Aerospace
Training Courses

2023

About Us

At LMRG we are passionate about supporting and empowering businesses to excel in today's ever-changing market. We help to overcome challenges, uncover opportunities, and achieve remarkable growth, thanks to our expert guidance and innovative solutions.

Who are we:

LMRG is a team of dedicated advisors with diverse experience across a variety of industries for over 30 years. Our team brings with them a wealth of both practical experience and industry-backed knowledge, acquired through decades of working with businesses off all sizes and sectors.

Our approach;

We believe a collaborative and personalised approach to change is optimal for understanding the individual requirements of an organisation. We take the time to understand the client's unique goals, challenges, and aspirations by immersing ourselves in their operations, culture, and market dynamics. We believe this allows us a greater appreciation for an organisations functions and provides us with invaluable insights to shape our recommendations.

What we do;

We offer various consultancy services designed to target different organisational requirements specific to you. Our services comprise of strategic planning, organisational optimisation & development, market research & analysis and more. We appreciate that a one size fits all approach is not optimal in organisations, therefore, we tailor our solutions accordingly.

Alongside our consultancy support, we also offer training suited to the aerospace and automotive industry and are AIAG-certified distributors for their core tools manuals, accessible through our website.

Why choose us?;

- Expertise – our services are supported by over 30 years of industry experience spanning many sectors, as well as being recognised on a global scale.
- Partnership – we believe in a collaborative approach to building meaningful long-term relationships with our clients by maintaining frequent and honest communication, collaboration, and knowledge transfer.
- Results orientation – our goal is to deliver measurable results that can be maintained in the current market and beyond. We pride ourselves on our ability to achieve long-term change.
- Tailored solutions – we acknowledge the diversity and uniqueness of every organisation and strive to develop solutions that will be most effectively implemented with minimal disruption.

AS9100 RevD Executive Understanding

Background

This highly interactive 1-day course provides an understanding of the specific quality management system standard, that was designed for organisations in the aerospace industry. The standards is a critical certification for companies that want to ensure the quality and safety of their services and products. An executive understanding of the AS9100 RevD is essential for effective leadership and compliance in this high regulated industry.

Learning Objectives

- Demonstrate an understanding of the Quality Management System principles used inthe development of the organization's QMS
- Apply the process approach as a management tool
- Demonstrate an understanding of how to integrate risk-based thinking into the QMS
- Demonstrate an understanding of AS9100 RevD requirements related to managementroles, responsibilities, and authorities

Who Should Attend

- Designed for Executives, Top Management, and the Management Review Team.

Agenda

- Introduction and Course Overview
- Quality Management Principles
- Process Approach and Risk-based thinking
- AS9100 RevD Key Management requirements

Additional Information

Duration: 0.5 Day

AS9100 RevD Understanding

Background

This highly interactive 1-day course provides an understanding of the specific quality management system standard, that was designed for organisations in the aerospace industry. The standards is a critical certification for companies that want to ensure the quality and safety of their services and products.

Learning Objectives

- Summarize the impact ISO 9001:2015 quality management principles have on AS9100:RevD
- In-depth review of the AS9100 RevD requirements (including AS9100C to AS9100RevD deltas)
- Demonstrate an understanding of the process approach to achieve strategic and operational objectives.
- Demonstrate an understanding of how risk-based thinking supports and improves the understanding and application of the process approach.
- Organize documentation according to AS9100 RevD to demonstrate effective planning,
- operation, and control of processes

Who Should Attend

- New Member of an AS9100 implementation team
- Over 3 years without AS9100 training
- Representatives from key functional groups involved in an organisations AS9100 RevD QMS
- Internal trainers who want an effective method of explaining AS9100 RevD to employees

Agenda

- Process Approach
- Process Identification: Customer Oriented Processes, Support Processes, and Management Processes
- Customer Oriented Process Analysis
- Support Process and Management Process Analysis
- Understanding the AS9100 RevD standard

Additional Information

Duration: 1 Day

AS9100D RevD Internal Auditor

Background

Self-Study (Mandatory): A series of questions (self-study document) to be answered by the student and turned in prior to, or at the beginning of, the course. The self-study is designed to acquaint you with ISO 9001:2015 and AS9100 RevD standards, and the guidelines for auditing. management systems

Learning Objectives

- Summarize the impact ISO 9001:2015 quality management principles have on AS9100 RevD

- Demonstrate an understanding of AS9100 RevD requirements and intent.

