System Assessment" Reference Manual (4th edition).**

Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-9 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Instrumentation management and pirometry requirements**: examples and exercises
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

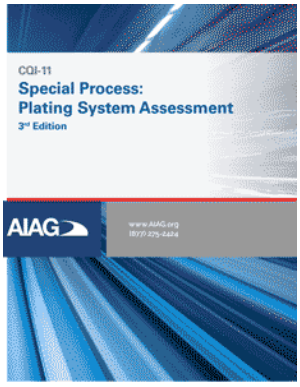
Length: 1.5 days (12 hours)

Cost: € 480,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A15

AIAG CQI-11 Special Process: Plating System Assessment



Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-11 "Special Process: Plating System Assessment" Reference Manual (3rd edition).**

Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-11 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Instrumentation management and pirometry requirements**: examples and exercises
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

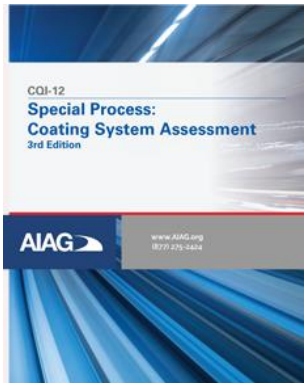
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A16

AIAG CQI-12 Special Process: Coating System Assessment



Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-12 "Special Process: Coating System Assessment" Reference Manual (3rd edition).**

Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-12 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Instrumentation management and pirometry requirements**: examples and exercises
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

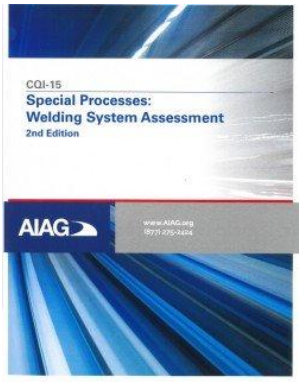
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A17

AIAG CQI-15 Special Process: Welding System Assessment



Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-15 "Special Process: Welding System Assessment" Reference Manual (2nd edition).**

Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-15 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A18

AIAG CQI-17 Special Process: Soldering System Assessment

Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-17 "Special Process: Soldering System Assessment" Reference Manual (2nd edition).**

Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-17 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

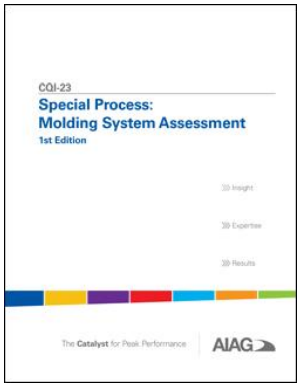
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A19

AIAG CQI-23 Special Process: Molding System Assessment



Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-23 "Special Process: Molding System Assessment" Reference Manual (2nd edition).**

Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-23 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

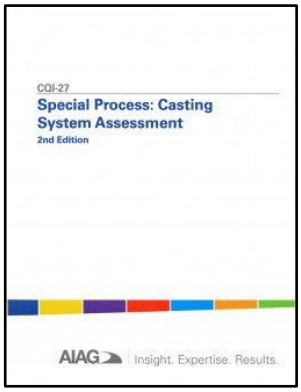
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A20

AIAG CQI-27 Special Process: Casting System Assessment



Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-27 "Special Process: Casting System Assessment" Reference Manual (2nd edition).**

Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-27 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A21

AIAG CQI-29 Special Process: Brazing System Assessment

Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-29 "Special Process: Brazing System Assessment" Reference Manual (1st edition).**

Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-29 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Thermal management requirements**: examples and exercises
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A23

ISO 9001:2015 Overview

INTERNATIONAL STANDARD

ISO 9001

Fifth edition
2015-09-15

Quality management systems — Requirements

Systèmes de management de la qualité — Exigences

Training description: This course is designed in order to provide a general overview of the fundamentals and requirements of the **ISO 9001:2015 standard.**

The initial part of the training will focus on the process approach and risk-based thinking impact on the organization.

Afterwards, participants will be driven to a detailed analysis of the ISO 9001:2015 requirements, learning how to implement them in daily activities with the aim of process effectiveness and efficiency.

