



## ACCEPTABLE AOC FLIGHT CREW AIRCRAFT TYPE-SPECIFIC GROUND TRAINING

### SECTION 1 POLICY & GENERAL INFORMATION

#### 1.1 PURPOSE

The purpose of this advisory circular is to provide specific guidance for the content of an aircraft ground training syllabus for training and qualification of AOC flight crews.

- The guidance in this advisory circular specifically addresses a typical curriculum segment for a turbojet airplane.
- Operators of difference categories and types of aircraft will find it necessary to modify their training modules, elements and events to address their aircraft training requirements.

#### 1.2 STATUS OF THIS AC

This AC is an original issuance.

#### 1.3 BACKGROUND

Each AOC holder is required to have an initial aircraft ground training curriculum for the flight crew that is applicable to—

- 1) Their duties;
- 2) The type of operations conducted; and
- 3) Aircraft type-specific systems and procedures.

#### 1.4 APPLICABILITY

This guidance is applicable to AOC holders and the personnel assigned as flight crew and instructors in commercial air transport operations.

#### 1.5 RELATED REGULATIONS

The following regulations are directly applicable to the guidance contained in this advisory circular—

- PCAR Part 2 – Personnel Licensing
- PCAR Part 8 – Operations of Aircraft
- PCAR Part 9 – AOC Certification & Administration

#### 1.6 RELATED PUBLICATIONS

For further information on this topic, individuals are invited to consult the following publications—

- Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.
- Where a regulation contains the words “prescribed by the Authority,” the AC may be considered to “prescribe” a viable method of compliance, but status of that “prescription” is always “guidance” (never regulation).

- 1) Civil Aviation Authority (CAAP) of the Philippines
  - ◆ AC 09-001, AOC Certification & Administration
- 2) International Civil Aviation Organization (ICAO)
  - ◆ Annex 6, Part I, International Commercial Air Transport – Aeroplanes
  - ◆ Annex 6, Part III, International Commercial Air Transport – Helicopters
- 3) United States Federal Aviation Administration
  - ◆ AC 25.853-1, Flammability Requirements for Aircraft Seat Cushions,

Copies may be obtained from the CAAP Flight Standards Inspectorate Service.

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

Copies may be obtained from the FAA website located at [www.faa.gov](http://www.faa.gov), searching for "Advisory Circulars" and the specific number of the AC.

## 1.7 DEFINITIONS & ACRONYMS

### 1.7.1 DEFINITIONS

The following definitions are used in this advisory circular—

- 1) **AOC Holder.** This term is used to describe a person or entity that has been issued a valid Air Operator Certification for the conduct of commercial air transport.
- 2) **Curriculum.** A complete training agenda specific to an aircraft type, crew member, dispatcher, or other duty position, and a category of training.
- 3) **Curriculum Segment.** The largest subdivision of a curriculum containing broadly related training subjects and activities based on regulatory requirements.
- 4) **Instructor.** This term is used to describe a person authorized by CAAP to conduct instructor activities
- 5) **Module.** Sub-divisions within a curriculum segment, that are characterized as training, checking, or qualification modules comprised of elements and events.—
  - (a) **Training Module.** A subpart of a curriculum segment which constitutes a logical, self-contained unit
  - (b) **Checking & Qualification Module.** An integral part of a qualification curriculum segment containing assessment, proficiency and experience requirements.
  - (c) **Element** - An integral part of a training, checking, or qualification module that is subject oriented.
  - (d) **Event** - An integral part of a training, checking, or qualification module which is task-oriented and requires the use of a specific procedure or procedures.

This list of definitions is applicable in the context of this advisory circular only. Words, such as "instructor" may be found in other publications with a different definition..

Curriculum segments are logical subdivisions of a curriculum which can be separately evaluated and individually approved.

A module contains elements or events which relate to a specific subject.

Within a module, elements and events are presented in subject and/or task listings.

### 1.7.2 ACRONYMS

The following acronyms are used in this advisory circular—

- 1) **AOC** – Air Operator Certificate
- 2) **ATO** – Approved Training Organization
- 3) **CAAP** – Civil Aviation Authority of the Philippines
- 4) **CPT** – Cockpit Procedures Trainer
- 5) **PCAR** – Philippine Civil Aviation Regulations

## SECTION 2 GENERAL AIRCRAFT TRAINING

### 2.1 CURRICULUM SEGMENTS

#### 2.1.1 AIRCRAFT GENERAL OPERATIONAL SUBJECTS: INITIAL

##### 2.1.1.1 Programmed Hours of Instruction

The programmed hours of instruction for this curriculum segment is 16 hours.