- Identify the requirements applicable to an AS9100 RevD internal auditor.

- Show an ability to independently plan, prepare and execute an AS9100 RevD internal audit based on ISO 19011:2011 and AS9101F guidance.

- Identify the tools to effectively form an audit team and conduct an audit meeting according to AS9100 RevD

- Demonstrate an understanding of the process approach to achieve strategic and operational objectives

- Demonstrate an understanding of how risk-based thinking supports and improves the understanding and application of the process approach.

- Organize documentation according to AS9100 RevD to demonstrate effective planning, operation, and control of processes

- Understand how to plan and manage a business to avoid potential nonconformities, analyse nonconformities that do occur, and take action to prevent reoccurrence of nonconformities.

Who Should Attend

- New AS9100 internal auditors

- Existing AS9100 internal auditors that have not attended training in over three years.

AS9100D RevD Internal Auditor

- Members of an AS9100 RevD implementation team

- Representatives from key functional groups involved in an organization's AS9100 RevD quality management system

Agenda

Day 1

- Introduction and Course Overview

- Quality Management Principles

- Process Approach and Risked-Based Thinking

- ISO 9001:2015 and AS9100 RevD – Requirements and Commentary

Day 2

- ISO 9001:2015 and AS9100 RevD – Requirements and Commentary

- Communication

- Conflict Management

- Auditing Skills

Day 3

- Auditing Skills (Continued)

- Audit Reporting

- Feedback

Additional Information

Duration – 3 Days

AS9120 RevD Executive Understanding

Background

AS9120 RevD is a specific revision of the AS9120 standard, which is a quality management system standard designed for organisations in the aerospace industry that deal with the distribution of aerospace parts, components, and materials. It's essential for executives and leaders in these organisations to understand AS9120 RevD to ensure compliance and the deliver of quality products

Learning Objectives

- Demonstrate an understanding of the Quality Management System principles used in the development of the organization's QMS
- Apply the process approach as a management tool
- Demonstrate an understanding of how to integrate risk-based thinking into the QMS
- Demonstrate an understanding of AS9120 RevB requirements related to management roles, responsibilities, and authorities

Who Should Attend

- Designed for Executives, Top Management and the Management Review Team

Agenda

- Introduction and Course Overview
- Quality Management Principles
- Process Approach and Risk-Based Thinking
- AS9120 RevB Key Management Requirements

Additional Information

Duration: 1 Day

AS9120 RevD Understanding

Background

AS9120 RevD is a specific revision of the AS9120 standard, which is a quality management system standard designed for organisations in the aerospace industry that deal with the distribution of aerospace parts, components, and materials.

Learning Objectives

Summarize the impact ISO 9001:2015 quality management principles have on AS9100 RevD
In-depth review of the AS9120 RevB requirements (including AS9120 RevA to AS9120 RevB deltas)
Demonstrate an understanding of the process approach to achieve strategic and operational objectives
Demonstrate an understanding of how risk-based thinking supports and improves the understanding and application of the process approach
Organize documentation according to AS9120 RevB to demonstrate effective planning, operation, and control of processes

Who Should Attend

- New members of an AS9120 implementation team
- Implementation team members who have not attended an AS9120 training in over 3 years
- Representatives from key functional groups involved in an organization's AS9120 RevB Quality Management System or those who haven't attended an AS9120 training in over 3 years
- Internal trainers who want an effective method of explaining AS9120 RevB to employees

Agenda

- Process Approach
- Process Identification: Customer Oriented Processes, Support Processes, and Management Processes
- Customer Oriented Process Analysis
- Support Process and Management Process Analysis
- Understanding the AS9120 RevB standard

Additional Information

Duration: 1 Day

AS9120 RevB Internal Audit Training

Background

Internal audits remain a crucial requirement of the AS9120B standard to verify the compliance of an organization's quality management system to the standard. Internal auditors must be knowledgeable of the AS9120B requirements to effectively perform internal audits.

