



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

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

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

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

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) 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

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

WINDSHEAR (RW)

Lessons

- Windshear Weather
- Windshear Encounters

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