



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 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) - (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

FLAT-LIGHT, WHITEOUT, AND BROWNOUT CONDITIONS

Tutorial - Flat-light, Whiteout, and Brownout Conditions

- Overview
- Avoiding and Responding

Lessons

- Overview
- Avoiding and Responding

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

JEPPESSEN 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

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

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 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

WINDSHEAR (RW)

Lessons

Windshear Weather

Windshear Encounters

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.