



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

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 - 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

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

- 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 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.