

## Unmanned Aircraft Systems/Drone Program

Responsible Administrator: EHS Safety Specialist

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**Summary:** This section outlines the policy and procedures related to the Unmanned Aircraft System/Drone Program that is administered through the Environmental Health and Safety (EHS) Department.

1. Program Description .....	1
2. Scope .....	1
3. Definitions .....	1
4. Responsibilities .....	3
5. Program Components .....	5
6. Reporting Requirements .....	7
7. References.....	7

### 1. Procedure Description

UC Irvine Environmental Health and Safety Small Unmanned Aircraft Systems (UAS)/Drone Program constitutes guidelines to be followed when all UC Irvine faculty, staff, students, and affiliates operate a UAS/Drone on campus property. This program establishes minimum performance requirements for safe operation of a small UAS/Drone on UC Irvine property, abides by all Federal Aviation Administration safety regulations, and John Wayne Airport mandatory restrictions.

### 2. Scope

1. This procedure applies to all UC Irvine faculty, students, staff, affiliates, and Non-Affiliates on UC Irvine Property, and details:
  - a. how the [UC Unmanned Aircraft System \(Drone\) Policy](#) (Policy) is implemented at UC Irvine; and
  - b. the minimum requirements for the safe operation of small [Unmanned Aircraft Systems \(UAS\)](#) on UC Irvine Property. UC Irvine is located less than five (5) miles from an airport which makes the UC Irvine campus subject to additional Federal Aviation Administration (FAA) and John Wayne Airport UAS flight restrictions.
2. All UAS flights on UC Irvine Property must:
  - a. Be reviewed and documented, see Procedures below for details;
  - b. Be at or below 100 ft;
  - c. Be at least 50 ft. from buildings; and
  - d. Not fly:
    - o over people
    - o over vehicles
    - o at night or in low visibility weather.
3. UAS cannot be flown in [No Drone Zones](#).
4. **Any new or updated UAS safety regulations established by the FAA or any other applicable local government agency take precedence over this procedure.**

### 3. Definitions

- **Designated Local Authority** – A single-point of contact or committee appointed by the Executive Officers or their designee at an individual University Location to oversee the development, implementation, and enforcement of any University Location-specific UAS related policies and procedures.
- **Executive Officer** – The term “Executive Officer” means any of the UC Irvine Chancellors, Medical Center Chief Executive Officers, Director of Lawrence Berkeley National Laboratory, and Vice President for Agriculture and Natural Resources
- **Federal Aviation Administration (FAA)** – A division of the Department of Transportation that inspects and rates civilian aircraft and pilots, enforces the rules of air safety, and installs and maintains air-navigation and traffic-control facilities.
- **Model Aircraft** – The term “model aircraft” means an unmanned aircraft that is capable of sustained flight in the atmosphere, flown within visual line of sight of the person operating the aircraft, and flown for hobby or recreational purposes.
- **FAA Class C Airspace** – Class C Airspace is generally that airspace from the surface to 4,000 feet above the airport elevation (charted in mean sea level MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control.
- **Recreational Use** – The term “recreational use” or its derivatives, means operations conducted strictly for hobby or recreational purpose. Flights that are commercial in nature, are in furtherance of a business, or incidental to a person’s business, regardless of compensation, are not considered “recreational.”
- **Small Unmanned Aircraft System (SUAS)** – The term “small unmanned aircraft system” means an unmanned aircraft weighing less than 55 lbs. and associated elements that are required to operate safely and efficiently in the national airspace system.
- **Systemwide Designated UAS Authority** – The individual designated by the UCOPEHS Executive Director as authorized to provide oversight for Unmanned Aircraft Systems.
- **University Business** – The term “University Business” means the official activities of a University that contribute to any one of the University’s major functions of teaching, research, patient care, or public service, or to any other non-recreational University purpose.
- **University Location** – The term “University Location” means any property or building that is owned or leased by the University where University Business or activities take place.
- **University Location Address** – The term “University Location Address” means the address which shall appear on the ownership and registration documents for all UAS owned by that University Location.
- **ATC** – Air Traffic Control
- **Autonomous Flight** – UAS operations without human control
- **COA** – Certificate of Authorization
- **Department** – Academic Units of UC Irvine responsible for faculty, staff, and students.
- **Geofence** – Range in which the UAS cannot exceed.
- **Ground Control Station** – Facility for humans or computers to operate UAS
- **Hexicopter** – Copter with six propellers
- **Non-Affiliate** – Any person who is not a student, officer, official volunteer, employee, or emeritus of the University of California or a member of a household authorized to reside in University property. Examples include vendors and visitors.