##### 2.1.1.2 Objective of This Curriculum Segment

- The trainee will be able to pass an examination of the general operational subjects that are found included as training modules.
- The trainee's demonstrated knowledge and actions will be consistent with policies and procedures provided in this training.

- This is the first of three ground training curriculum segments that make up the training specified by Part 14
- These three combined curriculums segments meet the 120 hours initial requirement for turbojet aircraft.

##### 2.1.1.3 Prerequisite of Entry

The prerequisite required for attending this training are—

- Must be a [AIRLINE] pilot employee
- Enrollment in an initial or requalification training curriculum at [AIRLINE] Airlines

##### 2.1.1.4 Instructor Guides/Lesson Plans

The instructor guides and lesson plans for this curriculum segment will be developed and implemented to present the training at a level which assumes that the student has no previous background in the subjects presented.

#### 2.1.2 GENERAL OPERATIONAL SUBJECTS: CURRENT & QUALIFIED

##### 2.1.2.1 Programmed Hours of Instruction

The programmed hours for this curriculum segment will be 4.0 hours.

##### 2.1.2.2 Objective of this Curriculum Segment

For each pilot to be able to learn the general operational subjects necessary to operate the airplane with a high degree of safety and confidence. Successful completion of this phase of training will prepare the pilot for the oral examination.

##### 2.1.2.3 Prerequisites of Entry

The prerequisite required for attending this training are—

- Must be a [AIRLINE] pilot employee

- Evidence of satisfactory completion of Basic Indoctrination training in the past 12 months at [AIRLINE].
- Evidence of current qualification in an [Aircraft-Specific] aircraft with [AIRLINE].
- Enrollment in an initial or requalification training curriculum at [AIRLINE] Airlines

#### **2.1.2.4 Instructor Guides/Lesson Plans**

The instructor guides and lesson plans for this curriculum segment will be developed and implemented to present the training at a level which assumes that the student has completed the general operational subjects in an initial curriculum at [AIRLINE] or another airline in the subjects presented within the last 12 months

#### **2.1.3 COURSEWARE**

The following courseware will be used or referenced during this curriculum segment—

- Prepared Lesson Plans
- Microsoft Power Point Presentation
- Flight Operations Manual
- [Aircraft-Specific] Standard Operating Procedures Manual
- [Aircraft-Specific] Quick reference Handbook (QRH)
- [Aircraft-Specific] Aircraft Systems Manual
- [Aircraft-Specific] Performance Manual
- [Aircraft-Specific] Minimum Equipment List

#### **2.1.4 INSTRUCTIONAL DELIVERY**

The following delivery methods will be used during this curriculum segment—

- Lectures
- Demonstrations

### **2.2 TRAINING MODULES: GENERAL OPERATIONAL SUBJECTS**

#### **2.2.1 INTRODUCTION TO JET PROPULSION**

- 1) Theory of Jet Propulsion
- 2) Engine Components
- 3) Instrumentation
- 4) Bleed Air

#### **2.2.2 TURBOJET AERODYNAMICS**

- 1) Shock Waves
  - 2) Critical Mach Number
  - 3) Transonic Airflow
  - 4) Mach Buffet/Tuck
  - 5) Overspeed
  - 6) Swept Wing
  - 7) Dutch Roll
  - 8) Supercritical Wing
  - 9) Stalls
  - 10) Compressibility
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- 11) Coffin Corner

### **2.2.3 HIGH ALTITUDE PHYSIOLOGY**

- 1) Carbon Monoxide and the Ozone
- 2) Respiration
- 3) Effects/Symptoms/Causes of Hypoxia, Hyperventilation and other High Altitude Sickness
- 4) Duration of Consciousness without Supplemental Oxygen.
- 5) Effects of Prolonged Use of Oxygen.
- 6) Causes and Effects of Gas Expansion, Gas Bubble Formation, and High Altitude Sickness and Preventative Measures for their Elimination.
- 7) Physical Phenomena and Incidents of Decompression.
- 8) Any other Physiological Aspects of High Altitude Flight Including Vision Changes.