This internal auditor course is designed for both new auditors and existing internal auditors who need a thorough refresher of how to perform an internal audit to AS9100. Participants will gain an in-depth understanding of AS9120B and the tools to effectively prepare and conduct first party audits to AS9120B. Through interactive learning methods, this course engages participants in a detailed review of AS9120B, including key changes related to counterfeit parts, documented information, process approach, and risk-based thinking.

Through individual participation and group exercises, participants will apply and audit the requirements of AS9120B through case study activities that focus on auditing techniques as referenced by ISO 19011:2018 and AS9101F. Upon completion of this training program, participants will leave with the skills necessary to successfully conduct internal audits to AS9120B.

Learning Objectives

- Summarize the impact ISO 9001:2015 quality management principles have on AS9120B
- Demonstrate an understanding of AS9120C requirements and intent
- Identify the requirements applicable to an AS9120B internal auditor
- Show an ability to independently plan, prepare and execute an AS9120B internal audit based on ISO 19011:2018 and AS9101F guidance
- Identify the tools to effectively form an audit team and conduct an audit meeting according to AS9120B
- Demonstrate an understanding of the process approach to achieve strategic and operational objectives
- Demonstrate an understanding of how risk-based thinking supports and improves the understanding and application of the process approach
- Organize documentation according to AS9120B to demonstrate effective planning, operation, and control of processes
- Understand how to plan and manage a business to avoid potential nonconformities, analyse nonconformities that do occur, and act to prevent reoccurrence of nonconformities

Agenda

Day 1
- Introduction
- ISO9001:2015 High level Structure
- Quality Management Principles

- The process Approach
- AS9120B requirements

Day 2
- AS9120B Requirements
- Auditing Skills and Preparation
- Questioning Techniques

Day 3
- The Audit Process (Case study or live audit)
- Conclusions, report writing and feedback
- Examination (Optional)

Additional Information

Duration: 3 Days

AS9110 RevC Executive Understanding

Background

AS9110 RevC is a standard published by the Society of Automotive Engineers (SAE) that outlines the requirements for a Quality Management System (QMS) specifically tailored to the aviation maintenance, repair, and overhaul (MRO) industry. The "Executive Understanding" is a document or summary that provides an overview of the standard's key points and requirements at a high level for executives and senior management within an organization. This document is intended to help top-level management understand the importance and implications of AS9110 RevC without delving into the technical details of the standard.

Learning Objectives

- Demonstrate an understanding of the Quality Management System principles used in the development of the organization's QMS
- Apply the process approach as a management tool
- Demonstrate an understanding of how to integrate risk-based thinking into the QMS
- Demonstrate an understanding of AS9110 RevC requirements related to management roles, responsibilities, and authorities

Who Should Attend

- Designed for executives, Top Management, and the Management Review Team

Agenda

Day 1
- Introduction and Course Overview
- Quality Management Principles
- Process Approach ad Risk-Based thinking
- AS9110 RevC Key Management Requirements

AS9110 RevC Understanding

Background

AS9110 RevC is a standard published by the Society of Automotive Engineers (SAE) that outlines the requirements for a Quality Management System (QMS) specifically tailored to the aviation maintenance, repair, and overhaul (MRO) industry.

Learning Objectives

- Summarize the impact ISO 9001:2015 quality management principles have on AS9110 RevC
- In-depth review of the AS9110 RevC requirements (including AS9110 RevB to AS9110 RevC deltas)
- Demonstrate an understanding of the process approach to achieve strategic and operational objectives
- Demonstrate an understanding of how risk-based thinking supports and improves the understanding and application of the process approach
- Organize documentation according

Who Should Attend

- New members of an AS9110 implementation team
- Implementation team members who have not attended an AS9110 training in over 3 years
- Representatives from key functional groups involved in an organization's AS9110
- RevC Quality Management System or those who haven't attended an AS9100 training in over 3 years
- Internal trainers who want an effective method of explaining AS9110 RevC to employees

Agenda

Day 1
- Process Approach
- Process Identification: Customer Oriented Processes, Support Processes, and Management Processes
- Customer-Oriented Process Analysis
- Support Process and Management Process Analysis
- Understanding the AS9110 RevC Standard
- Closure Activities

