

Attachment 11 Unique Pilot Training

_____ will be acting as the chief pilot for USDA-ARS' sUAS Program. _____ has the following FAA airman certificates (_____). In addition to his extensive experience in man aircraft operations, _____ will receive specialized training from Leptron on the operations of the Avenger. This training program includes:

Course #1: Basic Flight Training (Novice – Intermediate)

Duration: 5 Days with Hands-on Flight Training

Course Topics

I. Safety

1. **Airspace**
 - i. Understanding the Various Classes of Airspace
 - ii. How to read Aeronautical Charts
 - iii. Weather Requirements
 - iv. Temporary Flight Restrictions and NOTAMS
 - v. Applicable FARs
2. **Area of Operation**
 - i. Selecting an appropriate area for launching and recovering the aircraft
 - ii. Understanding methods of communicating to air-traffic control and other aircraft potentially in the area of operations
 - iii. Air-traffic awareness
3. **Weather**
 - i. Weather that may affect flight operations
 - ii. Understanding how to read weather reports and forecast
 - iii. Understanding how we may affect aircraft and possible lost link situations
4. **Emergency Procedures**
 - i. Factors to consider in lost link situations
 - ii. Factors to consider in potential airframe failure
 - iii. Methods of the conflicting with potential aircraft, property and persons in the vicinity of operations
 - iv. Emergency procedures for the aircraft

II. Helicopter Aerodynamics

1. Thrust and Airfoils
2. Lift and Dynamics

3. Air Density and flight time
4. System Overview

III. R/C Flight

1. Takeoff, Landing and Shutdowns
2. Maneuvering and positioning and patterns

IV. Flight System Training (Leptron Equipment)

1. Pre-flight, Takeoff, Flight, Landing and Post-Flight check lists and safety management
2. Flight Training with piloting
3. Positioning and Maneuvering
4. Basic Helicopter maintenance, storage and setup
5. Battery maintenance
6. Software 'Black Box' uploads, patches and downloads
7. Photo Gimbal setup and Camera usage

V. Hands On

1. Training exercises with Helicopter trainers
2. All aspects of previous topics in real situations and practical usage with Trainers

VI. Examination : Checkout and Certification

Course #2: Advanced Flight Training (Intermediate – Advanced or Basic Flight Training course)

Duration: 5 Days with Hands-on Flight Training

Course Topics

I. Advanced Safety

1. Airspace Management in the Field
2. Advanced Weather and Situational Awareness
3. Flight Planning and Safety

II. Semi-Stabilized Flight

1. Advanced Maneuvering and positioning
2. Photo management with Autopilot
3. Custom Payload management

III. Field Flights

1. Flights with Pilot in Charge and Safety Pilot
2. Pre-mission planning and setup

3. 4 Different scenarios of field flights
 1. Photo and Video missions
 2. Rapid timed deployment and team skills
 3. Mission Simulations and training settings
 4. Timed operations and goals
4. Failsafe execution and recovery
5. Downloading and customization of missions to and from Helicopter

IV. Helicopter Management

1. Advanced Helicopter maintenance, storage and setup
2. Advanced Trouble shooting

V. Hands On

1. All aspects of previous topics in real situations and practical usage with Trainers

VI. Examination : Checkout and Certification