Training course outline:

- **Introduction to ISO 9001:2015 standard:** history, stakeholders and targets of the standard in the global scenario
- **Context definition and risk-based thinking:** introduction to these fundamentals of ISO 9001 standard. Impact of process risks / opportunities evaluation on daily process management activities
- **Process approach:** definition and classification of company processes. Introduction to the most common mapping tools for process definition, process input / output relationship, process stakeholders, infrastructures and resources, support documents, indicators and performance monitoring
- **Understanding and application of ISO 9001:2015 standard:** requirements, key-role of the customer needs and expectations, critical issues, impact on the organization processes, process effectiveness and efficiency monitoring, continuous improvement

Who should attend: Department Managers

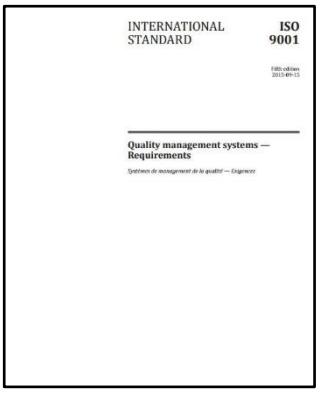
Length: 2 days (16 hours)

Cost: € 650,00 + Italian VAT (if applicable)

Participants will receive a Plexus Attendance Certificate upon completion.

Course: A24

ISO 9001:2015 Internal Auditor Training


INTERNATIONAL STANDARD

ISO 9001

Quality management systems — Requirements

Training description: This course is designed to provide the participants with a rigorous management process of internal audits.

Combining individual and team activities, case studies and role plays, the participants will gain the knowledge and the skills for planning and leading the audit activities according to the **ISO 19011 guidelines**.

Training course outline:

- **Introduction to ISO 9001:2015 standard:** history, stakeholders and targets of the standard in the global scenario
- **Context definition and risk-based thinking:** introduction to these fundamentals of ISO 9001 standard. Impact of process risks / opportunities evaluation on daily process management activities
- **Process approach:** definition and classification of company processes. Introduction to the most common mapping tools for process definition, process input / output relationship, process stakeholders, infrastructures and resources, support documents, indicators and performance monitoring. Process management according to risk-based thinking criteria
- **Understanding and application of ISO 9001:2015 standard:** requirements, impact on the organization processes, process effectiveness and efficiency monitoring, continuous improvement. Objective evidence to be collected during the audit with the aim to evaluate conformity, effectiveness and efficiency of the organization processes
- **Auditing skills:** auditor competence profile according to ISO 19011 guideline, verbal and non-verbal communication techniques, conflict management, interview techniques
- **Audit planning based on process approach and risk-based thinking:** audit program management and audit activities according to ISO 19011 guidelines
- **Audit applications:** case study, audit simulations, classification and evaluation of audit objective evidence, audit report, corrective action requests

During this course, participants will be continuously evaluated through individual and team activities, an audit role play and a written examination.

Who should attend: Internal Auditors, Second-party Auditors

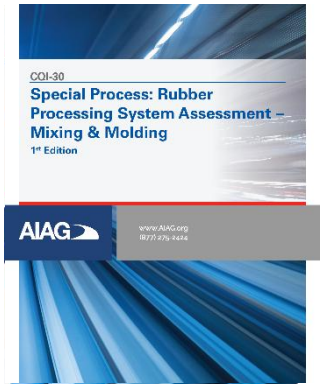
Length: 3 days (24 hours)

Cost: € 1.000,00 + Italian VAT (if applicable)

Upon successful appraisal, participants will receive a Plexus Certificate of Successful Completion.

Course: A25

AIAG CQI-30 Special Process: Rubber Processing System Assessment – Mixing & Molding



Training description: This course will provide participants in achieving a common approach to the special process assessment, according to the guidelines defined in the **AIAG CQI-30 "Special Process: Rubber Processing System Assessment – Mixing & Molding" Reference Manual (1st edition).** Combining theory, exercises and case studies, participants will learn audit planning and preparation, audit management and audit techniques in order to collect the needed objective evidence.

Training course outline:

- **Introduction to the special process assessment:** purpose, scope, benefits
- **AIAG CQI assessment in the IATF 16949 context and according to the process approach:** linkages and differences
- **AIAG CQI and customer specific requirements:** brief overview based on the OEM CSRs released by automotive OEMs
- **AIAG requirements:** introduction, requirements and auditing tools for the special process assessment. Review and application of the assessment check list provided by the AIAG CQI-30 manual, with the aim to achieve a deep comprehension of the objective evidence to be collected during the audit
- **Planning, execution and audit follow-up according to AIAG CQI method:** exercises, non conformity examples and case studies.