AS9110 RevC Internal Auditor

Background

AS9110 is a standard developed by the Society of Automotive Engineers (SAE) that pertains to Quality Management Systems (QMS) for aviation, space, and defense organizations. AS9110 Rev C is a specific revision of this standard, and it outlines the requirements for establishing, implementing, maintaining, and continually improving a QMS in organizations that provide maintenance, repair, and overhaul (MRO) services for aviation products

Learning Objectives

- Summarize the impact ISO 9001:2015 quality management principles have on AS9110 RevC
- Demonstrate an understanding of AS9110 RevC requirements and intent
- Identify the requirements applicable to an AS9110 RevC internal auditor
- Show an ability to independently plan, prepare and execute an AS9110 RevC internal audit based on ISO 19011:2011 and AS9101F guidance
- Identify the tools to effectively form an audit team and conduct an audit meeting according to AS9110 RevC
- Demonstrate an understanding of the process approach to achieve strategic and operational objectives
- Demonstrate an understanding of how risk-based thinking supports and improves the understanding and application of the process approach
- Organize documentation according to AS9110 RevC to demonstrate effective planning, operation, and control of processes
- Understand how to plan and manage a business to avoid potential nonconformities, analyze nonconformities that do occur, and take action to prevent the reoccurrence of non-conformities

Who Should Attend

- New AS9110 internal auditors
- Existing AS9110 internal auditors that have not attended training in over three years
- Members of an AS9110 RevC implementation team
- Representatives from key functional groups involved in an organization's AS9110 RevC quality management system

AS9110 RevC Internal Auditor

Agenda

Day 1
- Introduction and course overview
- Quality Management Principles
- Process Approach and Risk-Based Thinking
- ISO 9001:2015 and AS9110 RevC – Requirements and Commentary

Day 2
- ISO 9001:2015 ad AS9110 RevC – Requirements and Commentary
- Communication
- Conflict Management
- Auditing Skills
- Auditing Application

AS9100 RevD Lead Auditor

Background

Participants must have a working knowledge of the Core Tools and auditing experience. Although there is no mandatory verification by Training Administrator, lack of the required working knowledge and experience in this competence area may negatively affect training participation and final scoring.

Learning Objectives

- Identify linkages to quality management principles

- Demonstrate an understanding of and apply the process approach to auditing, including risk-based thinking

- Demonstrate an understanding of ISO 9001:2015 and RevD

- Apply auditing skills according to ISO 19011 for Lead Auditors

- Apply the concept of risk-based thinking in the audit process

Who Should Attend

- New AS9100 RevD auditors

- Existing AS9100 RevD auditors who haven't attended a training in over three years

- Members of an AS9100 RevD implementation team

- Representatives from key functional groups involved in an organization's AS9100 REVD quality management system

Agenda

Day 1

- Introduction and Course Overview

- Quality Management Principles

- Process Approach and Risked-Based Thinking

Day 2

- Process Approach and Risk-Based Thinking (continued)

- Understanding AS9100:RevD

AS9100 RevD Lead Auditor

Day 3

- Understanding AS9100 RevD (continued)

- Communication

- Conflict Management

- Auditing Skills

Day 4

- Auditing Application

Day 5

- Auditing Application (continued)

- Final Examination

Additional Information

- Duration – 5 Days

APQP & PPAP Overview

Background

Advanced Product Quality Planning (APQP) and Production Part Approval Process (PPAP). The APQP aspects of this standard define a methodology for ensuring that the product development processes deployed throughout the aviation, space, and defense industries are fully integrated phased processes that extend from concept and design through manufacturing process planning
and execution, and on into product use, service, and customer feedback. The PPAP is an output of APQP confirming that the production process has demonstrated the potential to produce products that consistently fulfil all requirements at the customer demand rate.

