



LONDON
INTERNATIONAL
SCHOOL FOR AVIATORS

AVIATION TRAINING PROGRAMS

Safety & Security

Syllabus prepared by industry experts, with strong consideration of UK and international requirements.

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1. Safety and Compliance Training

Combined International Syllabus (Modules) for Safety and Compliance Training, harmonized to meet regulatory expectations.

MODULE 1: Regulatory Framework & International Aviation Law

1.1 ICAO Framework

- ICAO structure and oversight system
- Annex 19 – Safety Management
- Annex 6 – Operation of Aircraft
- USOAP & Continuous Monitoring

1.2 National Aviation Regulations

- CAR 145 / CAR M / CAR 66 (DGCA)
- UK Part-145 / Part-CAMO
- EASA Basic Regulation & Implementing Rules
- FAA 14 CFR Parts 21, 43, 65, 91, 121, 145
- GCAA CAR-145 & CAR-OPS
- GACA Part-145 & GACAR
- CASA CASR framework
- GCC & South Asian regulatory structures

1.3 Regulatory Approvals & Certificates

- AOC
 - AMO Approval
 - CAMO Approval
 - Training Organization Approval
 - MOE / MCM / OM structure
-

MODULE 2: Safety Management System (SMS)

2.1 SMS Fundamentals

- Safety Policy & Objectives
- Safety Risk Management
- Safety Assurance
- Safety Promotion

2.2 Hazard Identification & Risk Assessment

- Hazard reporting systems
- Risk matrices
- Bow-tie method
- Root cause analysis

2.3 Occurrence Reporting

- Mandatory occurrence reporting

- Voluntary reporting systems
- Just Culture principles
- Confidential reporting programs

2.4 Emergency Response Planning

- ERP structure
 - Crisis management
 - Coordination with authorities
-

MODULE 3: Compliance Monitoring System (CMS)

3.1 Compliance Monitoring Principles

- Internal audit systems
- Independent audit function
- Auditor qualification requirements

3.2 Audit Process

- Audit planning
- Checklists preparation
- Conducting audits
- Evidence collection

3.3 Findings & Corrective Action

- Level 1 & Level 2 findings
 - Root cause analysis
 - Corrective and preventive actions
 - Follow-up & closure
-

MODULE 4: Human Factors in Safety & Compliance

4.1 Human Performance & Limitations

- SHELL model
- Dirty Dozen
- Fatigue & stress management

4.2 Human Error & Violation

- Error types
- Safety culture
- Organizational factors

4.3 Just Culture & Safety Culture

- Accountability vs blame
 - Reporting culture
 - Management responsibilities
-

MODULE 5: Quality Assurance & Documentation Control

5.1 Quality Management System (QMS)

- ISO 9001 interface with aviation
- Quality objectives
- KPI monitoring

5.2 Documentation Control

- MOE/OM control procedures
- Revision control
- Technical records retention
- Digital record systems

5.3 Control of Contractors & Subcontractors

- Vendor evaluation
 - Safety oversight
 - Third-party audit requirements
-

MODULE 6: Airworthiness & Operational Compliance

6.1 Continuing Airworthiness

- ARC process
- AD compliance
- SB evaluation
- MEL/CDL control

6.2 Maintenance Compliance

- Certifying staff requirements
- Tool & equipment control
- Calibration requirements
- Work order control

6.3 Operational Compliance

- Flight operations manual
 - Dispatch compliance
 - ETOPS requirements
 - Weight & balance compliance
-

MODULE 7: Safety Investigation & Root Cause Analysis

7.1 Occurrence Investigation

- Incident vs accident
- Preservation of evidence
- Reporting to authorities

7.2 Investigation Techniques

- 5 Why analysis
- Fishbone diagram
- HFACS model

7.3 Corrective Action & Effectiveness Monitoring

- Tracking systems
 - Performance indicators
-

MODULE 8: Risk-Based Oversight & Performance Monitoring

8.1 Safety Performance Indicators (SPI)

- Leading & lagging indicators
- Data-driven oversight

8.2 Safety Review Boards

- SRB structure
- Management review meetings

8.3 Continuous Improvement

- Trend analysis
 - Benchmarking
 - Safety data analytics
-

MODULE 9: Ethics, Accountability & Regulatory Enforcement

9.1 Enforcement Actions

- Suspension & revocation
- Civil penalties
- Certificate action

9.2 Professional Ethics

- Conflict of interest
 - Whistleblower protection
 - Compliance responsibility
-

