Virginia Polytechnic Institute and State University

Operation of Unmanned Aircraft Systems (UAS)

No. 5820

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8/21/2017

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Policy Owner:
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Vice President for Public
Safety

Policy Author: *(Contact Person)*
Andrew Marinik, Executive
Director of Emergency
Management

Affected Parties:
Undergraduate
Graduate Faculty
Staff
Other

1.0 Purpose

The operation of unmanned aircraft systems ("UAS"), or "drones" is regulated by the Federal Aviation Administration ("FAA") and relevant state laws. Virginia Polytechnic Institute and State University (the "university") recognizes that UAS is a rapidly growing industry that is creating unique educational, research and commercial opportunities for faculty, students, and the broader campus community. The university is a leader in research and development of UAS technology and recognizes the broad benefits that the UAS industry offers to workforce development, industry capability, and even social and humanitarian efforts. As such, the university is committed to promoting, supporting, and sustaining university efforts in furtherance of UAS research and development, and the use of UAS for educational and workforce development purposes. The university also recognizes that the unlimited use of UAS on campus may pose significant risks to safety, security, and privacy.

The university establishes the following policy (the "Policy") to enable operation of UAS on campus and university-controlled property in furtherance of the foregoing objectives, while ensuring compliance with its federal and state legal obligations and reducing the risks to safety, security, and privacy on campus and any other university real property.

2.0 Policy

This policy governs (i) the operation of UAS on or over university real property as defined in Section 4.0, (ii) the operation of university-owned UAS, and (iii) the operation of UAS for university-related purposes (each, a "University UAS Operation"; collectively, "University UAS Operations").

Anyone conducting University UAS Operations shall be personally responsible for complying with FAA regulations, state and federal laws, this policy, and all other university policies and procedures.

Any violations of federal, state, and local law or violations of university policies may subject the UAS operator to criminal or civil penalties and/or disciplinary action. Fines or damages incurred by individuals or units that do not comply with this policy will not be paid by the university and will be the responsibility of those persons involved.

A violation of this policy shall be considered unacceptable conduct and subject to disciplinary actions under the appropriate faculty, staff, and student policies, up to and including dismissal.

- University staff and classified employees are subject to disciplinary action as outlined in the [Commonwealth of Virginia Standards of Conduct Policy 1.60.](#)
- University faculty members are subject to disciplinary review as outlined in the [Faculty Handbook](#).
- Hourly and wage employees, including adjunct faculty, are "at will" employees and may be disciplined or dismissed.
- Undergraduate and graduate students are subject to disciplinary actions as outlined in the [Student Code of Conduct](#).

- Third parties that operate UAS in violation of this policy **may be** subject to legal prohibitions regarding physical presence on campus/trespassing and other legal action.

University UAS Operations are subject to the following limitations and requirements:

2.1 Authorization of UAS Operations

2.1.1 Responsible University Entity: UASOC

The UAS Oversight Committee (UASOC) has been established to administer this policy. UASOC membership comprises:

- Executive Director for Emergency Management (or designee), Chair
- Chief of Police and Director for Security (or designee)
- Vice President for Research and Innovation (or designee)
- Executive Vice President and Provost (or designee)
- Faculty member engaged in UAS research and appointed by the Provost
- Director of Risk Management
- Representative of the Mid-Atlantic Aviation Partnership (MAAP)
- Institute for Critical Technology and Applied Science (ICTAS), Director of Facilities
- Associate Vice President for Public Safety
- UAS Safety Officer

2.1.2 Changes to Policy

The UASOC shall be solely responsible for the review and approval of any requested changes to this Policy. The UASOC shall propose to the Associate Vice President for Public Safety appropriate changes to this Policy as needed.

2.1.3 Establishment of Location-Specific Protocols

UASOC will be principally responsible for the review and approval of site-specific protocols (the "Protocols") for the authorization of all University UAS Operations conducted in or on university real property (such as the Blacksburg Campus, Kentland Farms, and other university-controlled properties). If a site-specific Protocol for a university-controlled location has not been established and approved by the UASOC, then the Blacksburg Campus Protocol will be in effect. The UASOC has the sole authority to establish protocols and all proposed site protocols must be submitted to UASOC for approval.

In addition, any proposed changes to established protocols must be submitted to UASOC for approval. UASOC will be responsible for the review, approval and establishment of any protocols or changes to protocols.