Learning Objectives

- Provide an overview of the Aerospace Advanced Product Quality Planning and Production Part Approval Process in line with AS9145
- Demonstrate and understanding of the 5 phases of APQP, including the specific inputs and outputs related top each phase and provide an understanding of PPAP requirements
- Identify the key linkages between AS9100 and AS9145, AS9102 and AS9103

Agenda

- Overview of Aerospace Sector Performance
- Basics of APQP and PPAP
- The 5 phases of APQP (Plan and Define, Product Design and Development, Process Define and
- Development, Product and Process Validation, On-Going Production, Use and Post Delivery Services
- Production Part Approval Process
- Key Linkages between AS9100 and AS9145, AS9102 and AS910

Additional Information

Duration: 0.5 Day

AS13004 Control Plan Methodology

Background

The overview provides delegates with an insight into the requirements and intent of AS13004 and its alignment with AS13100. It is designed for FMEA implementation team members, auditors, and other representatives from key functional groups involved in the organization's risk management process.

Learning Objectives

- Provide and overview on AS13004 specifically focusing on Control Plan Methodology and its deployment within the aerospace sector.

Agenda

- Core Tool Relationship

- Cross Functional Teams

- Creating Production Control Plans from PFMEA

- Dominant Processes

- How to Manage FMEA Prevention and Detection Tools

- Control Plan Inputs

- Control Plan Structure

Additional Information

Duration: 0.5 Days

Process Failure Mode and Effects Analysis

Background

The overview provides delegates with an insight into the requirements and intent of AS13004 and its alignment with AS13100. It is designed for FMEA implementation team members, auditors, and other representatives from key functional groups involved in the organization's risk management process.

Learning Objectives

- Provide and overview on AS13004 and its deployment within the aerospace sector.

Agenda

- What is an FMEA

- Dominant Processes

- The FMEA Failure Chain

    - Severity Ranking Table

    - Occurrence Ranking Table

    - Detection Ranking Table

- FMEA Benefits

- FMEA Process

Additional Information

Duration: 0.5 Days

AS9102 RevC First Article Inspection (FAI)

Background

AS9102 RevC is a standard that outlines the requirements for conducting a First Article Inspection (FAI) in the aerospace industry. It is a crucial part of quality control and assurance in aerospace manufacturing, ensuring that the initial production of a new part, assembly, or product conforms to all engineering and design specifications. Here are some key aspects of AS9102 RevC First Article Inspection:

Learning Objectives

- Discuss the purpose and applicability of FAI and their importance within the aerospace sector
- Apply terms and definitions used within AS9102
- Explain the FAI phases in detail and how they apply to organizations working within the aerospace sector
- Demonstrate awareness of the completion of the AS9102 forms
- Recognize when full or partial FAI submissions are required

Who Should Attend

Anyone involved in AS9102 FAI activities, AS9145 APQP and PPAP, AS13004 PFMEA and Control Plans, AS13003 MSA and ongoing process control and process improvement.

Additional Information

- 1 Day

Statistical Process Control

Background

Statistical Process Control (SPC) is a methodology used in manufacturing and other industries to monitor, control, and improve processes. Its primary goal is to ensure that a process operates efficiently and consistently, producing products or services that meet quality specifications. SPC involves the use of statistical techniques to analyze and manage variability within a process

Learning Objectives

- Learn proven questioning techniques for effective SPC implementation by developing an Operational Definition
- Demonstrate an understanding of the linkage between SPC and the larger scope of the core tools manuals (MSA, FMEA, APQP), along with the requirements of IATF 16949.
- Identify the sources of variation present and know how to categorize normal versus non-normal
- Differentiate between prevention and detection and illustrate their impact on the Cost of Poor Quality (CoPQ)
- Learn about the different tools that support SPC implementation
- Identify the correct and applicable tools for both variable and attribute data
- List best practices regarding implementation and taking action on out-of-control conditions to aid in effective implementation
- Calculate and Interpret acceptance criteria for process capability indices like CpK and PpK
- Apply methods for implementing the principles of SPC to manufacturing processes
- Apply software to the calculation of Control Limits and incorporation of measurement studies process to the selected Process Controls
- Demystify SPC by learning to carry out all calculations and interpretations followingthe steps in the SPC reference manual

Who Should Attend

- Recommended for quality managers, quality team leaders, manufacturing managers and technicians, quality assurance and laboratory technicians and engineers, anyone involved in the implementation of AS9100 RevD, individuals and cross functional teams interested in risk reduction and anyone who wants a better understanding of SPC.

Additional Information

- 0.5 Days