



## 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

## **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

## **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

## **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)

## **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

## **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.