

Safety Leader Training Course Overview				
	Day 1	Day 2	Day 3	Day 4
Time	SMS Eval Tools	SMS Eval Tools	Auditing	Safety Culture
0900-1000	Introductions and SMS Overview	Management Commitment	ISO 19011 Principles	Measuring Safety Culture
1000-1100	Hazard Identification	Accountabilities and Responsibilities	Audit Process and Procedures	Leadership vs Management
1100-1200	Risk Assessment and Mitigation	Appointment of Key Personnel	SMS Eval Scenarios	Managing Human Factors
1300-1400	Performance Monitoring and Measurement	Coordination of Emergency Response Plans	SMS Eval Scenarios	Root Cause Analysis Techniques
1400-1500	Management of Change	SMS Documentation	SMS Eval Scenarios	Incident Investigation
1500-1600	Continuous Improvement	Education, Training, Communication	Audit Findings and Report	Quiz / Award Certificates
1600-1630	Review	Review	Review	

### Module 1: Introductions and SMS Overview

This presentation addresses the need for SMS and how it relates to Total Quality Management and ISO 31000, *Risk Management* and [ISO 9001, Quality Management](#). The instructor provides a background of ICAO Standards and Annexes, to include Annex 19, *Safety Management*, and ICAO Doc 9859, *Safety Management Manual*. The four components and related elements are presented from the view of the Safety Management International Collaboration Group (SMICG) [SMS Evaluation Tool](#).

### Module 2: Hazard Identification

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. A confidential reporting system to capture errors, hazards, and near misses that is simple to use and accessible to all staff.
2. A confidential reporting system that provides appropriate feedback to the reporter and, where appropriate, to the rest of the organization.
3. Confidence and trust in the organization’s reporting policy.

4. The process that defines how hazards are identified from multiple sources through reactive and proactive methods (internal and external).
5. The hazard identification process identifies human performance related hazards.
6. The process to analyze safety data and safety information to look for trends and gain useable management information.
7. Safety investigations that are carried out by appropriately trained personnel to identify root causes (why it happened, not just what happened).

### **Module 3: Safety Risk Assessment and Mitigation**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. The process for the management of risk that includes the analysis and assessment of risk associated with identified hazards expressed in terms of likelihood and severity (or alternative methodology).
2. The criteria for evaluating the level of risk the organization is willing to accept and risk assessments and ratings are appropriately justified.
3. The process to make decisions and apply appropriate and effective risk controls.
4. How to ensure that senior management has visibility of medium and high risk hazards and their mitigation and controls.

### **Module 4: Safety Performance Monitoring and Measurement**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. Safety performance indicators (SPIs) linked to the organization's safety objectives have been defined, promulgated, and are being monitored and analyzed for trends.
2. Risk mitigations and controls are being verified/audited to confirm they are working and effective.
3. Safety assurance takes into account activities carried out by all directly contracted organizations.
4. Responsibilities and accountability for ensuring compliance with safety regulations are defined and applicable requirements are clearly identified in organization manuals and procedures.

5. There is an internal audit program including details of the schedule of audits and procedures for audits, reporting, follow up, and records.
6. Responsibilities and accountabilities for the internal audit process (IAP) are defined and those who are responsible for the IAP have direct access to the Accountable Manager.
7. After an audit, there is appropriate analysis of causal factors and corrective/preventive actions are taken.

### **Module 5: Management of Change [0900-0940]**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. The process to identify whether changes have an impact on safety and to manage any identified risks in accordance with existing safety risk management processes.
2. Human Factor (HF) issues that should be considered as part of the change management process and, where appropriate, how the organization applies the appropriate HF/human-centered design standards to the equipment and physical environment design.

### **Module 6: Continuous Improvement, Interface Management**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include

1. How the organization continuously monitors and assesses its SMS processes to maintain or continuously improve the overall effectiveness of the SMS.
2. How the organization identifies and documents the relevant internal and external interfaces and the critical nature of such interfaces.

### **Module 7: Management Commitment**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. The safety policy, signed by the Accountable Manager, which includes a commitment to continuous improvement; observes all applicable legal requirements and standards; and considers best practices.

2. A statement to provide appropriate resources and the organization is managing resources by anticipating and addressing any shortfalls.
3. The policies for safety critical roles relating to all aspects of Fitness for Duty (for example, Alcohol and Drugs Policy or Fatigue).
4. The means for the communication of the safety policy.
5. How the AE and senior management team promote a positive safety culture and demonstrate their commitment to the safety policy through active and visible participation in the safety management system.
6. The safety policy actively encourages safety reporting.
7. A just culture policy and principles defined that clearly identifies acceptable and unacceptable behaviors to promote a just culture.
8. Safety objectives that are consistent with the safety policy and communicated throughout the organization.
9. The State Safety Program (SSP) considerations.

### **Module 8: Safety Accountabilities and Responsibilities**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. The appointment of an AE with full responsibility and accountability to ensure the SMS is properly implemented and performing effectively.
2. How the AE maintains full awareness of their SMS roles and responsibilities in respect of the safety policy, safety standards, and safety culture of the organization.
3. How safety accountabilities, authorities, and responsibilities are defined and documented throughout the organization and how staff understand their own responsibilities.