MODULE 10: Security & Safety Interface

10.1 Safety vs Security Responsibilities

- AVSEC coordination
- Threat reporting
- Cybersecurity awareness

10.2 Insider Threat Management

- Reporting mechanisms
 - Background checks
 - Access control
-

MODULE 11: Practical Workshop & Case Studies

- Major accident case studies
- Regulatory enforcement cases

- SMS implementation workshop
- Audit simulation exercise
- Risk assessment practical session

2. CRM (CREW RESOURCE MANAGEMENT)

A. INITIAL CRM TRAINING (Flight Crew / Cabin Crew / Maintenance CRM Adaptable)

MODULE 1: Introduction to CRM

- History and evolution of CRM (NASA workshops, accident case studies)
 - Regulatory framework (ICAO, EASA, FAA, DGCA, etc.)
 - Objectives and scope of CRM
 - TEM (Threat and Error Management) concept
 - Just Culture & Safety Management System (SMS)
-

MODULE 2: Human Factors & Human Performance

- SHELL Model
 - Human limitations
 - Information processing
 - Situational awareness
 - Decision-making models (DECIDE, FOR-DEC, OODA)
 - Automation philosophy & monitoring
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MODULE 3: Communication

- Effective communication models
 - Verbal & non-verbal communication
 - Standard phraseology
 - Barriers to communication
 - Assertiveness & Advocacy
 - Briefings and debriefings
 - Cross-cultural communication
-

MODULE 4: Leadership & Followership

- Leadership styles
 - Authority gradient
 - Team building
 - Conflict resolution
 - Shared mental model
 - Delegation and task management
-

MODULE 5: Workload Management

- Workload distribution
 - Time management
 - Prioritization
 - Multi-tasking risks
 - Monitoring & cross-checking
-

MODULE 6: Threat and Error Management (TEM)

- Types of threats (operational, environmental, organizational)
 - Error types
 - Undesired aircraft states
 - Error detection & recovery
 - Case studies (international accidents/incidents)
-

MODULE 7: Stress & Fatigue Management

- Causes and symptoms
 - Acute vs chronic stress
 - Fatigue science
 - Circadian rhythm
 - FRMS (Fatigue Risk Management System)
 - Coping mechanisms
-

MODULE 8: Cultural Awareness & Professional Standards

- Cultural dimensions in multinational crews
 - Professional conduct
 - Company safety culture
 - Ethical decision making
-

MODULE 9: Automation & Technology Management

- Automation dependency
 - Mode awareness
 - Automation surprises
 - Monitoring philosophy
 - Manual handling skills
-

MODULE 10: CRM in Abnormal & Emergency Situations

- Decision-making under stress
 - Startle effect & surprise
 - Leadership in emergencies
 - Cabin-flight crew coordination
 - ATC coordination
 - Post-incident communication
-

B. RECURRENT CRM TRAINING (Annual / As per Authority Requirement)

- Refresher on core CRM principles
 - Accident/incident case studies (recent global events)
 - Updates in regulations
 - TEM review
 - Company-specific safety reports
 - Line-oriented safety topics
 - Group exercises & role play
-

C. COMMAND / CAPTAIN UPGRADE CRM

- Command authority & responsibility
 - Advanced decision-making
 - Mentoring and coaching
 - Handling difficult crew members
 - Command presence
 - Crisis leadership
-

D. INSTRUCTOR CRM (CRM Trainer Qualification Course)

- Adult learning principles
 - Facilitation skills
 - Classroom management
 - Assessment techniques
 - Behavioral marker systems (NOTECHS, LOSA)
 - Conducting debriefing sessions
-

E. MAINTENANCE CRM (MCRM)

- Human error in maintenance
 - Communication shift handover
 - Tool control & documentation
 - Pressure & organizational factors
 - Maintenance error case studies
-

F. CABIN CREW CRM

- Passenger management
- Crew coordination
- Conflict resolution onboard
- Emergency leadership
- Cabin-Flight Deck interface

3. SEP (Safety & Emergency Procedures)

COMBINED INTERNATIONAL SEP TRAINING SYLLABUS

(For AME Students / Maintenance Personnel / Ground Handling / Cabin & Technical Staff)

MODULE 1: Aviation Regulatory Framework & Safety Oversight

- ICAO framework and Annex structure
 - National Aviation Authorities (NAA) overview
 - CAR-145 / Part-145 / FAR 145 / Part-ORA safety obligations
 - Operator vs AMO safety responsibilities
 - Reporting obligations (MOR / ASR / Occurrence Reporting)
-

MODULE 2: Safety Management System (SMS)

- SMS principles (ICAO Annex 19)
 - Hazard identification & risk assessment
 - Safety policy & objectives
 - Safety assurance & performance monitoring
 - Safety promotion & reporting culture
 - Just Culture principles
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MODULE 3: Human Factors & Error Management

