COMPUTER TRAINING SYSTEMS

HELICOPTER TRAINING

IFR HELICOPTER INDOCTRINATION TRAINING SYLLABUS

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 - RW IFR
Lessons
- 14 CFR Part 91, Subpart A
- 14 CFR Part 91, Subparts C, D, and E
- 14 CFR Part 91.105-153, Subpart B
- 14 CFR Part 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 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 - RW IFR
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 L - Helicopter Air Ambulance Requirements

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 - RW IFR
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
- Chapter 10 - Helicopter Operations

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 - Basic Weather Principles
- The Atmosphere
- Pressure and Altimetry
- Moisture
- Wind
- Air Masses and Fronts
- Clouds

Tutorial - Adverse Weather Phenomena
- Adverse Wind
- Turbulence
- Icing
- Obstructions to Visibility
- Powerful Storm Systems

Tutorial - Recognizing and Avoiding Adverse Weather
- Preflight Planning
- Inflight Weather Avoidance Resources
- Weather Avoidance Strategies

Lessons
- Basic Weather Principles
- Winds, Air Masses, and Fronts
- Clouds and Fog
- Adverse Winds and Turbulence
- Icing and Visibility Obstructions
- Storm Systems
- Preflight Planning and Weather Resources
- Adverse Weather Avoidance

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) - (RW)
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 - Rotor Wing
Tutorial - CRM - Rotor Wing
- Crew Resource Management
- Authority of the PIC
- 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 - Rotor Wing
- 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
- Risk and Operational Pitfalls
- Threat and Error Management

FLAT-LIGHT, WHITEOUT, AND BROWNOUT CONDITIONS
Tutorial - Flat-light, Whiteout, and Brownout Conditions
- Overview
- Avoiding and Responding

Lessons
- Overview
- Avoiding and Responding

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)

FUNDAMENTALS OF INSTRUCTION
Tutorial - Duties, Functions, and Responsibilities
- 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 (RW IFR-VFR)
Tutorial - GPS Overview
- GPS System Description
- Availability and Reliability
- GPS Errors
- WAAS and GBAS Augmentation
- GPS NOTAMs and Aeronautical Information
- GPS Operational Overview

Tutorial - GPS Operations
- Inadvertent IMC
- IFR Operations
- Terminal Operations and Approaches
- WAAS Approaches
- Departure Procedures

Tutorial - Non-Part 97 Procedures
- Non-Part 97 Procedures

Lessons
- GPS Overview
- Terminal Operations
- WAAS
- Non-Part 97 Approaches

HAA OPERATIONS
Lessons
- HAA Operations

HAZMAT WILL CARRY OR WILL NOT CARRY - FLIGHT CREW AND LOAD PLANNERS
Tutorial - Hazardous Materials Awareness
- General Philosophy
- Limitations
- Labels and Markings
- Recognition of Undeclared Hazardous Materials
- Emergency Procedures
- Hazardous Materials Incident and Discrepancy Reporting

Tutorial - Provisions for Passengers and Crew
- Provisions for Passengers and Crew

Tutorial - List of Hazardous Materials
- List of Hazardous Materials

Tutorial - Storage and Loading Procedures
- Storage and Loading
- Information to the Pilot in Command

Tutorial - Security Awareness
- Introduction and Regulatory Requirements
- Recognizing and Preventing Security Threats
- Responding to Security Threats

Tutorial - Loading Procedures Walk-Through
- Loading Procedures Walk-Through

Lessons
- General Philosophy
- Limitations
- Labeling and Marking
- Recognition of Undeclared Hazardous Materials
- Emergency Procedures
- Hazardous Materials Incident and Discrepancy Reporting
- Provisions for Passenger and Crew
- List of Hazardous Materials
- Storage and Loading Procedures
- Pilot's Notification
- Security Awareness

HELICOPTER AERODYNAMICS
Lessons
- Aerodynamics Lessons
- Hazards of Helicopter Flight

HELICOPTER EXTERNAL LIGHTING
Lessons
- Helicopter External Lighting Lessons

JEPPESEN CHARTS
Lessons
- Area Charts
- Departure and Arrival Charts
- Enroute Low Altitude Charts
- Enroute High Altitude Charts
- Approach Charts

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

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

Lessons
- Minimum Equipment List (MEL)

PHYSIOLOGY AND FIRST AID (RW)
Lessons
- CPR
- AED
- First Aid - Bleeding, Wounds, and Burns
- First Aid - Poison, Bites, and Stings
- First Aid - Serious Illnesses and Injuries
- Hyperventilation
- Spatial Disorientation
- Trapped Gases

PILOT'S GLOSSARY - RW IFR
Lessons
- Pilot's Glossary A-C
- Pilot's Glossary D-N
- Pilot's Glossary O-W
- IFR Only
- Helicopter Only

RUNWAY INCURSION AND EXCURSION
Tutorial - Runway Incursions
- Runway Incursions
- Communiation with ATC
- Flight Planning
- Ground Operations

Tutorial - Runway Excursions
- Runway Excursions
- Planning and Communications
- Takeoff Stragtegies and Procedures
- Landing Strategies and Procedures

Tutorial - Airport Lighting, Markings, and Signs
- Airport Lighting
- Airport Pavement Markings
- Airport Signs

Lessons
- Runway Incursion
- Runway Excursion
- Airport Lighting, Markings, and Signs

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SAFETY MANAGEMENT SYSTEM (SMS)
Tutorial - Safety Management Fundamentals
- Introduction to Safety Management Systems
- Accident Theory

Tutorial - Safety Culture
- Safety Culture

Tutorial - Safety Management System Components
- Safety Policy and Objectives
- Safety Risk Management
- Safety Assurance
- Safety Promotion

Tutorial - Internal Evaluation Programs
- Elements of an IEP
- IEP Documentation

Lessons
- Safety Management Fundamentals
- Safety Culture
- Safety Management System Components
- Internal Evaluation Program

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

TRAFFIC ADVISORY SYSTEM (TAS)
Tutorial - Traffic Advisory System
- Introduction to TAS
- Systems and Equipment Description
- Traffic Advisories
- Recommended Actions

Lessons
- TAS Basics
- Multi-Function Display Symbols and Use
- Pilot Actions

WIND SHEAR AND ADVERSE WEATHER - RW
Tutorial - Encountering Adverse Weather
- Adverse Weather Phenomena
- Recognition, Avoidance, and Recovery
- Inadvertent Thunderstorm Penetration

Tutorial - Case Study
- Wind Shear Case Study

Lessons
- Adverse Weather Phenomena
- Recognition, Avoidance, and Recovery
- Inadvertent Thunderstorm Penetration

WINTER OPERATIONS (RW)
Tutorial - Cold Temperature Airports
- Cold Temperature Airports

Tutorial - Winter Operations
- Background and Regulations
- Types of Aircraft Icing
- Helicopters and Winter Operations
- Ground Icing Conditions and Deicing Procedures

Lessons
- Regulations and Definitions
- Effects of Icing on Flights
- Cold Temperature Airports
- Rotor Wing Operations in a Winter Environment

WIRE STRIKE PREVENTION
Tutorial - Wire Strike Prevention
- Wire Strike Prevention Overview
- Utility Infrastructure Charting
- Wire Detection and Strike Prevention

Lessons
- Wire Strike Prevention

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

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