- **PIC** – Pilot in command
- **Quadcopter** – Copter with four propellers
- **RPAS** – Remotely piloted aircraft system
- **UAS/Drone** – Unmanned aircraft systems; remote controlled pilot-less aircraft.
- **UC Irvine Affiliate** – Vendor that has been contracted to perform services for a UC Irvine entity.
- **UC Irvine Property** – Any University-owned, operated, or leased property including all University grounds and Structures.
- **VLOS** – Visual line of site
- **VO** – Visual observer

#### 4. Responsibilities

1. UC IRVINE Environmental Health and Safety as the Systemwide Designated UAS Authority is responsible for:
  - a. The implementation of the Small Unmanned Aircraft Systems Safety Program to faculty, staff and students, refers all Drone flight requests to the UCOP Drone web application, requests will be submitted and reviewed by EHS.
  - b. Providing UAS regulatory interpretation and assistance with compliance.
  - c. Ensuring Policy compliance with applicable laws and regulations.
  - d. Providing assistance with requests for UAS activities consistent with applicable laws and regulations and Policy requirements, unless a Designated Local Authority has been selected and delegated this task for specific University Locations.
  - e. Providing support in communication with regulatory authorities, and when appropriate, acting on behalf of University faculty and staff as a point of UC Irvine – Policy Unmanned Aircraft System (Drone) Policy 5 of 8 contact to the applicable aviation authority for UAS registration and flight operations.
  - f. Providing a central repository for all applicable regulations and policies, including international, federal, state and local regulations, and University Location-specific policies and other agency policies, as appropriate.
  - g. Maintaining a record of UAS activity covered under this Policy.
  - h. Implementing effective mechanisms for reporting in order to remain in compliance with applicable laws and policies.
  - i. Providing a forum to communicate and share UAS-related information and best practices.
  - j. Coordinating the development of University UAS policies through taskforces/working groups.
  - k. Coordinate schedule with Campus Building Facility Managers for flight locations.
  - l. Oversee post flight reports completed and submitted through the UCOP Drone web application.
  - m. Contact UC Irvine Police Department of all approved UAS/Drone flights on campus. Police department will respond to any and all unauthorized flights.
  - n. Manage correspondences sent to [dronesafety@uci.edu](mailto:dronesafety@uci.edu).
  - o. Oversee any drone related incident reports through the UC Irvine Online Incident Report System and the UCOP Drone web application.
  - p. Coordinate Drone events that may or may not be using airspace.
  - q. Create and oversee online course for all Engineering students to obtain a certificate to fly their course made drones within a secure cage.
  - r. Serve as a liaison to Federal Aviation Administration (FAA) and John Wayne Airport.

## 1. Campus Community and University-owned UAS Procedures

### a. UAS Flights for University Business:

i. **Create Profile:** All faculty, students, and staff must create a profile and submit all UAS information to the Office of the President (UCOP) UC UAS Safety Management System through the [Drone web application](#):

- Select UC Irvine, Irvine and select 'Next'
- Login using your UCnet ID and Password
- Select the Drones icon
  - Select on 'Pilot'
    - Under Certificate Type choose SUAS and Certificate # type: enter certificate number for registered UAS/Drone, save entry.
  - Select on 'Manage Flights'
    - Some information will automatically populate
    - Enter flight information and provide detailed description of flight in the comment box.