### **2.2.4 HIGH ALTITUDE WEATHER**

- 1) Introduction
- 2) The Tropopause
- 3) The Jetstream
- 4) Clear Air Turbulence

### **2.2.5 ADVERSE WEATHER PRACTICES**

- 1) Recognizing and avoiding severe weather situations
- 2) Escaping from severe weather situations, in case of inadvertent encounters, including low altitude wind shear
- 3) Icing
- 4) Turbulence
- 5) Principles of Frontal Systems
- 6) Heavy Precipitation
- 7) Fog
- 8) Operating in or near thunderstorms (including best penetrating altitudes), turbulent air (including clear air turbulence), icing, hail, and other potentially hazardous meteorological conditions
- 9) Thunderstorms with Associated Windshear and Microburst Phenomena.
- 10) Virga (Dry and Wet microburst)
- 11) Hail
- 12) Low Visibility
- 13) Effects of Contaminated Runways and how that Affects Actual Aircraft Performance
- 14) Windshear Avoidance and Detection
- 15) Operations near Volcanic Ash

### **2.2.6 OPERATIONAL CONTROL/FLIGHT PLANNING**

- 1) Dispatch/Flight Release Procedures
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- 2) Flight Locating
- 3) Fuel Consumption, cruise control and other Related Flight Planning Charts
- 4) Operations and Limitations
- 5) Flight Planning

### **2.2.7 WEIGHT & BALANCE**

- 1) Principles
- 2) Methods of Determining

### **2.2.8 COMMUNICATION & NAVIGATION EQUIPMENT OPERATIONS**

- 1) Company Communications (i.e. Company Frequency, ACARS, ARINC, Delta Radio)
- 2) Normal and Emergency Communication Procedures
- 3) Air Traffic Control Systems, Procedures, Phraseology
- 4) ATC Clearances
- 5) Area Departure and Arrival
- 6) Enroute
- 7) Approach and Landing

### **2.2.9 PERFORMANCE CHARACTERISTICS FOR [AIRCRAFT-SPECIFIC] AIRCRAFT**

- 1) Use of Charts, Tables, Tabulated Data & Other Related Manual Information
- 2) Principles of Aircraft Performance and Limitations
- 3) Principles of Airport Analysis and Limitations
- 4) Takeoff and Landing Weight Determination and Runway Limitations
- 5) Cruise Altitude Determination and Limitations
- 6) Fuel Requirement Determination and Limitations, Fuel Computations and Cruise Control
- 7) Normal, Abnormal & Emergency Performance Problems
- 8) Meteorological & Weight Limiting Performance Factors, such as, Temperature, Pressure, Contaminated Runways, Precipitation, and Climb/Runway Limits
- 9) Inoperative Equipment Performance Limiting factors such as found in the MEL and CDL
- 10) Special Operational Conditions such as High Altitude Airports, Drift Down Requirements
- 11) Standard vs. Non-Standard Engine Failure Profiles

### **2.3 CAAP-APPROVED AFM & AOM**

- 1) Applicability and Description
  - 2) Limitations Section
  - 3) Normal and Abnormal Procedures Section
  - 4) Emergency Procedures Section
  - 5) General Performance Section
  - 6) Appendices and Bulletins
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**2.3.1 LOWER THAN STANDARD TAKEOFF MINIMUMS**

- 1) Rejected Takeoff in a Low Visibility Environment
- 2) Engine Failure at V1 in Low Visibility
- 3) Taxi in Low Visibility Environment with Emphasis on Preventing Runway Incursion
- 4) Critical Areas
- 5) Crew Coordination and Planning

**2.3.2 WINDSHEAR TRAINING**

- 1) Windshear Weather
- 2) Lessons Learned from Windshear Encounters
- 3) Model of Flight Crew Action

**2.3.3 NAVIGATION**

- 1) Use of Nav Aids
- 2) Instrument Approach Procedures
- 3) Visual Cues Prior to and Descent Below DH or MDA

**2.3.4 REDUCED VERTICAL SEPARATION MINIMUM (RVSM) AIRSPACE OPERATIONS**

- 1) Introduction.
- 2) Flight Planning.
- 3) Preflight procedures at the aircraft for each flight.
- 4) Procedures prior to RVSM airspace entry.
- 5) In-flight procedures.
- 6) Post flight procedures.