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production, Engineering, Maintenance)

Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A29

Reverse FMEA

Training description: for several years, Reverse PFMEA has become part of the automotive Customer Specific Requirements (CSR), integrating the IATF 16949 standard. To date, there are no standards or guidelines available for the implementation and appropriate documentation of this activity. Automotive organizations are often struggling in defining an effective and value-added method to meet this requirement.

The course aims to propose a suitable process for planning, preparation, execution and documentation of the Reverse FMEA in 4 stages, combining theoretical activities and practical exercises.

Training course outline:

- **Phase 1 – Planning:** identify "what RFMEA should be"
- **Phase 2 – Validating:** comparing current process vs. documented PFMEA
- **Phase 3 – Exploring:** discover news failure modes / causes
- **Phase 4 – Evolving:** implementing what has been learned

Who should attend: Department Managers and Operators (Quality, Quality Control, Laboratory, Supplier Quality, Production)

Length: 4 hours

Cost: € 180,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A30

APQP PPAP HARMONIZED STELLANTIS v2022 (approved by Stellantis)

Training description: STELLANTIS has defined and adapted the APQP and PPAP processes to manage the quality of its suppliers throughout development and mass production phases. New APQP PPAP STELLANTIS v2022 is based on the merging of ex-PSA and ex-FCA standards.

Training qualification is mandatory for STELLANTIS suppliers' Project Managers and Quality Managers assigned to a vehicle project applying the new STELLANTIS standards. [reference to 01276_22_00061 (docinfo IT system) or PRO.00109 (BeStandard)].

The course is provided under the agreement between Plexus and Euro-Symbiose, a TRIGO Group company nominated by Stellantis to develop and provide worldwide this training program to all the Stellantis suppliers. Combining exercises and case studies, participants will learn the Stellantis APQP and PPAP requirements.

Training course outline:

- **Know requirements and particularities** of the APQP PPAP STELLANTIS version 2022.
- Understand the **rating rules of the Deliverables in APQP Grid**.
- Know **roles & responsibilities** between the suppliers and STLA, and among STLA Teams.
- Get an introduction about APQP **IT Applications** (PLM, CQMS-AUROS).
- Build your **action plan to implement STELLANTIS requirements**.

After the successful completion of the **final exam**, participants will receive an "APQP PPAP STELLANTIS Training Certificate".

Prerequisites:

- Have completed general training on the APQP and PPAP processes or have experience with the APQP practice"
- E-learning pre-session module is mandatory before classroom session (length: around 1 hour).

Recommended for:

- This qualifying training is requested by STELLANTIS for any Supplier's Project Manager and Project Quality Manager assigned on a STELLANTIS development project.
- This training is also recommended for all other members of APQP project teams: Quality engineers, Design engineers, Test & Product Validation engineers, Industrialization engineers, Production managers, Logistics managers, Sales managers, IATF 16949 system auditors.

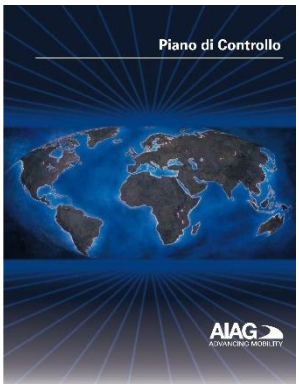
Length: 2 days (16 hours)

Cost: € 900,00 + Italian VAT (if applicable)

Upon succesful completion of the final exam, participants will receive an Attendance Certificate recognized by Stellantis.

Course: A33

AIAG Control Plan: Understanding and Implementing



Training description: achieving the expected level of product and process quality requires a control system that is properly planned and integrated into the organizational context, with the aim of minimizing variation and monitoring performance over time.

The course, according to the guidelines defined in the **AIAG "Control Plan" Reference Manual (1st edition)**, will provide participants with an overview of the process to create a control plan across the different stages of the product lifecycle, linked to other automotive core tools.

Training course outline:

- **Control Plan:** scope and benefits, linkages to the APQP process, control plan phases according to the product lifecycle.
- **Control Plan key elements:** template, special characteristics, pass-through characteristics, family and inter-dependent control plans, reaction plans, control plans in highly automated processes.
- **Control Plan** development: how to prepare a control plan in relationship with other automotive core tools (FMEA, MSA, and SPC). Case studies and exercises.
- **Control Plan management:** linkages with FMEA and lessons learned, LPAs, Reverse FMEA, handling and storage conditions for effective control plan management as a "living document."