- Human performance & limitations
 - SHELL model
 - Dirty Dozen
 - HFACS principles
 - Fatigue management
 - Stress & workload management
 - Communication & teamwork
 - Maintenance Error Management System (MEMS)
-

MODULE 4: General Safety & Ramp Safety

- Airside safety rules
- FOD control
- PPE requirements
- Tool control procedures
- Safe aircraft servicing practices
- Ground equipment hazards

- Aircraft marshalling safety
 - Working at height / confined space safety
-

MODULE 5: Fire Prevention & Fire Fighting

- Fire theory (Fire Triangle / Tetrahedron)
 - Classes of fire (A, B, C, D, K)
 - Aircraft-specific fire risks
 - Portable fire extinguishers (CO₂, Halon, Foam, DCP)
 - Engine/APU fire response
 - Cargo/battery fire procedures
 - Practical fire drill
-

MODULE 6: Emergency Response Procedures (ERP)

- Emergency Response Plan structure
 - Accident vs serious incident response
 - Communication chain during emergency
 - Role of Emergency Control Centre (ECC)
 - Aircraft evacuation coordination
 - Bomb threat handling
 - Media & family assistance protocol
-

MODULE 7: Aircraft Emergency Equipment

- Emergency exits & slides
 - Life rafts & flotation devices
 - ELT & survival equipment
 - Emergency lighting systems
 - First aid kits & medical kits
 - Protective breathing equipment (PBE)
 - Crash axe & crowbar
-

MODULE 8: Dangerous Goods Regulations (DGR)

- ICAO TI / IATA DGR overview
 - Classification of Dangerous Goods
 - Labeling & marking
 - Lithium battery hazards
 - Acceptance & storage procedures
 - Emergency handling of DG incidents
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MODULE 9: Fuel Safety & Refuelling Procedures

- Jet fuel characteristics
 - Refueling bonding & grounding
 - Fuel contamination prevention
 - Fuel spill response
 - Hot refuelling precautions
 - Fuel tank entry precautions
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MODULE 10: Electrical & Maintenance Safety

- Electrical hazard awareness
 - Lock-Out/Tag-Out procedures
 - Hydraulic & pneumatic system safety
 - Composite material handling safety
 - Engine ground run safety
 - Propeller & rotor safety
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MODULE 11: Survival Training

- Ditching procedures
 - Sea survival techniques
 - Desert survival principles
 - Cold weather survival
 - Use of survival kits
 - Crowd control in evacuation
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MODULE 12: First Aid & Medical Emergencies

- CPR & AED usage
 - Basic life support (BLS)
 - Bleeding control
 - Fracture management
 - Smoke inhalation response
 - Handling unconscious persons
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MODULE 13: Security Awareness

- AVSEC basics (ICAO Annex 17)
- Access control procedures
- Airside security protocols
- Suspicious activity reporting

- Cyber security awareness
 - Insider threat awareness
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MODULE 14: Environmental & Occupational Safety

- Hazardous waste disposal
 - Chemical exposure control
 - Noise hazard management
 - Radiation awareness
 - Environmental protection regulations
-

MODULE 15: Practical Emergency Drills (Mandatory)

- Live fire fighting drill
- Aircraft evacuation mock drill
- Fuel spill mock drill
- Emergency response table-top exercise
- First aid practical session

4. Safety Management System Training

MODULE 1: Introduction to Safety & SMS

- Evolution of aviation safety
 - Accident causation models (Reason's Model)
 - ICAO Annex 19 overview
 - Definition and purpose of SMS
 - Difference between QA and SMS
 - Reactive vs Proactive vs Predictive safety
-

MODULE 2: Regulatory Framework & Compliance

- ICAO SARPs on SMS
 - National Civil Aviation Authority (NAA) SMS requirements
 - Part-145 / CAR-145 / FAR 121/145 SMS obligations
 - State Safety Programme (SSP)
 - Enforcement vs Just Culture
 - Regulatory reporting obligations
-

MODULE 3: SMS Framework – Four Pillars

3.1 Safety Policy & Objectives

- Safety policy statement
- Accountable Manager responsibilities
- Safety roles and responsibilities
- Emergency Response Planning (ERP)
- Documentation & SMS manual

3.2 Safety Risk Management (SRM)

- Hazard identification methods
- Risk assessment matrix
- Severity & likelihood classification
- Risk mitigation strategies
- Change management process

3.3 Safety Assurance

- Safety performance indicators (SPIs)
- Safety performance targets (SPTs)
- Internal audits vs safety investigations
- Occurrence reporting systems
- Data collection & trend analysis