ii. **Register UAS:**

- (a) All University owned or fabricated UAS must be registered on the [UC Drones Web App](#)
  - Select UC Irvine, Irvine and select 'Next'
  - Login using your UCnet ID and Password
  - Select the Drones icon
    - Select on 'Manage Aircraft'
      - Enter requested information.
      - Provide manufacturer and model information
      - Provide storage location
      - Faculty and Staff purchased UAS/Drones are considered UC owned, select YES when this question is asked.
      - Search Responsible Person by selecting UC Irvine and search Pilot name.
- (b) All personally owned or fabricated UAS (for example, faculty using a privately owned vehicle for their research) must be registered with Risk Services: [riskmgmt@uci.edu](mailto:riskmgmt@uci.edu). The University's insurance described below only covers personally owned UAS used for UC business if it is reported to and approved by the underwriter (via Risk Services).

iii. **Flight submissions are subject to review** by Environmental Health and Safety and Risk Services and UCOP Center of Excellence Unmanned Aircraft System Safety.

iv. **Insurance and Liability**

UC Irvine has purchased an Unmanned Aircraft Liability Policy for University business flights. This policy has a total of \$5 Mil limit with a \$1 Mil Personal Injury sublimit and \$1 Mil Products/Completed Operations sublimit. Coverage is automatic for UAS's that meet the following criteria:

- Aircraft weight under 55 lbs (at time of takeoff)
- Flight operations are within Line of Sight
- Flight operations are below 400 ft above ground level.
- Flight operations are conducted on behalf and sanctioned by UC Irvine.
- Flight operations are conducted within the United States.

### b. UAS Flights for Personal/Recreational Use:

All faculty, students, and staff flying UAS for personal/recreational are subject to: Part C. 1. a. i.; a. ii. (b); and a. iii above; and the insurance requirements for Non-Affiliates detailed below.

## 2. Non-Affiliates:

- a. Are subject to the UC Unmanned Aircraft System (Drone) Policy and UC Irvine 's implementation of the UC Policy (see [Section V: Procedures, Part A.](#))
- b. Are not covered by the Certificate of Authorization ([COA](#)) that the FAA granted to the University; and
- c. Must meet all the following UC IRVINE Non-Affiliate UAS flight approval requirements:
  - i. Comply with all applicable federal, state, and local laws and regulations regarding the safe use and operation, including:
    - Per FAA regulations, obtain a drone pilot license and registering any and all drones - <https://www.faa.gov/uas/>.
    - Obtain your own flight authorizations from the FAA and John Wayne Airport.
  - ii. Submit a temporary UAS flight request to [dronesafety@uci.edu](mailto:dronesafety@uci.edu) with the following information:
    - contact name
    - contact email
    - purpose of flight(s)
    - name of pilot
    - proposed:
      - UC IRVINE location of flight
      - number of flights
      - flight date(s)
      - flight start time(s)
      - flight end time(s)
  - iii. Provide proof of insurance to UC IRVINE that meets the following requirements:
    - A certificate of Aviation Liability or UAS Liability insurance with a minimum of \$2,000,000 per occurrence/general aggregate (Note: required minimum limits are subject to change) that:
      - Names The Regents of the UC Irvine and its directors, officers, employees, servants and agents (collectively, the "Indemnified Parties" and individually, the "Indemnified Party") as additional insureds, as their respective interests may appear;
      - States that the operator's insurance shall be primary without any right of contribution from any other insurance available to Indemnified Parties;
      - Includes a cross liability or severability of interests among Indemnified Parties, providing that the insurance shall operate in all respects as if a separate policy had been issued covering each party insured;
      - Includes a waiver of subrogation in favor of the Indemnified Parties; and
      - Provides that, in the event of a cancellation or material restrictive change of the policy which would adversely affect the interest of the Indemnified Parties, the insurers agree to provide 30 days prior written notice to The University.
- d. May only proceed with their flight(s) if and when:
  - i. all items under [Section C.2.c](#) above have been completed; and
  - ii. flight approval is received from [dronesafety@uci.edu](mailto:dronesafety@uci.edu).
- e. Must, upon request, present confirmation of flight approval from [dronesafety@uci.edu](mailto:dronesafety@uci.edu) and copies of FAA and John Wayne Airport authorizations.