Who should attend: Department Managers

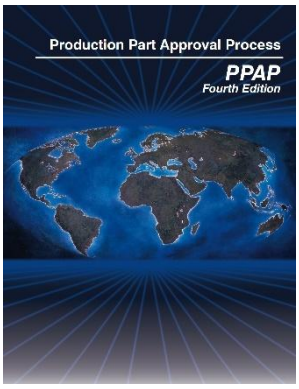
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A34

AIAG PPAP: Understanding and Reviewing Effectiveness



Training description: production part approval process is the final step of the APQP process and it aims to obtain the customer approval prior to shipment. The course, **according to the guidelines defined in the AIAG "PPAP – Production Part Approval Process" Reference Manual (4th edition)**, will provide a full overview of the management, preparation, submission and approval steps of this core tool widely required by automotive customers.

Training course outline:

- **PPAP:** scope and benefits, requirements and procedures to be followed for the significant production run
- **PPAP submission:** situations and typical scenarios within the automotive supply chain where PPAP submission is required according to the AIAG manual guidelines
- **5 levels of PPAP submission:** definitions, requirements, operative methods
- **PPAP package:** the relationship between the PPAP level and the APQP process. Documentation requirements and available templates
- **Case studies:** examples of preparation, submission, review and approval of the "PPAP package"

Who should attend: Department Managers (Quality, Production, R&D / Engineering, Sales, Purchasing, Supplier Quality, Logistic)

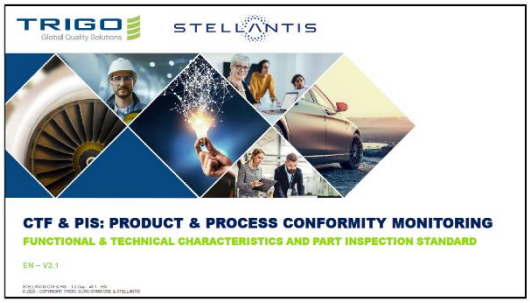
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A36

CTF & PIS: Product & Process conformity monitoring (approved by Stellantis)



Training description: This course will provide participants with a deep understanding of Stellantis requirements for product and process conformity monitoring.
According to Stellantis CSRs, **this training is mandatory for at least one member of each supplier project team** (design engineer, quality engineer, process engineer) that is responsible for documenting CTF list, PIS development and RCM.
The course may be provided in English or Italian by qualified trainers under the agreement between Plexus and Euro-Symbiose, a TRIGO Group company nominated by Stellantis to develop and provide worldwide this training program to all the Stellantis suppliers.

Training course outline:

- **Product Design and CTF List**
- **Process Design and Characteristics to be Monitored (CSE, CS, CTF to audit)**
- **PIS Development**
- **Part Conformity Control (RCM, proactive containment, control plan)**
- **Conclusion, Quiz, and Evaluation**

After the successful completion of the **final exam**, participants will receive a “CTF & PIS STELLANTIS Training Certificate”.

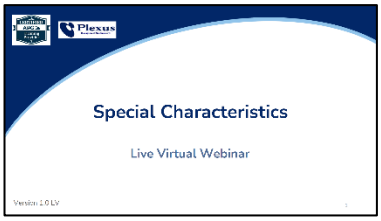
Prerequisites:
Participants need to have successfully completed the “APQP PPAP HARMONIZED STELLANTIS” training (certificate is required for training admission).

Who should attend:
At least one member of each Stellantis project team (design engineer, quality engineer, process engineer) that is responsible for documenting CTF list, PIS development and RCM

Length: 1.5 days (12 hours)
Cost: € 680,00 + Italian VAT (if applicable)
Upon successful completion of the final exam, participants will receive an Attendance Certificate recognized by Stellantis.

Course: A37

Special Characteristics



Training description: This course will provide participants with a **sustainable process for the identification and classification of the product and process special characteristics**, according to IATF 16949 requirements. Based on established automotive standards, the training offers a structured framework for documenting APQP team decisions regarding characteristics that require specific oversight during serial production. A strong emphasis is placed on bridging theory and practice, providing guidelines that organizations can adapt to their specific operational contexts.

This training is primarily intended for design-responsible organizations, but is also highly beneficial for organizations focused solely on manufacturing process development.

Training course outline:

- **special characteristics and IATF 16949:** definition of special characteristics according to automotive terminology and their impact on control methods in serial production;
- **special characteristics and CSR:** the role of the automotive customer in defining rules for classification and management of the special characteristics;
- **functions, requirements and characteristics:** definitions, examples and linkages with function analysis, failure analysis and severity ranking of DFMEA;
- **from the performance requirement to the product and process characteristics:** identifying potential special characteristics based on functional analysis and customer requirements;
- **robust design / process and classification of special characteristics:** introduction to a method for evaluating design and process robustness to document final characteristics classification decision.