3.4 Safety Promotion

- Training & competency
 - Safety communication methods
 - Safety meetings & bulletins
 - Promotion of reporting culture
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MODULE 4: Hazard Identification & Risk Assessment (Advanced)

- Reactive hazard identification
 - Proactive safety surveys
 - Predictive data analysis
 - Bow-Tie risk modelling
 - Root Cause Analysis (RCA)
 - HFACS application
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MODULE 5: Occurrence Reporting & Investigation

- Mandatory Occurrence Reporting (MOR)
 - Voluntary reporting systems
 - Confidential reporting systems
 - Investigation methodology
 - Corrective & preventive action (CAPA)
 - Follow-up & effectiveness review
-

MODULE 6: Just Culture & Safety Culture

- Definition of Just Culture
 - Accountability vs blame
 - Reporting protection principles
 - Human error vs negligence
 - Safety culture maturity models
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MODULE 7: Emergency Response Planning (ERP)

- ERP structure
 - Crisis management team roles
 - Communication chain
 - Coordination with regulators
 - Media handling
 - Post-accident review
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MODULE 8: Human Factors in SMS

- Human performance & limitations
 - Dirty Dozen
 - Communication breakdown
 - Fatigue Risk Management
 - Maintenance Error Management
 - Organisational factors in accidents
-

MODULE 9: Safety Performance Monitoring

- Leading vs lagging indicators
 - Data-driven safety decisions
 - Risk-based oversight
 - Safety dashboards
 - Management review meetings
-

MODULE 10: Change Management

- Organisational change risk
 - Introduction of new aircraft/equipment
 - Staff restructuring risks
 - Temporary procedures risk assessment
 - Safety case preparation
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MODULE 11: SMS Documentation & Record Keeping

- SMS Manual structure
 - Hazard log maintenance
 - Risk register management
 - Safety meeting minutes
 - Regulatory documentation retention
-

MODULE 12: Practical Workshop (Mandatory)

- Hazard identification exercise
 - Risk matrix practical session
 - Incident investigation case study
 - ERP simulation exercise
 - SPI development workshop
-

5. ACAS Training (Airborne Collision Avoidance System)

MODULE 1: Introduction to ACAS

- Evolution of mid-air collision prevention
 - ICAO ACAS mandate
 - Difference between ACAS & ATC separation
 - Overview of ACAS I vs ACAS II
 - TCAS terminology
-

MODULE 2: Regulatory Framework

- ICAO Annex 10 (Aeronautical Telecommunications)
 - ICAO Annex 6 (Operations)
 - National mandates for ACAS II
 - Airspace requirements (RVSM & TCAS)
 - Operational approval requirements
 - MEL dispatch considerations
-

MODULE 3: ACAS System Architecture

- Transponder fundamentals (Mode A/C/S)
 - Interrogation & reply principle
 - TCAS processor unit
 - Directional antenna system
 - Integration with EFIS / PFD / ND
 - Aural warning system
-

MODULE 4: ACAS Operating Principles

- Traffic Advisory (TA) logic
 - Resolution Advisory (RA) logic
 - Time to Closest Point of Approach (CPA)
 - Sensitivity levels
 - Vertical-only resolution concept
 - Coordination between aircraft (RA coordination logic)
-

MODULE 5: TCAS II Version 7.1

- “Adjust Vertical Speed, Adjust” logic
 - Reversal RAs
 - Level-off RA changes
 - Compliance monitoring
 - Differences from Version 7.0
-

MODULE 6: Flight Crew Procedures

- TA response procedures
 - RA response procedures
 - ATC communication phraseology
 - “RA takes priority over ATC” principle
 - Post-RA reporting requirements
 - Handling multiple threats
-

MODULE 7: Abnormal & Failure Conditions

- TCAS failure indications
 - Mode S transponder failures
 - Incorrect altitude reporting
 - Inhibited modes (Take-off/Landing)
 - Nuisance alerts
 - Maintenance logbook entries
-

MODULE 8: Maintenance & Continuing Airworthiness (For AME / 145 Staff)

- LRU components
 - Built-In Test Equipment (BITE)
 - Periodic testing requirements
 - Mode S transponder testing
 - Antenna inspection
 - Configuration control
 - Software version control
 - Troubleshooting procedures
-

MODULE 9: Human Factors & ACAS

- Pilot reaction time
- Startle effect
- Non-compliance consequences

- CRM during RA
 - Case studies of mid-air collisions
 - Lessons learned (e.g., Überlingen accident analysis)
-

MODULE 10: ACAS & Modern CNS/ATM Integration

- ACAS vs ADS-B
 - ACAS X concept (future development)
 - Interaction with RVSM
 - Interaction with autopilot & flight director
 - Integration with modern glass cockpit
-