**SECTION 3 AIRCRAFT-SPECIFIC SYSTEMS TRAINING**

Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown.

**3.1 CURRICULUM SEGMENTS****3.1.1 [AIRCRAFT-SPECIFIC] AIRCRAFT SYSTEMS TRAINING - INITIAL****3.1.1.1 Programmed Hours of Instruction**

The programmed hours for this curriculum segment will be 80 hours.

**3.1.1.2 Objective of This Curriculum Segment**

The trainee will be able to pass an oral examination of the aircraft systems. The trainee's demonstrated knowledge and actions will be consistent with policies and procedures provided in this training.

**3.1.1.3 Prerequisite of Entry**

The prerequisite required for attending this training are—

- Must be a [AIRLINE] pilot employee
  - Enrollment in an initial or requalification training curriculum at [AIRLINE] Airlines
  - Satisfactory completion of Basic Indoctrination curriculum segment
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- Completion of the aircraft general operations subjects curriculum segment

#### **3.1.1.4 Instructor Guides/Lesson Plans**

The instructor guides and lesson plans for this curriculum segment will be developed and implemented to present the training at a level which assumes that the student has no previous background in the subjects.

### **3.1.2 [AIRCRAFT-SPECIFIC] AIRCRAFT SYSTEMS TRAINING - UPGRADE**

#### **3.1.2.1 Programmed Hours of Instruction**

The programmed hours for this curriculum segment will be 24 Hours

#### **3.1.2.2 Objective of This Curriculum Segment**

The trainee will be able to pass an oral examination of the aircraft systems The trainee's demonstrated knowledge and actions will be consistent with policies and procedures provided in this training.

#### **3.1.2.3 Prerequisite of Entry**

The prerequisite required for attending this training are—

- Must be a [AIRLINE] pilot employee
- Enrollment in an initial, upgrade or requalification training curriculum at [AIRLINE] Airlines
- Must be currently qualified in the [Aircraft-Specific] aircraft for commercial air transport operations

#### **3.1.2.4 Instructor Guides/Lesson Plans**

The instructor guides and lesson plans for this curriculum segment will be developed and implemented to present the training at a "review and refresh" level which assumes that the student holds a current qualification in the [Aircraft-Specific] aircraft.

### **3.1.3 [AIRCRAFT-SPECIFIC] AIRCRAFT SYSTEMS TRAINING -RECURRENT**

#### **3.1.3.1 Programmed Hours of Instruction**

The programmed hours for this curriculum segment will be 6 Hours

#### **3.1.3.2 Objective of This Curriculum Segment**

The trainee will be able to pass an oral examination of the aircraft systems The trainee's demonstrated knowledge and actions will be consistent with policies and procedures provided in this training.

#### **3.1.3.3 Prerequisite of Entry**

The prerequisite required for attending this training are—

- Must be a [AIRLINE] pilot employee
- Must be qualified in an [Aircraft-Specific] aircraft
- Must have a current proficiency check for the duty position
- Enrollment in a recurrent training curriculum or a at [AIRLINE] Airlines

#### **3.1.3.4 Instructor Guides/Lesson Plans**

The instructor guides and lesson plans for this curriculum segment will be developed and implemented to present the training at a "review and refresh" level for an individual that is currently qualified for the duty position with [AIRLINE] or another airline presented within the last 12 months

### **3.1.4 COURSEWARE**

The following courseware will be used or referenced during this curriculum segment—

- Prepared Lesson Plans
  - Microsoft Power Point
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- Flight Operations Manual
- [Aircraft-Specific] Standard Operating Procedures Manual
- [Aircraft-Specific] Quick reference Handbook (QRH)
- [Aircraft-Specific] Aircraft Systems Manual
- [Aircraft-Specific] Supplemental Performance Manual
- [Aircraft-Specific] Minimum Equipment List
- Runway Analysis

### 3.1.5 INSTRUCTIONAL DELIVERY

The following delivery methods will be used during this curriculum segment—

- Lecture
- Audio Visuals
- Demonstration
- Cockpit Mock-up
- Computer-Based Training

## 3.2 TRAINING MODULES [AIRCRAFT SYSTEMS]

### 3.2.1 AIRCRAFT-GENERAL

- 1) Aircraft dimensions, turning radius, panel layouts, cockpit and cabin configurations.
- 2) Other major systems and components or appliances of the aircraft.

