



COMPUTER TRAINING SYSTEMS



FIXED WING
TRAINING

14 CFR PART 135 INDOCTRINATION TRAINING SYLLABUS - FIXED WING

Each Part 135 training program consists of customer-selected subjects from the list below. Each course is a comprehensive learning program covering the listed topics in each area with individual course examinations drawn from all assigned material testing student retention. Subjects include a mixture of interactive tutorials and text-based lessons, culminating in a final exam. Each course also includes administrator access to online record keeping in order to track and monitor individual pilot progress. All subjects are designed to satisfy the initial and recurrent training requirements of 14 CFR 135.293 as well as other aviation-related topics.

14 CFR PART 1-97 AND 49 CFR, PART 830 - FW

Lessons

- 14 CFR Part 91, Subpart A
- 14 CFR Part 91, Subpart F
- 14 CFR Part 91, Subpart G
- 14 CFR Part 91, Subparts C, D, and E
- 14 CFR 91.103 - 153, Subpart B
- 14 CFR 91.155 - 187, Subpart B
- 14 CFR Parts 1, 39, 43, and 47
- 14 CFR Parts 61 and 67
- 14 CFR Parts 95 and 97
- 49 CFR Part 830

14 CFR PART 91 SUBPART F

Lessons

- Part 91 Subpart F

14 CFR PART 110

Lessons

- Definitions

14 CFR PART 119

Lessons

- Subparts A and B
- Subpart C - 119.33-53
- Subpart C - 119.55-69

14 CFR PART 135 - FW

Lessons

- Eligible On-Demand Operations
- Subpart A - General
- Subpart B 135.63-87 - Flight Operations
- Subpart B 135.89-129 - Flight Operations
- Subpart C - Aircraft and Equipment
- Subpart D - Operating Limitations and Weather Requirements
- Subpart E-H - Crew Requirements and Training
- Subpart I - Airplane Performance Operating Limitations

ADS-B OVERVIEW

Tutorial - ADS-B

- Overview and System Description
- ADS-B Operations
- ADS-B Procedures
- ADS-B In Services
- ADS-B In-Trail Procedures
- CAVS
- Human Factors in ADS-B

Lessons

- Overview and System Description
- ADS-B Operations
- ADS-B Procedures
- ADS-B In Services
- ADS-B In-Trail Procedures
- CAVS Using ADS-B In

AERONAUTICAL INFORMATION MANUAL - FW

Lessons

- Chapter 1.1 - Navigational Aids
- Chapter 1.2 - Performance Based Navigation
- Chapter 2 - Aeronautical Lighting and Visual Aids
- Chapter 3 - Airspace
- Chapter 4.1 - ATC Services Available to Pilots and Radio Phraseology
- Chapter 4.2 - Radio Communications
- Chapter 4.3 - Airport Operations
- Chapter 4.4 - ATC Clearances and Aircraft Separation
- Chapter 5.1-5.2 - Air Traffic Procedures
- Chapter 5.3-5.4 - ATC En route and Arrival Procedures
- Chapter 5.6 - National Security
- Chapter 6 - Emergency Procedures
- Chapter 7.1 - Meteorology
- Chapter 7.3-7.6 - Turbulence and Flight Hazards
- Chapter 8 - Medical Facts for Pilots

AERONAV CHARTS

Lessons

- Area Charts
- Departure and Arrival Charts
- Enroute Low Altitude Charts
- Enroute High Altitude Charts
- Approach Charts

AIRSPACE OVERVIEW

Tutorial - Airspace

- Overview
- Class A
- Class B
- Class C
- Class D
- Class E
- Class G
- Special Use Areas
- Other Airspace Areas
- Air Defense Identification Zones
- Charting

Lessons

- Controlled and Uncontrolled Airspace
- Special Use Airspace
- Other Types of Airspace

AVIATION WEATHER THEORY

Tutorial - Aviation Weather Theory

- The Standard Atmosphere
- Moisture
- States of Water
- Cloud Types
- Air Masses
- Fronts
- Turbulence
- Adverse Weather
- Aviation Weather Services

Lessons

- The Standard Atmosphere
- Moisture
- Cloud Types
- Air Masses and Fronts
- Turbulence and Wind Shear
- Adverse Weather – Icing
- Adverse Weather – Thunderstorms
- Adverse Weather – Fog
- Aviation Weather Services