Who should attend: Department Managers (Project Manager, Quality, Production, R&D / Engineering, Supplier Quality)

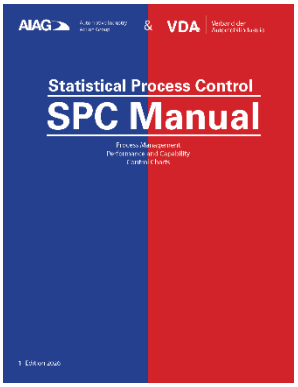
Length: 4 hours

Cost: € 180,00 + Italian VAT (if applicable)

Participants will receive a Plexus Attendance Certificate upon completion.

Course: A38

AIAG & VDA SPC: Transitioning



Training description: This course will provide participants with an overview overview of key changes, new concepts, and updated methodologies introduced in the **AIAG & VDA "Statistical Process Control" Manual (1st edition)**.

Participants will be introduced to the tools defined in the new reference manual for planning, managing, and continuously improving SPC activities, focusing on how to evaluate machine performance, process performance and capability, and select the best control charts based on time-dependent distribution models.

The course is designed only for participants with a background in statistical knowledge and tools, as defined in the previous AIAG "SPC" Manual: variation causes, distribution, average and standard deviation, control charts, capability indices).

Training course outline:

- **The new AIAG & VDA perspective**
- **Traditional SPC versus AIAG & VDA SPC Manual approach**
- **Retrospective control charts versus SPC control charts**
- **Process distribution**
- **Performance and capability across the production lifecycle**
- **Machine performance for releasing production equipment**
- **Process performance and capability for releasing production processes**
- **SPC and ongoing capability monitoring**
- **SPC approach in case of time-dependent distribution models**
- **Documenting and Reporting SPC Results**

Who should attend: Department Managers and Operators **who have experience implementing and managing Statistical Process Control based on the AIAG SPC 2nd Edition manual and are transitioning to the AIAG & VDA SPC Manual**

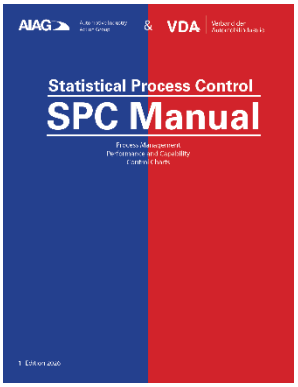
Length: 1 day (8 hours)

Cost: € 330,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

Course: A39

AIAG & VDA SPC in Practice (Practitioner Training)



Training description: This course, according to **the fundamentals of the statistical process control and the guidelines defined in the AIAG & VDA "Statistical Process Control" Manual (1st edition)**, will introduce the participants to basic statistical concepts and their application for the process control, as required by IATF 16949.

Through a combination of team and individual tasks, participants will complete a learning process structured into two modules.

Module 1: SPC Fundamentals

- **Introduction to statistical process approach**: rationale & benefits.
  Prevention vs. Detection approach. The loss function model applied to the statistical process control approach
- **Statistical process distribution:** fundamentals of normal distribution
- **Process variation sources:** common causes & special causes of process variation. Impact on process output
- **Variables control charts:** definition, preparation, application and interpretation
- **Attributes control charts:** definition, preparation, application and interpretation
- **Process capability evaluation:** key indicators, definition and realization of a process capability study. Common process capability indexes: Cm/Cmk, Pp/Ppk, Cp/Cpk. Calculation and interpretation for process improvement

Module 2: The AIAG & VDA SPC Manual approach

- **Traditional SPC versus AIAG & VDA SPC Manual approach**
- **Retrospective control charts versus SPC control charts**
- **Performance and capability across the production lifecycle**
- **Machine performance for releasing production equipment**
- **Process performance and capability for releasing production processes**
- **SPC and ongoing capability monitoring**
- **SPC approach in case of time-dependent distribution models**
- **Documenting and Reporting SPC Results**

Who should attend: Department Managers and Operators (Quality, Quality Control, Engineering, Supplier Quality, Production)

Length: 2 days (16 hours)

Cost: € 650,00 + Italian VAT (if applicable)

Participants will receive an AIAG Attendance Certificate upon completion.

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