### 3.2.2 POWERPLANTS

- 1) Basic engine description.
- 2) Engine thrust ratings.
- 3) Engine components such as accessory drives, ignition, oil, fuel control, hydraulic, and bleed air features.

### 3.2.3 ELECTRICAL

- 1) Sources of aircraft electrical power (engine driven generators, APU generator, and external power);
- 2) Electrical buses;
- 3) Circuit breakers;
- 4) Aircraft battery; and
- 5) Standby power systems.

### 3.2.4 HYDRAULIC

- 1) Hydraulic reservoirs, pumps, accumulators; filters, check valves, interconnects and actuators; and
- 2) Other hydraulically operated components.

### 3.2.5 FUEL

- 1) Fuel tanks (location and quantities);
- 2) Engine driven pumps;
- 3) Boost pumps;
- 4) System valves and crossfeeds;
- 5) Quantity indicators; and

- 6) Provisions for fuel jettisoning.

### **3.2.6 PNEUMATIC**

- 1) Bleed air sources (APU or external ground air); and
- 2) Means of routing, venting and controlling bleed air via valves, ducts, chambers, and temperature and pressure limiting devices

### **3.2.7 AIR CONDITIONING & PRESSURIZATION**

- 1) Heaters, air conditioning packs, fans, and other environmental control devices;
- 2) Pressurization system components such as outflow and negative pressure relief valves; and
- 3) Automatic, standby, and manual pressurization controls and annunciators.

## **3.3 FLIGHT CONTROLS**

- 1) Primary controls (yaw, pitch, and roll devices);
- 2) Secondary controls (leading/trailing edge devices, flaps, trim, and damping mechanisms);
- 3) Means of actuation (direct/indirect or fly by wire); and
- 4) Redundancy devices.

### **3.3.1 LANDING GEAR**

- 1) Landing gear extension and retraction mechanism including the operating sequence of struts, doors, and locking devices, and brake and antiskid systems, if applicable;
- 2) Steering (nose or body steering gear);
- 3) Bogie arrangements;
- 4) Air/ground sensor relays; and
- 5) Visual downlock indicators.

### **3.3.2 ICE & RAIN PROTECTION**

- 1) Rain removal systems; and
- 2) Anti-icing and/or de-icing system(s) affecting flight controls, engines, pitot static probes, fluid outlets, cockpit windows, and aircraft structures.

### **3.3.3 EQUIPMENT & FURNISHINGS**

- 1) Exits;
  - 2) Galleys;
  - 3) Water and waste systems;
  - 4) Lavatories;
  - 5) Cargo areas;
  - 6) Crew member and passenger seats;
  - 7) Bulkheads;
  - 8) Seating and/or cargo configurations; and
  - 9) Non-emergency equipment and furnishings.
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**3.3.4 NAVIGATION EQUIPMENT**

- 1) Flight directors;
- 2) Horizontal situation indicator;
- 3) Radio magnetic indicator;
- 4) Navigation receivers (GPS, ADF, VOR, RNAV, Marker Beacon, DME, GPS);
- 5) Inertial systems (INS, IRS);
- 6) Functional displays;
- 7) Fault indications and comparator systems;
- 8) Aircraft transponders;
- 9) Radio altimeters;
- 10) Weather radar; and
- 11) Cathode ray tube or computer generated displays of aircraft position and navigation information.

**3.3.5 AUTO FLIGHT SYSTEM**

- 1) Autopilot;
- 2) Autothrottles;
- 3) Flight director and navigation systems;
- 4) Automatic approach tracking;
- 5) Autoland; and
- 6) Automatic fuel and performance management systems.

**3.3.6 FLIGHT INSTRUMENTS**

- 1) Panel arrangement;
- 2) Flight instruments (attitude indicator, directional gyro, magnetic compass, airspeed indicator, vertical speed indicator, altimeters, standby instruments); and
- 3) Instrument power sources, and instrument sensory sources (e.g., Pitot static pressure).

**3.3.7 DISPLAY SYSTEMS**

- 1) Weather radar; and
- 2) Other CRT displays (e.g., checklist, vertical navigation or longitudinal navigation displays).