CANADIAN AIM

Lessons

- GEN 1-3, 6 - General Information
- GEN 5 - Terms and Definitions
- AGA 1-5 - Aerodromes
- AGA 6-9 - Aerodromes
- COM 1-3 - Communications
- COM 4-7 - Communications
- MET 1 - Meteorology
- MET 2-5 - Meteorology
- MET 6-12 - Meteorology
- NAT - North Atlantic (NAT) Operations
- SAR - Search and Rescue
- MAP - Aeronautical Charts and Publications
- LRA - Licensing, Registration, and Airworthiness
- AIR 1-2.11 - Airmanship
- AIR 2.12-3.8 - Airmanship
- AIR 3.9-4 - Airmanship

CANADIAN RULES OF THE AIR AND AIR TRAFFIC SERVICES (RACs)

Lessons

- Section 1 - General
- Section 2 - Airspace
- Section 3 - Flight Planning
- Section 4.1-4.2 - Airport Operations
- Section 4.3-4.6 - Airport Operations
- Section 5 - VFR Enroute Procedures
- Section 6 - IFR General
- Section 7 - IFR Departure Procedures
- Section 8 - IFR Enroute Procedures
- Section 9.1-9.19 - IFR Arrival Procedures
- Section 9.20-9.28 - IFR Arrival Procedures
- Section 10 - IFR Holding Procedures
- Section 11 - ATC Special Procedures
- RAC Annex

CFIT AVOIDANCE (FW)

Tutorial - CFIT Avoidance (FW)

- Introduction
- Outside Factors
- Combating CFIT

Lessons

- CFIT 1
- CFIT 2
- Approach and Landing Accident Reduction (ALAR)

CLASSES OF FIRE

Tutorial - Classes of Fire

- General Description
- Anatomy of a Fire
- Classes of Fire
- Types of Fire Extinguishers
- Using a Fire Extinguisher
- Lavatory Fires
- Basic Procedures for All Fires
- Toxic Fumes
- Current Safety Standards

Tutorial - Lithium Battery Fires

- Lithium Battery Fires
- Lessons
- Classes of Fire-1
- Classes of Fire-2
- Lithium Battery Fires

CRM-ADM - Fixed Wing Tutorial - CRM Fixed Wing

- Crew Resource Management
- Authority of the Pilot in Command
- CRM Skills
- Communication Processes
- Building and Maintaining a Flight Team
- Workload and Time Management
- Situational Awareness
- Fatigue: Effects and Reduction Strategies
- Stress: Effects and Reduction Strategies

Tutorial - ADM Fixed Wing

- What is ADM?
- Risk Management
- Operational Pitfalls
- Applying ADM

Tutorial - Case Study

- Case Study

Lessons

- Authority of the PIC
- Communication
- Team Building
- Workload and Time Management
- Situational Awareness
- Fatigue - Effects and Reduction
- Stress - Effects and Reduction
- Aeronautical Decision Making
- Risks and Operational Pitfalls

GPS (FW)

Tutorial - GPS Overview

- GPS System Description
- Availability and Reliability
- GPS Errors
- WAAS and GBAS Augmentation
- GPS NOTAMs, RAIM, and Aeronautical Information
- GPS Operational Overview

Tutorial - GPS Operations

- IFR Operations
- Terminal Operations and Approaches
- WAAS Approaches
- Departure Procedures

Lessons

- GPS Overview
- Terminal Operations
- WAAS

HAZMAT - WILL CARRY OR WILL NOT CARRY

Tutorial - Label Identification

Introduction
Class 1
Class 2
Class 3
Class 4
Class 5
Class 6
Class 7
Class 8
Class 9
Miscellaneous Labels, Placards, and Markings

Tutorial - Security Awareness

Introduction and Regulatory Requirements
Recognizing Security Threats
Responding to Security Threats

Lessons

General Philosophy
Limitations
List of Hazardous Materials
Labeling and Marking
Recognition of Undeclared Hazardous Materials
Storage and Loading Procedures
Pilot's Notification
Provisions for Passenger and Crew
Emergency Procedures
Security Awareness

HIGH ALTITUDE WEATHER AND AERODYNAMICS

Tutorial - High Altitude Aerodynamics

Principles of Mach Flight
Critical Aspects of Mach Flight
Aerodynamics and Performance

Tutorial - High Altitude Weather

The Atmosphere
The Jet Stream
High Altitude Clouds
Clear Air Turbulence
High Altitude Weather Systems
High Altitude Weather Products

Lessons

High Altitude Weather
Aerodynamics

JEPPESEN CHARTS

Lessons

Area Charts
Departure and Arrival Charts
Enroute Low Altitude Charts
Enroute High Altitude Charts
Approach Charts

