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 1.1-1.1.10 - Navigational Aids
- Chapter 1.1.11-1.2.3 - Navigational Aids
- Chapter 2 - Aeronautical Lighting and Airport Visual Aids
- Chapter 3 - Airspace
- Chapter 4.1 - Services Available to Pilots
- Chapter 4.2 - Radio Communications
- Chapter 4.3 - Airport Operations
- Chapter 4.4 - Clearances
- Chapter 5.1-5.2 - Preflight and Departure
- Chapter 5.3 - En Route
- Chapter 5.4-5.6 - Approach
- Chapter 6 - Emergency Procedures
- Chapter 7.1-7.2 - Weather and Altimeter Settings
- 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

200 W. Douglas, Suite 230 · Wichita, KS 67202 · www.ctsys.com
TEL: 316-265-1585 · FAX: 316-265-1642 · EMAIL: sales@ctsys.com

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

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.

200 W. Douglas, Suite 230 · Wichita, KS 67202 · www.ctsys.com
TEL: 316-265-1585 · FAX: 316-265-1642 · EMAIL: sales@ctsys.com