**3.3.8 COMMUNICATION EQUIPMENT**

- 1) VHF/HF radios;
  - 2) Audio panels;
  - 3) In-flight interphone and passenger address systems;
  - 4) Voice recorder;
  - 5) Air/ground passive communications systems (ACARS); and
  - 6) Data link system
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**3.3.9 WARNING SYSTEMS**

- 1) Aural, visual, and tactile warning systems (including the character and degree of urgency related to each signal); and
- 2) Warning and caution annunciator systems ( including ground proximity and takeoff warning systems).

**3.3.10 FIRE PROTECTION**

- 1) Fire and overheat sensors, loops, modules, or other means of providing visual and/or aural indications of fire or overheat detection;
- 2) Procedures for the use of fire handles, automatic extinguishing systems and extinguishing agents; and
- 3) Power sources necessary to provide protection for fire and overheat conditions in engines, APU, cargo bay/wheel well, cockpit, cabin and lavatories.

**3.3.11 OXYGEN**

- 1) Passenger, crew, and portable oxygen supply systems;
- 2) Sources of oxygen (gaseous or solid);
- 3) Flow and distribution networks;
- 4) Automatic deployment systems;
- 5) Regulators, pressure levels and gauges; and
- 6) Servicing requirements.

**3.3.12 LIGHTING**

- 1) Cockpit, cabin, and external lighting systems;
- 2) Power sources;
- 3) Switch positions; and
- 4) Spare light bulb locations.

**3.3.13 EMERGENCY EQUIPMENT**

- 1) Fire and oxygen bottles
- 2) First aid kits
- 3) Life rafts and life preservers
- 4) Crash axes
- 5) Emergency exits and lights
- 6) Slides and slide rafts
- 7) Escape straps or handles
- 8) Hatches, ladders and movable stairs

**3.3.14 AUXILIARY POWER UNIT (APU)**

- 1) Electric and bleed air capabilities
  - 2) Interfaces with electrical and pneumatic systems
  - 3) Inlet doors and exhaust ducts
  - 4) Fuel supply
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## SECTION 4 AIRCRAFT-SPECIFIC COCKPIT PREPARATION

Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown, including aircraft systems integration elements and events.

### 4.1 CURRICULUM SEGMENTS

#### 4.1.1 [AIRCRAFT-SPECIFIC] SYSTEMS INTEGRATION TRAINING - INITIAL

##### 4.1.1.1 Programmed Hours of Instruction

The programmed hours for this curriculum segment will be 24 Hours.

##### 4.1.1.2 Objective of This Curriculum Segment

The trainee will be able to pass an oral examination of the aircraft systems. The trainee's demonstrated knowledge and actions will be consistent with policies and procedures provided in this training.

##### 4.1.1.3 Prerequisite of Entry

The prerequisite required for attending this training are—

- Must be a [AIRLINE] pilot employee
- Enrollment in an initial or requalification training curriculum at [AIRLINE] Airlines
- Satisfactory completion of [Aircraft-Specific] Aircraft Systems curriculum segment

##### 4.1.1.4 Instructor Guides/Lesson Plans

The instructor guides and lesson plans for this curriculum segment will be developed and implemented to present the training at a level which assumes that the student has no previous background in the ERJ-170 other than the aircraft systems ground training.

#### 4.1.2 [AIRCRAFT-SPECIFIC] SYSTEM INTEGRATION TRAINING - UPGRADE

##### 4.1.2.1 Programmed Hours of Instruction

The programmed hours for this curriculum segment will be 8.0 Hours

##### 4.1.2.2 Objective of This Curriculum Segment

The trainee will be able to pass an oral examination of the aircraft systems. The trainee's demonstrated knowledge and actions will be consistent with policies and procedures provided in this training.

##### 4.1.2.3 Prerequisite of Entry

The prerequisite required for attending this training are:

- Must be a [AIRLINE] pilot employee
- Enrollment in an initial, upgrade or requalification training curriculum at [AIRLINE] Airlines
- Must be currently qualified in the [Aircraft-Specific] aircraft for commercial air transport operation

##### 4.1.2.4 Instructor Guides/Lesson Plans

The instructor guides and lesson plans for this curriculum segment will be developed and implemented to present the training at a "review and refresh" level which assumes that the student holds a current qualification in the [Aircraft-Specific].

