



## COMPUTER TRAINING SYSTEMS



FIXED WING  
**TRAINING**

### 14 CFR PART 125 INDOCTRINATION TRAINING SYLLABUS

Each Part 125 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 125.287 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, Subpart C, D, and E
- 14 CFR Part 91.103-153, Subpart B
- 14 CFR Part 91.155-187, Subpart B
- 14 CFR Part 1, 39, 43, and 47
- 14 CFR Parts 61 and 67
- 14 CFR Parts 95 and 97
- 49 CFR Part 830

#### **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 125**

##### **Lessons**

- Subpart A-D - Certification Rules and Requirements
- Subpart C-E - Manual, Airplane, and Airworthiness Requirements
- Subpart F - Instrument and Equipment Requirements
- Subpart G-I - Maintenance and Crewmember Requirements
- Subpart J - Flight Operations
- Subpart K-L - Flight Release Rules and Records

#### **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 - FW**

What is ADM?  
Risk Management  
Operational Pitfalls  
Applying ADM

#### **Tutorial - Case Study**

Case Study

#### **Lessons**

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

## **FIXED WING WINDSHEAR**

### **Lessons**

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

## **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

## **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

## **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

## **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

## **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)

## ***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***

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

## ***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.