



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 - 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

Tutorial - Runway Incursion

Introduction
Flight Planning
Ground Operation
Standard Operating Procedures
Airport Lighting
Airport Pavement Markings and Signs
Equipment and Technology

Lessons

Runway Incursion

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