### **Module 9: Appointment of Key Personnel**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. A competent safety manager who is responsible for the implementation and maintenance of the SMS with a direct reporting line to the AE.
2. The allocation of sufficient resources to manage the SMS including, but not limited to, competent staff for safety investigation, analysis, auditing, and promotion.
3. Appropriate safety committee(s) that discuss and address safety risks and compliance issues and includes the AE and the heads of functional areas.

### **Module 10: Coordination of Emergency Response Planning**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. An appropriate emergency response plan (ERP) developed and distributed that defines the procedures, roles, responsibilities, and actions of the various organizations and key personnel.
2. Ensuring that the ERP is periodically tested for the adequacy of the plan and the results reviewed to improve its effectiveness.

### **Module 11: SMS Documentation**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. Ensuring the SMS documentation includes the policies and processes that describe the organization's safety management system and processes and is readily available to all relevant personnel.
2. SMS documentation, including SMS related records, are regularly reviewed and updated with appropriate version control in place.

### **Module 12: Training and Education, Communication**

The instructor facilitates a discussion related to the indicators of compliance and performance for this section of the SMS, to include:

1. There is a training program for SMS in place that includes initial and recurrent training. The training covers individual safety duties (including roles, responsibilities, and accountabilities) and how the organisation's SMS operates.

2. There is a process in place to measure the effectiveness of training and to take appropriate action to improve subsequent training.
3. Training includes human and organizational factors including just culture and non-technical skills with the intent of reducing human error.
4. There is a process that evaluates the individual's competence and takes appropriate remedial action when necessary.
5. The competence of trainers is defined and assessed, and appropriate remedial action taken when necessary.
6. The process to determine what safety critical information needs to be communicated and how it is communicated throughout the organization to all personnel, as relevant. This includes contracted organizations and personnel where appropriate.

**Module 13: Audit Principles** During this module, the trainee reviews key audit terms and principles based on ISO 19011, Guidelines for Auditing Management Systems. The trainee discusses the values of integrity, fairness, confidentiality, independence, and evidence-based conclusions. Population sampling is discussed, along with the principles of audit scope and objectives. The trainee is presented with various audit criteria which can be applied to a wide variety of organizations, each one having a focus on safety risk management.

**Module 14: Audit Process and Procedures.** The six steps of the audit process are presented and discussed to include: initiating, preparing, conducting, audit report preparation, completion, and follow-up. Each step is broken down into its elements so the trainee can appreciate the amount of work involved in conducting internal or external audits. The module presents an example of industry tools utilized to conduct safety audits to include the ICAO, FSF, IBAC and FAA.

**Module 15: SMS Evaluation Scenarios.** Using the SMICG SMS Evaluation Tool, the instructor provides the trainees with various scenarios that the trainee practices assessing the elements of the SMS, comparing the criteria to the evidence to generate findings.

**Module 16: Preparing Findings and Audit Report.** This module presents and the trainee discusses how to make findings based on the audit criteria, audit objectives, and collected evidence. The difference between compliance and conformity is explored, along with the proper use of auditor recommendations, when there is a gap based on criteria that are other than standards or regulatory requirements. Example finding

statements are presented, along with the technique of determining finding criticality to enhance the process to develop a corrective action plan.

**Module 17: Measuring Safety Culture.** This module explores the relationship between SMS performance and organizational culture. Trainees learn about the characteristics of a safety culture and how that relates to an organization's overall culture. Key attributes of a safety culture are presented and discussed to include: reporting, informed, just, flexible, and learning. Scholarly research is cited which describes the correlation between trust, information, and incident rates. Finally, the trainee is presented with a variety of ways to assess the culture of their organization.

**Module 18: Management Versus Leadership.** This fascinating module explores the differences between the concepts of management and leadership. As both sides of one coin are considered, the trainee is reminded that successful leaders must manage and successful managers must lead. This training is a clear and refreshing reminder that anyone can be a leader and leadership is not just for those who hold higher titles. Finally, the four pillars of the SMS are studied which clarifies which components require leadership and which require effective management.

**Module 19: Managing Human Factors.** This module presents the philosophy of how unmanaged human factors can lead to accidents. It examines the SHELL model to provide insight into the potential effects of human interaction with software, hardware, environment, and other people. The HFACS approach to accident prevention is explored to include psychological and cognitive factors considered and studied at the US Air Force Safety Center. Practical applications for safety performance indicators and targets are presented and discussed. ICAO tools are provided to the trainees with demonstration on how they work.

**Module 20: Root Cause Analysis.** This module explores the various techniques of root cause analysis, to include the US Department of Energy Root Cause Analysis Guidebook. The techniques presented and discussed include: Events and Causal Factor Analysis (ECFA), Change Analysis, Barrier Analysis, 5-Whys, and the Ishikawa Fish Bone Diagram utilizing 8-Ms. Practical examples are provided and discussed, to include a Fishbone example related to a runway excursion.

**Module 21: Incident Investigation.** This module explores the purpose and how to investigate following an incident. It examines an OSHA incident/accident investigation guide book and covers the essential elements to include: evidence collection, interviewing witnesses and involved employees, determining and examining contributing factors. This provides the trainee with an understanding of the interplay between errors, deviations, and causal factors.