



## 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

## **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

## **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

**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.

**200 W. Douglas, Suite 230 · Wichita, KS 67202 · [www.ctsys.com](http://www.ctsys.com)  
TEL: 316-265-1585 · FAX: 316-265-1642 · EMAIL: [sales@ctsys.com](mailto:sales@ctsys.com)**

**REVISION 2.1**