MODULE 11: Practical / Simulator Training (Mandatory for Flight Crew)

- TA recognition exercise
 - RA compliance maneuver
 - Reversal RA scenario
 - Multiple aircraft conflict scenario
 - Post-RA ATC communication exercise
-

6. TCAS Training (Traffic Alert and Collision Avoidance System)

MODULE 1: Introduction to TCAS

- History of mid-air collisions
 - Evolution from TCAS I to TCAS II
 - ICAO mandate for ACAS/TCAS
 - Purpose and limitations of TCAS
 - TCAS vs ATC separation
-

MODULE 2: Regulatory & Operational Framework

- ICAO Annex 6 operational requirements
 - ICAO Annex 10 technical standards
 - State mandates for TCAS II equipage
 - RVSM airspace requirements
 - MEL dispatch considerations
 - Reporting obligations after RA events
-

MODULE 3: System Architecture & Components

- Mode A/C/S transponder fundamentals
 - TCAS processor unit
 - Directional & omni antennas
 - Integration with EFIS/PFD/ND
 - Audio alert system
 - Data bus integration
-

MODULE 4: TCAS Operating Principles

- Surveillance & tracking logic
 - Traffic Advisory (TA) logic
 - Resolution Advisory (RA) logic
 - Time to Closest Point of Approach (CPA)
 - Sensitivity Levels (SL)
 - Vertical speed calculations
 - RA coordination between aircraft
-

MODULE 5: TCAS II Version 7.1 Enhancements

- “Level Off, Level Off” RA
 - “Adjust Vertical Speed” logic
 - RA reversal procedures
 - RA compliance monitoring
 - Differences between Version 7.0 & 7.1
-

MODULE 6: Flight Crew Procedures (Operational)

- Response to TA
 - Response to RA
 - RA priority over ATC instruction
 - Standard phraseology (“TCAS RA”)
 - Autopilot interaction during RA
 - Post-RA communication & reporting
 - Multiple threat scenarios
-

MODULE 7: Abnormal Operations & Failures

- TCAS fail annunciations
 - Transponder malfunction
 - Incorrect altitude encoding
 - Inhibited modes (Ground / Landing configuration)
 - Nuisance & false alerts
 - Dispatch restrictions
-

MODULE 8: Maintenance & Continuing Airworthiness

- TCAS LRU identification
 - BITE test procedures
 - Mode S testing requirements
 - Periodic inspection requirements
 - Antenna & wiring checks
 - Software version control (7.1 compliance)
 - Troubleshooting flow
-

MODULE 9: Human Factors & CRM in TCAS Events

- Startle & surprise effect
- Reaction time considerations
- CRM during RA events

- Case study: Überlingen mid-air collision
 - Lessons learned from TCAS non-compliance
-

MODULE 10: TCAS & Modern CNS/ATM Integration

- TCAS vs ADS-B
 - Interaction with RVSM operations
 - ACAS X (future development concept)
 - Integration with glass cockpit systems
 - Interaction with autopilot & flight director
-

MODULE 11: Practical / Simulator Training (Mandatory for Flight Crew)

- TA recognition exercise
 - RA compliance maneuver
 - Reversal RA scenario
 - Coordinated RA scenario (two aircraft)
 - Post-event reporting practice
-

7. EWIS Training (Electrical Wiring Interconnection System)

MODULE 1: Introduction to EWIS

- Definition of EWIS
 - Evolution of EWIS regulations (post-accident regulatory changes)
 - Importance of EWIS in airworthiness
 - EWIS vs standard electrical systems
 - Overview of regulatory mandates
-

MODULE 2: Regulatory Framework & Compliance

- ICAO airworthiness obligations
 - EWIS requirements under Part-145 / CAR-145
 - EWIS training levels (Target Groups 1–8 / Level A–C)
 - Continuing Airworthiness Management Organisation (CAMO) responsibilities
 - Documentation & training records
-

MODULE 3: Electrical Fundamentals Refresher

- Basic electrical theory (Voltage, Current, Resistance)
 - AC/DC systems
 - Bonding & grounding
 - EMI/EMC considerations
 - Circuit protection devices
-

MODULE 4: EWIS Components & Identification

- Wire types & construction
 - Insulation materials
 - Connectors & backshells
 - Terminal lugs & splices
 - Clamps & supports
 - Conduits & raceways
 - Shielding & separation
-

MODULE 5: Wiring Degradation & Failure Modes

- Chafing & abrasion
 - Arc tracking
 - Corrosion
 - Overheating
 - Contamination (fluids/dirt)
 - Vibration damage
 - Ageing effects
-

