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

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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 - 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

ELECTRONIC FLIGHT BAG (EFB)
Tutorial - Electronic Flight Bag (EFB)
- Introduction to EFBs
- Operation of the EFB
- Abnormal and Emergency Procedures

Lessons
- Electronic Flight Bag (EFB)

FIXED WING WINDSHEAR
Lessons
- Windshear Weather - 1
- Windshear Weather - 2
- Windshear Encounters - 1
- Windshear Encounters - 2
- Flight Crew Actions
- Windshear Recovery

FUNDAMENTALS OF INSTRUCTION
Tutorial - Duties, Functions, and Responsibilites
- Duties, Functions, and Responsibilities
- Instruction and Evaluation
- Teaching Risk Management
- Aircraft Procedures and Corrective Actions

Tutorial - Fundamental Principles of Instruction
- Human Behavior
- Teaching Methods
- Learning Process
- Assessment and Critique
- Risk Management

Tutorial - Case Study
- Case Study

Lessons
- Duties, Functions, and Responsibilities
- Fundamental Principles of Instruction

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 - Introduction to High-Altitude Flight
- The High-Altitude Flight Environment
- Flight Planning and Navigation
- High-Altitude Emergencies

Tutorial - Physiological Aspects of High-Altitude Flight
- Respiration and Hypoxia
- Trapped Gas and Decompression Sickness

Tutorial - High-Altitude Mach Flight
- High-Altitude Aerodynamics and Performance

Lessons
- High-Altitude Weather and Planning
- High-Altitude Emergencies
- Physiological Aspects of High-Altitude Flight
- Mach Flight

INTRODUCTION TO SAFETY MANAGEMENT SYSTEM (SMS)
Tutorial - SMS
- SMS Fundamentals
- Safety Culture: Theory and Practice
- Safety Policy and Objectives
- Safety Risk Management
- Safety Assurance
- Safety Training and Promotion

Lessons
- SMS Fundamentals

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

MINIMUM EQUIPMENT LIST (MEL)
Tutorial - Minimum Equipment List (MEL)
- MEL Overview
- MEL Contents
- MEL Procedures

Lessons
- Minimum Equipment List (MEL)

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 Contigency 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

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.

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