



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 SAFETY ACTION PROGRAM (ASAP) OVERVIEW

Tutorial - Aviation Safety Action Program

- ASAP Overview
- ASAP Process
- How to Submit a Report

Lessons

- Aviation Safety Action Program (ASAP) Overview

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

CLASSES OF FIRE AND PORTABLE FIRE EXTINGUISHERS

Tutorial - Portable Fire Extinguishers

- Overview and Classes of Fire
- Types of Fire Extinguishers
- Location and Use of Fire Extinguishers
- Risks and Hazards of Fire

Tutorial - Lithium Battery Fires

- Lithium Battery Fires

Lessons

- Classes of Fire and Types of Extinguishers
- Location, Use, Risks, and Hazards
- Lithium Battery Fires

CONTROLLED FLIGHT INTO TERRAIN AVOIDANCE (CFIT, TAWS, AND ALAR) - (FW)

Tutorial - CFIT and ALAR

- Introduction to CFIT
- Combating CFIT
- Approach and Landing Accident Reduction (ALAR)

Tutorial - TAWS

- Introduction to TAWS
- TAWS Equipment
- Cautions and Warnings
- Databases

Tutorial - Case Study

- Case Study

Lessons

- Controlled Flight into Terrain (CFIT) Approach and Landing Accident Reduction (ALAR)
- Terrain Awareness and Warning System (TAWS)

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

PERFORMANCE-BASED COMMUNICATION AND SURVEILLANCE (PBCS)

Tutorial - ADS-C Overview

ADS-C Overview

Tutorial - CPDLC - U.S. Domestic Operations

CPDLC - U.S. Domestic Operations

Tutorial - CPDLC Overview

CPDLC Overview

Tutorial - PBCS Overview

PBCS Overview, Approvals, and Authorizations

Lessons

PBCS

CPDLC - Domestic Operations

CPDLC - Oceanic & Remote

ADS-C

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 - Single-Pilot Resource

Management

- 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

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 Airports

Lessons

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

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