MODULE 6: EWIS Inspection & Zonal Analysis

- Zonal inspection concept
 - Detailed vs General Visual Inspection (GVI)
 - EWIS Inspection Program (EWIS IP)
 - Enhanced Zonal Analysis Procedure (EZAP)
 - Critical zones identification
-

MODULE 7: Installation & Maintenance Practices

- Proper routing & separation
 - Minimum bend radius
 - Clamping intervals
 - Protection against mechanical damage
 - Wire bundle repair
 - Splicing standards
 - Use of approved tools
-

MODULE 8: Human Factors in EWIS

- Maintenance-induced damage
 - FOD impact on wiring
 - Tool accountability
 - Working in confined spaces
 - Error prevention strategies
-

MODULE 9: EWIS & Fuel Tank Safety

- Flammability risks
- Ignition source prevention
- Bonding & shielding requirements

- SFAR 88 / CDCCL concepts
 - Lightning & HIRF protection
-

MODULE 10: Troubleshooting & Testing

- Continuity testing
 - Insulation resistance testing
 - Fault isolation techniques
 - Use of wiring diagrams & IPC
 - BITE systems interaction
-

MODULE 11: Documentation & Configuration Control

- Wiring diagram manuals (WDM)
 - AMM & SRM references
 - CDCCL (Critical Design Configuration Control Limitations)
 - Modification control
 - Record keeping requirements
-

MODULE 12: Practical Training (Mandatory for Level B/C)

- Wire inspection practical
 - Connector assembly & crimping exercise
 - Splice repair demonstration
 - Identification of wiring damage samples
 - Tool usage assessment
-

8. AVSEC Training (Aviation Security)

MODULE 1: Introduction to Aviation Security

- Definition of AVSEC
 - Difference between Safety & Security
 - History of unlawful interference
 - ICAO Annex 17 overview
 - National Civil Aviation Security Programme (NCASP) concept
-

MODULE 2: Regulatory Framework & Legal Provisions

- ICAO Annex 17 & Annex 9
 - State Security Programme (SSP – Security)
 - National security legislation
 - Operator Security Programme (OSP)
 - Airport Security Programme (ASP)
 - Enforcement & penalties
-

MODULE 3: Acts of Unlawful Interference

- Aircraft hijacking
 - Sabotage
 - Bomb threats
 - Hostage situations
 - Cyber threats to aviation
 - Insider threats
-

MODULE 4: Access Control & Airport Security

- Landside vs airside security
 - Airport entry permits
 - ID card system
 - Vehicle access control
 - Restricted Area Pass (RAP)
 - Escort procedures
-

MODULE 5: Passenger & Cabin Baggage Screening

- Screening objectives
 - X-ray interpretation basics
 - Prohibited items recognition
 - Liquid restrictions (LAGs)
 - Secondary screening procedures
 - Behavioral detection awareness
-

MODULE 6: Hold Baggage & Cargo Security

- Hold baggage screening systems
 - Explosive Detection Systems (EDS)
 - Cargo security chain
 - Known consignor concept
 - Catering & stores security
 - Tamper-evident procedures
-

MODULE 7: Aircraft Security Procedures

- Aircraft security search
 - Pre-flight security check
 - Transit security procedures
 - Aircraft guarding
 - Cockpit security measures
-

MODULE 8: Crew Security Training

- Hijack response principles
 - Bomb threat procedures
 - Crew coordination during unlawful interference
 - Communication protocols
 - Post-incident reporting
-

MODULE 9: Security Equipment & Technology

- Walk-through metal detectors
- Hand-held metal detectors
- Explosive trace detection (ETD)
- CCTV systems
- Biometric systems
- Cyber security tools

MODULE 10: Human Factors in AVSEC

- Vigilance & complacency
 - Insider threat awareness
 - Stress management
 - Cultural awareness
 - Communication under threat
-

MODULE 11: Emergency & Contingency Planning

- Airport Emergency Plan (Security aspect)
 - Crisis Management Team
 - Coordination with law enforcement
 - Media handling
 - Family assistance procedures
-

MODULE 12: Security Reporting & Quality Control

- Incident reporting
 - Security audits & inspections
 - Internal quality control programme
 - Corrective action process
 - Confidential reporting systems
-

MODULE 13: Dangerous Goods & AVSEC Interface

- Security risks of dangerous goods
 - Screening of DG shipments
 - Lithium battery risks
 - Coordination with safety department
-

MODULE 14: Practical Training (Mandatory as Applicable)

- X-ray image recognition practice
- Access control simulation
- Aircraft security search exercise
- Bomb threat tabletop exercise
- Security breach drill