LAND AND HOLD SHORT OPERATIONS

Tutorial - Land and Hold Short Operations

Introduction
Factors Affecting Landing Distance
LAHSO Requirements
LAHSO Procedures
Pilot-Controller Communications and Airport Markings

Lessons

Land and Hold Short Operations

LOWER THAN STANDARD TAKEOFF MINIMUMS

Lessons

Regulations
RVR Requirements
Use of Charts
Runways and Taxiways
HUD Takeoff Guidance

METAR and TAF

Tutorial - METAR and TAF

What is a METAR?
METAR Elements
METAR Remarks
The TAF - Significant Differences

Lessons

Introduction
METAR Body Elements
METAR Remarks
TAF
Abbreviations and their Meanings

OPTIONAL LESSONS

Lessons

Edible Plants
Human Performance

PERFORMANCE-BASED NAVIGATION (PBN)

Tutorial - PBN Overview

Introduction to Performance-Based Navigation
Aircraft and Operational Approvals
RNAV Operations, U.S. Terminal and En Route Area
RNP Operations, Terminal, En Route, and Approach

Tutorial - RNP APCH and Baro-VNAV

RNP APCH and Baro-VNAV

Tutorial - B-RNAV and P-RNAV

Guidance for B-RNAV and P-RNAV in European Airspace

Tutorial - RNP AR

RNP Procedures with AR

Lessons

PBN Overview (RNP and RNAV)
RNP APCH and Baro-VNAV
B-RNAV and P-RNAV
RNP AR

PHYSIOLOGY AND FIRST AID - FW

Lessons

Decompression Sickness
CPR
AED
First Aid - Bleeding, Wounds, and Burns
First Aid - Poison, Bites, and Stings
First Aid - Serious Illnesses and Injuries
Hyperventilation
Hypoxia
Spatial Disorientation
Trapped Gases

PILOT'S GLOSSARY - FW

Lessons

Pilot's Glossary A-C
Pilot's Glossary D-N
Pilot's Glossary O-W
IFR Only

PRM-SOIA Procedures

Tutorial - PRM-SOIA Procedures

PRM and SOIA Introduction
PRM Procedures
SOIA Procedures

Lessons

PRM-SOIA - General Requirements
PRM Approaches
SOIA Approaches

REDUCED VERTICAL SEPARATION MINIMUM (RVSM)

Tutorial - RVSM

RVSM and Requirements
RVSM Procedures
Turbulence, MWA, Communications, and Contingency Actions
The Effect of RVSM on TCAS

Tutorial - Oceanic Contingency Procedures and SLOP

Oceanic Contingency Procedures and SLOP

Lessons

Reduced Vertical Separation Minimum (RVSM)

RUNWAY INCURSION

Tutorial - Runway Incursion

Introduction
Flight Planning
Ground Operation
Standard Operating Procedures
Airport Lighting
Airport Pavement Markings and Signs
Equipment and Technology

Lessons

Runway Incursion

SINGLE-PILOT RESOURCE MANAGEMENT

Tutorial

What is SRM?
Risk Management for Single-Pilot Operations
Applying SRM

Lessons

Communications
Aeronautical Decision Making
Risk Management
Situational Awareness
Task Management
Fatigue - Effects and Reduction
Stress - Effects and Reduction
Automation Management
CFIT Awareness

SURVIVAL

Lessons

General
Food
Water
Making Fires
Signaling
Desert Survival
Arctic Survival
Survival at Sea
Navigation

TAWS

Tutorial - TAWS

History
Regulations
Required Equipment
Terrain Database
Aircraft Flight Manual Inclusions
Caution and Warning

Lessons

TAWS

TCAS II

Tutorial - TCAS II

History and Development
Basic Concept
System and Traffic Display
Types of RAs
Flight Crew Response
Problem Encounters
Operations
Communication and Reporting
Requirements

Lessons

Communication and Reporting
General Information
Operations
System and Displays
TAs and RAs

WINDSHEAR (FW)

Lessons

Windshear Weather - 1
Windshear Weather - 2
Windshear Encounters - 1
Windshear Encounters - 2
Flight Crew Actions
Windshear Recovery

WINTER OPERATIONS (FW)

Tutorial - Winter Operations

Background and Regulations
In-flight Icing Conditions
Ground Icing Conditions and Deicing
Procedures
Fluid Types and Holdover Tables
Application Guidelines
Runway Contamination
Cold Temperature Restricted Airports

Lessons

Regulations and Definitions
Procedures and Holdover Tables
Effects of Icing on Flight
Contaminated Runways
Cold Temperature Restricted Airports

An **Operations Manual Training Program** can be developed for your specific operations manual and specifications.