#### 4.1.3 COURSEWARE

The following courseware will be used or referenced during this curriculum segment—

- Prepared Lesson Plans
  - Flight Operations Manual
  - [Aircraft-Specific] Standard Operating Procedures Manual
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- [Aircraft-Specific] Quick reference Handbook (QRH)
- [Aircraft-Specific] Aircraft Systems Manual
- [Aircraft-Specific] Supplemental Performance Manual
- [Aircraft-Specific] Minimum Equipment List

#### **4.1.4 INSTRUCTIONAL DELIVERY**

The following delivery methods will be used during this curriculum segment—

- Lectures
- Demonstrations
- Approved Training Device

### **4.2 TRAINING MODULES: AIRCRAFT SYSTEMS INTERGRATION**

#### **4.2.1 USE OF CHECKLISTS**

- 1) Safety checks
- 2) Cockpit preparation (switch position and checklist flows)
- 3) Checklist callouts and responses
- 4) Checklist sequence.
- 5) Normal flow patterns

#### **4.2.2 NON-NORMAL PROCEDURES**

- 1) Quick Reference Handbook
- 2) Memory Items
- 3) Immediate Action
- 4) Expanded Non-Normal
- 5) Crew Coordination
- 6) Review of each Normal and Emergency Procedure

#### **4.2.3 COMMUNICATIONS**

- 1) VHF
- 2) Audio System
- 3) PA/Interphone
- 4) Cockpit Voice Recorder
- 5) MCDU

#### **4.2.4 DISPLAY SYSTEMS**

- 1) Radar Display
  - 2) Engine Instruments
  - 3) EDS - Electronic Display System
  - 4) System Monitoring/Warning
  - 5) Standby Instruments
  - 6) TCAS Display
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**4.2.5 AUTOFLIGHT/ FLIGHT GUIDANCE**

- 1) Mode Selection
- 2) Flight Director
- 3) Enroute Operation
- 4) Approach Profiles

**4.2.6 FMS SETUP & OPERATION**

- 1) FMS Database Check
- 2) FMS Position Initialization
- 3) Navigation Initialization
- 4) Performance Initialization
- 5) Flight Operations

**4.2.7 CPT 1: FLOWS, CHECKLISTS & QRH PROCEDURES**

- 1) Period Brief
- 2) Safety & Power On Checklist
- 3) Originating/Receiving Flows & Checklist
- 4) Before Start Flows & Checklist
- 5) After Start Flows & Checklist
- 6) Before Takeoff Flows & Checklist
- 7) After Takeoff Flows & Checklist
- 8) Passing 10,000 Feet MSL Flow
- 9) Climbing Through Transition Altitude Flow
- 10) Selected QRH Procedure Review
- 11) Period Debrief

**4.2.8 CPT 2: FLOWS, CHECKLISTS & QRH PROCEDURES**

- 1) Period Brief
- 2) Preliminary Landing Flows & Checklist
- 3) Landing Flows & Checklist
- 4) After Landing Flows & Checklist
- 5) Parking/Securing Flows & Checklist
- 6) Selected QRH Procedure Review
- 7) Period Debrief

**4.2.9 CPT 3: FLOWS, CHECKLISTS & QRH PROCEDURES**

- 1) Period Brief
  - 2) Preliminary Landing Flows and Checklist
  - 3) Landing Flows and Checklist
  - 4) After Landing Flows and Checklist
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- 5) Parking/Securing Flows and Checklist
- 6) Selected QRH Procedure Review
- 7) Period Debrief

#### **4.3 FLIGHT PLANNING**

- 1) Performance limitations (meteorological, weight, and MEL/CDL items);
- 2) Required fuel loads;
- 3) Weather planning (lower than standard takeoff minimums or alternate requirements).

#### **4.4 NAVIGATION SYSTEMS**

- 1) Pre-flight and operation of applicable receivers;
- 2) Onboard navigation systems; and
- 3) Flight plan information input and retrieval.

#### **4.5 AUTOFLIGHT**

Autopilot, autothrust, and flight director systems, including the appropriate procedures, normal and abnormal indications, and annunciators.

#### **4.6 COCKPIT FAMILIARIZATION**

- 1) Activation of aircraft system controls and switches to include normal, abnormal and emergency switches; and
- 2) Control positions and relevant annunciators, lights, or other caution and warning systems.

*End of Advisory Circular*



RAMON S. GUTIERREZ  
Director General

Date of Issue : **23 September 2011**

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