9. Fuel Tank Safety Training

MODULE 1: Introduction to Fuel Tank Safety

- Background of fuel tank explosions
 - Regulatory evolution after major accidents
 - Purpose of Fuel Tank Safety (FTS) programme
 - Ignition source prevention philosophy
 - Overview of flammability & risk concepts
-

MODULE 2: Regulatory Framework & Compliance

- ICAO airworthiness obligations
 - SFAR 88 (FAA philosophy)
 - EASA Fuel Tank Safety requirements
 - CAR-145 / Part-145 FTS training requirements
 - CDCCL (Critical Design Configuration Control Limitations)
 - Continuing Airworthiness obligations
-

MODULE 3: Fuel System Design Fundamentals

- Fuel tank construction (wet wing / bladder type)
 - Venting systems
 - Fuel pumps & wiring
 - Fuel quantity indicating systems (FQIS)
 - Inerting systems (NGS/OBIGGS)
 - Bonding & grounding
-

MODULE 4: Flammability & Ignition Sources

- Fuel vapour flammability range
 - Heat sources
 - Electrical arc tracking
 - Static electricity
 - Lightning strike effects
 - Short circuit & wiring degradation
-

MODULE 5: Critical Design Configuration Control Limitations (CDCCL)

- Definition & purpose
 - Maintenance impact
 - Alteration & modification restrictions
 - Documentation control
 - Compliance monitoring
-

MODULE 6: Maintenance & Inspection Practices

- Fuel tank entry procedures
 - Safety precautions before tank entry
 - Wire separation & routing inside tanks
 - Inspection of bonding & shielding
 - Fuel pump replacement precautions
 - Post-maintenance checks
-

MODULE 7: Human Factors in Fuel Tank Safety

- Maintenance-induced ignition risks
 - Tool control inside tanks
 - Contamination hazards
 - Confined space risks
 - Error prevention strategies
-

MODULE 8: EWIS Interface with Fuel Tank Safety

- Wiring degradation impact
 - Separation requirements
 - Clamping standards
 - Shield integrity
 - Inspection intervals
-

MODULE 9: Troubleshooting & Testing

- Insulation resistance testing
 - Bonding continuity checks
 - Fuel pump wiring checks
 - Leak detection procedures
 - Fault isolation techniques
-

MODULE 10: Continuing Airworthiness & Documentation

- Airworthiness Directives (ADs) related to FTS
 - Service Bulletins (SBs)
 - Maintenance Planning Document (MPD) tasks
 - Recording CDCCL compliance
 - Audit & quality oversight
-

MODULE 11: Practical Training (Mandatory for Phase 2 Personnel)

- Fuel tank safety hazard identification
 - Bonding continuity testing demonstration
 - Review of fuel tank wiring damage samples
 - CDCCL compliance review exercise
 - Risk assessment workshop
-

10. Emergency Exit Door Procedure Training

MODULE 1: Introduction to Aircraft Emergency Exits

- Purpose of emergency exits
 - Types of exits (Type A, I, II, III, IV)
 - Certification requirements (90-second evacuation rule)
 - Role of crew in emergency evacuation
-

MODULE 2: Regulatory & Operational Requirements

- ICAO Annex 6 operational standards
 - Cabin crew training mandates
 - Aircraft Flight Manual (AFM) & Cabin Crew Operating Manual (CCOM) references
 - MEL considerations for inoperative exits
 - Operator training & recurrent requirements
-

MODULE 3: Aircraft Door Types & Mechanisms

- Plug-type doors
 - Semi-plug doors
 - Overwing exits
 - Slide-equipped doors
 - Slide-raft systems
 - Automatic vs manual slide deployment
-

MODULE 4: Normal Door Operation (Ground & Flight)

- Arming procedure
 - Disarming procedure
 - Cross-check procedures
 - Door safety checks before departure
 - Communication protocols with cockpit
-

MODULE 5: Emergency Door Operation

- Assessment before opening
- Outside condition evaluation
- Blocked exit procedure
- Manual slide inflation

- Power assist failure handling
 - Evacuation commands & crowd control
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MODULE 6: Slide & Slide-Raft Operation

- Inflation sequence
 - Slide pressure check
 - Detaching slide-raft
 - Ditching configuration
 - Survival equipment in slide-raft
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MODULE 7: Abnormal & Failure Scenarios

- Slide fails to inflate
 - Door jammed
 - Cabin smoke/fire
 - Water landing (ditching)
 - Structural damage near exit
 - Passenger interference
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MODULE 8: Human Factors & CRM in Evacuation

- Startle effect
 - Decision-making under stress
 - Assertive communication
 - Crowd psychology
 - Coordination between cabin & flight crew
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MODULE 9: Ground Handling & Maintenance Awareness