## 5. Program Components

- All persons seeking to operate a University-Owned UAS, a UAS for University Business, or at University Locations must first submit a completed UAS Request Form to the Designated Local Authority or Systemwide Designated UAS Authority in advance of any UAS activity.
- Registration of all UC-owned UAS must be registered in accordance with all applicable laws, regulations, and requirements.

- Registration documents for UC-owned UAS must be submitted to the Designated Local Authority or Systemwide Designated UAS Authority and must reflect the following ownership data: The Regents of the UC Irvine (University Location Address)
- Registration documents for all UAS used for University Business must be submitted to the Designated Local Authority or Systemwide Designated UAS Authority.
- All Pilots, Ground Station, Ground Crew, Trainee, and Instructors must be registered in UCOP Drone web application.
- All flight requests must be submitted through [UCOP Drone web app](#).
- A post flight report must be submitted within 3 days of flight through [UCOP Drone web app](#) for EHS review. A new drone flight cannot be submitted until previous flight report has been submitted.
- Unmanned aircraft in use at UC Irvine must weigh less than 55 lbs. (25 kg).
- Unmanned aircraft must remain within VLOS (Visual line-of-sight) of the visual observer.
- UC Irvine is in class C controlled airspace. Operations within this airspace are allowed with the required Air Traffic Control permission and EHS approval.
- All incidents must be reported through the Incident Report [UCOP Drone web app](#), and an email notification sent to [dronesafety@uci.edu](mailto:dronesafety@uci.edu), should occur within 24 hours of incident.
- Operators who use UAS within netting or are not using FAA regulated airspace must complete UAS flight request through UCOP Drone web app prior to use.
- Small unmanned aircraft should remain close enough to the remote pilot in command and the person manipulating the flight controls of the small UAS for those people to be capable of seeing the aircraft with vision unaided by any device other than corrective lenses.
- Per FAA regulation, Small unmanned aircraft may not operate over any persons not directly participating in the operation, not under a covered structure, and not inside a covered stationary vehicle.
- Daylight-only operations, or civil twilight (30 minutes before official sunrise to 30 minutes after official sunset, local time) with appropriate anti-collision lighting.
- Must yield right of way to other aircraft.
- May use visual observer (VO) but is not required.
- First-person view camera cannot satisfy “see-and-avoid” requirement but can be used as long as requirement is satisfied in other ways.
- Maximum groundspeed of 100 mph (87 knots).
- UAS must not exceed maximum altitude of 100 feet above ground level (AGL)
- No person may act as a remote pilot in command or VO for more than one unmanned aircraft operation at one time.
- No UAS operations from a moving aircraft.
- No UAS operations from a moving vehicle unless the operation is over a sparsely populated area.
- No UAS should be operated in a careless or reckless manner, including carrying of hazardous materials.

## 6. Reporting Requirements

- Post flight report must be submitted through the [UCOP Drone web app](#) after each flight within 3 days and prior to submitting a new flight request.
- Incidents should also be reported through Environmental Health and Safety Incident Report system [EHS Safety Incident and Safety Concern](#) and [dronesafety@uci.edu](mailto:dronesafety@uci.edu).

## 7. References

UCI links:

- Email EHS and Risk Services – [dronesafety@uci.edu](mailto:dronesafety@uci.edu)
- [Environmental Health and Safety](#) - 949-824-6200
- [UCI Administrative Policies & Procedures Section 903-10 Unmanned Aircraft Systems/Drone Procedures](#)

UCOP Drone links:

- [UCOP Drone Web Application](#)
- [UCOP Center of Excellence website](#)
- [UCOP Campus Regulatory Cheat Sheet](#)

Federal Aviation Administration links:

- [Federal Aviation Administration UAS information](#)
- [Pilot Certificate Exam](#)
- [UAS Registration](#)