



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

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

BROWNOUT, WHITEOUT, AND FLAT LIGHT CONDITIONS

Tutorial - Brownout, Whiteout, and Flat Light Conditions

Introduction
Terms and Definitions
Enroute Flight
Approach and Landing
Takeoff and Departure
Summary

Lessons

General
Takeoff and Departure
Enroute
Approach and Landing

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 (RW)

Tutorial - CFIT Avoidance (RW)

Introduction
Outside Factors
Combating CFIT

Lessons

Helicopter CFIT Lessons

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 - 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

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

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

HELICOPTER AERODYNAMICS

Lessons

- Aerodynamics Lessons
- Hazards of Helicopter Flight

HELICOPTER EXTERNAL LIGHTING

Lessons

- Helicopter External Lighting Lessons

HELICOPTER WINDSHEAR

Lessons

- Windshear Weather
- Windshear Encounters

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

OPTIONAL LESSONS

Lessons

- Edible Plants
- Human Performance

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

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 - 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

TAWS - Helicopter

Tutorial - TAWS - Helicopter

- History
- Helicopter TAWS Differences
- Required Equipment
- Terrain Database and Presentation
- Caution and Warning

Lessons

- TAWS - Helicopter

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

WINTER OPERATIONS (RW)

Tutorial - Cold Temperature

Restricted Airports

Cold Temperature Restricted 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 Restricted Airports

Rotor Wing Operations in a Winter

Environment

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

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