- Safe door opening from outside
 - Jet bridge vs stairs operation
 - Accidental slide deployment prevention
 - Door maintenance safety precautions
 - Warning placards & safety pins
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MODULE 10: Security Considerations

- Unauthorized door opening prevention
 - Door arming during security threats
 - Coordination with AVSEC procedures
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MODULE 11: Practical Training (Mandatory)

- Door trainer practical exercise
- Arming/disarming drill
- Emergency exit operation drill
- Slide deployment demonstration
- Evacuation command practice
- Blocked exit simulation

11. Safety and Security Training For Store Engineering Staff, Cargo Staff, APS Security Staff, Flight Crew and Dispatchers.

MODULE 1: Aviation Regulatory Framework

- ICAO SARPs overview
 - Safety vs Security regulatory structure
 - State Safety Programme (SSP)
 - National Civil Aviation Security Programme (NCASP)
 - Operator & Organisation responsibilities
 - Occurrence reporting obligations
-

MODULE 2: Safety Management System (SMS)

- SMS four pillars (Policy, Risk Management, Assurance, Promotion)
 - Hazard identification
 - Risk assessment matrix
 - Safety reporting systems
 - Just Culture principles
 - Role of each department in SMS
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MODULE 3: Aviation Security (AVSEC) Fundamentals

- ICAO Annex 17 overview
 - Acts of unlawful interference
 - Insider threat awareness
 - Access control procedures
 - ID & restricted area control
 - Reporting suspicious activity
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MODULE 4: Dangerous Goods Awareness (All Departments)

- ICAO TI / IATA DGR overview
- DG classification
- Lithium battery hazards
- Cargo acceptance principles
- Emergency response for DG incidents
- Documentation & declaration

MODULE 5: Occupational Health & Safety (OHS)

- PPE requirements
 - Working at height
 - Confined space safety
 - Fire prevention & firefighting basics
 - First aid awareness
 - Fatigue management
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MODULE 6: Human Factors & CRM

- Human performance limitations
 - Communication errors
 - Team coordination
 - Stress & workload management
 - Decision-making under pressure
 - Safety culture development
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MODULE 7: Emergency Response & Crisis Management

- Emergency Response Plan (ERP) structure
 - Bomb threat procedure
 - Aircraft accident response
 - Coordination with authorities
 - Media handling principles
 - Post-incident documentation
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SPECIALISED MODULES BY FUNCTION

A. STORE ENGINEERING STAFF MODULES

A1: Material Safety & Storage

- Segregation of hazardous materials
- Shelf-life control
- Chemical storage standards
- MSDS awareness
- Tool & equipment storage safety

A2: Airworthiness & Documentation Control

- Traceability of parts
- Certification documents (8130/EASA Form 1 equivalent)
- Unserviceable part segregation
- Suspected unapproved parts (SUP) awareness

B. CARGO STAFF MODULES

B1: Cargo Security & Screening

- Known consignor concept
- Cargo screening methods
- Tamper-evident seals
- Cargo documentation verification

B2: Load Control & Aircraft Safety

- Weight & balance basics
- ULD inspection
- Restraint systems
- Load sheet awareness

C. APS / SECURITY STAFF MODULES

C1: Access Control & Patrol Procedures

- Airside patrol
- Vehicle access inspection
- Escort procedures
- Perimeter security

C2: Screening & Threat Response

- X-ray basics
- Explosive trace detection
- Handling prohibited items
- Coordination with law enforcement

D. FLIGHT CREW MODULES

D1: Operational Safety & Security

- Pre-flight security checks
- Threat & error management (TEM)
- TCAS/ACAS awareness
- RA priority procedures

D2: Unlawful Interference & Threat Response

- Hijack protocol basics
- Communication codes
- Bomb threat checklist
- Crew coordination

E. FLIGHT DISPATCHERS MODULES

E1: Operational Risk Assessment

- Weather & NOTAM risk evaluation
- Route threat assessment
- Security advisories
- Alternate aerodrome risk planning

E2: Emergency Coordination

- In-flight emergency support
 - Security event coordination
 - Communication with ATC & authorities
 - Incident documentation
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MODULE 8: Cyber Security Awareness

- Phishing awareness
 - Operational system protection
 - Data protection principles
 - Reporting cyber incidents
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MODULE 9: Environmental Protection & Sustainability

- Fuel spill control
 - Waste segregation
 - Noise awareness
 - Environmental reporting
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MODULE 10: Practical Drills & Workshops

- Fire drill
 - Bomb threat tabletop exercise
 - Hazard identification workshop
 - Emergency response simulation
 - Cargo DG case study
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