ELK GROVE POLICE DEPARTMENT
UNMANNED AIRCRAFT SYSTEMS OPERATOR COURSE
COURSE OUTLINE

Purpose

The purpose of this course is to provide first responders and governmental agencies with the knowledge and skills necessary to create and implement an aviation program based on an Unmanned Aircraft System, UAS.

Learning Outcomes

Students who complete this course will have developed the foundational knowledge and basic skills to establish their own UAS Program at their agency. They will gain an understanding of the issues and complexities with managing a UAS Program, including policy and procedures considerations, as well as administration and training issues with maintaining a program. This course will also cover critical contemporary legal matters surrounding UAS technology in law enforcement. Matters such as constitutional, case and statutory laws related to UAS Programs and law enforcement.

Lastly, the student will gain basic operational training in the actual flying of an unmanned aircraft. This course includes day and night time flight operations, indoor/outdoor applications, and operations involving multiple and simultaneous UAS deployments.

Expanded Course Outline

Registration and Introductions

    I.   Purpose of a UAS Program
         A. Establishing the mission of the program
               1.   What's the purpose of your program
               2.   What missions does it seek to perform
               3.   What are your limitations
         B. Obtaining FAA authorization
               1.   Certificate of Authorization
               2.   FAA Part 107 License
               3.   Special Government Interest
         C. Soliciting community support
               1.   Outreach opportunities
               2.   Media support
               3.   Local representative support
               4.   Social media
         D. Building an operational program
               1.   Staffing
               2.   Equipment
               3.   Policies and procedures

II.   Legal/ Liability Issues
    A. Liabilities
            1.   Public privacy concerns
            2.   How laws impact actual application of UAS's
            3.   UAS collision responsibilities
    B. Laws related to UAS Uses
            1.   Case laws
            2.   Constitutional concerns
            3.   Statutory laws

III.   Documentation
    A. Computer software
            1.   UAS GPS recording
    B. Records keeping
            1.   Pilot/ flight/ maintenance logs
            2.   Department activity reporting
            3.   FAA monthly reporting

IV.   Pre/Post Flight Procedures
    A. Importance of checklists
            1.   Mission approved
            2.   Pre-flight equipment
            3.   Scene/ environment check
            4.   Public announcements
            5.   NOTAMS, LAANC, SGI

V.   Basic UAS Operations
    A. General aeronautics related to unmanned aircraft
    B. Basic flying skills development
    C. Human factors
    D. Risk management
    E. Aeronautical decision making

VI.   Resources Management
    A. Aircrews during operations
    B. Equipment
    C. Battery management
            1.   During operations
            2.   Overall for program

VII.   First Person View UAS Operations
    A. Role of the visual observer
    B. Indoor operations
    C. Outdoor operations

VIII.   Nighttime UAS Operations
    A. Physiological factors
    B. Equipment
        1.   Visible illumination
        2.   Thermal imaging

IX.   Multiple UAS Operations
    A. Resource management
        1.   Aircrews
        2.   Aircraft
        3.   Supplies
    B. De-conflicting altitudes
    C. Communication issues

X.   UAS Program Maintenance
    A. Technology trends
        1.   Software updates and logs
        2.   Staying current on new technology changes
    B. Progressive training
        1.   Continual pilot training
        2.   Visual observer training
    C. Mechanical maintenance
        1.   Minor v. major damage
        2.   Maintenance logs

XI.   Course Conclusion
    A. Course summary
    B. Final questions and answers
    C. Final exam
        1.   Written test
        2.   Practical test
    D. Graduation