2.1.4 UAS Safety Office

The UAS Safety Office, consisting of one or more University UAS Safety Officers, will be charged with the development and administration of the protocols and the review and approval of all University UAS Operation requests or applications made pursuant to the protocols. The UAS Safety Office will manage the UAS Flight Authorization system.

2.1.5 University Authorization: Limitations

This policy, the protocols, and any university authorization of UAS operations pursuant to this policy will not replace or supersede any technical or safety reviews of flight operations (such as reviews relating to aviation safety, qualifications of operators, and feasibility of the operations) as may be required and/or conducted by the FAA.

The university is not responsible for an operator's failure to comply with any reviews or requirements that may be imposed by the FAA. Strict compliance by the operator with FAA requirements is necessary for aviation safety.

2.2 Operations of UAS Owned by the University or Operated by University Personnel for University Purposes that do not Occur on University-Controlled Property

All UAS operations that are conducted utilizing UAS owned by the university, or by university personnel for university-approved purposes that do not occur on university real property must be conducted in accordance with federal regulations, applicable state laws, and applicable local ordinances. Prior university approval for University UAS Operations that do not occur on university real property is not required. The university is not responsible for an operator's failure to comply with any reviews or requirements that may be imposed by the FAA. Strict compliance by the operator with FAA requirements is necessary for aviation safety.

2.3 Permitted Uses for University UAS Operations

The university may authorize the following University UAS Operations pursuant to the policy and applicable protocols:

- Educational or research uses
- Civil or commercial uses
- Public or governmental uses (including the use of UAS in an emergency)
- Hobby or recreational uses (UAS operations limited to designated areas)

All inquiries concerning permitted uses for University UAS Operations should be directed to the UAS Safety Office.

2.3.1 Public Safety Exception

If UAS support is requested to assist public safety organizations in response to an incident on the Virginia Tech main campus, the Executive Director of Emergency Management (or designee), or a shift supervisor with the Virginia Tech Police Department, may authorize emergency flights by qualified, pre-approved pilots, granting a public safety exception to the standard approval process. To qualify for a public safety exception, pilots must hold either a Federal Aviation Administration (FAA) Small UAS Rule (Part 107) Remote Pilot Certificate or FAA Certificate of Waiver of Authorization (COA) flying on behalf of a public safety organization. Virginia Tech Emergency Management maintains a roster of pre-approved pilots.

The UAS Safety Office should be advised of any emergency flights and notification sent to the UAS Safety Officer. A public safety exception will be granted for emergency flights in support of emergency response only; all normal operational flights must follow the standard flight approval process.

2.4 Safety, Security, and Privacy

All University UAS Operations must demonstrate respect for public interests including protection of property and privacy, and commitment to safety. FAA statutes and regulations prohibit conduct that might endanger lives, property, or other aircraft.

In addition to strict adherence with existing laws and regulations, it is imperative that UAS operations are conducted in a manner that is consistent with respect for privacy. Except for photography that may occur in public areas where there is no expectation of privacy, intentional data collection on individuals is prohibited except when prior consent has been obtained and the operator has received Institutional Review Board (IRB) approval.

The use of imaging or other recording technology for aerial surveillance by UAS for the collection, retention, or dissemination of surveillance data or information on individuals, homes, businesses, or property at locations where there is a reasonable expectation of privacy is strictly prohibited unless express written permission is obtained from the individuals or individual property owners.

2.4.1 Appropriate Use and Confidentiality of Data

Collection, use and dissemination of UAS-generated data must be limited to the provisions of the university-approved UAS operation. Protocols for the use, distribution, security, and retention of collected data must comply with applicable university policies. Given that UAS-generated data is transmitted through the internet and other digital communication platforms, UAS operators are expected to know and follow University Policy 7000, Acceptable Use and Administration of Computer and Communication Systems and the Acceptable Use of Information Systems at Virginia Tech.

2.4.2 Export Controls

UAS technologies may be subject to U.S. Export Controls. Any university employee, student, or unit seeking to export UAS or UAS related technology outside of the United States or to foreign nationals (including foreign national students) must comply with university export policies and procedures (e.g. University Policy 13045 Export Control and Sanctions, Research Security, and Industrial Security Compliance Policy, and Office of Sponsored Programs Procedure OSP 10016 Export Control and Sanctions, Research Security, and Industrial Security Compliance Management). All inquiries concerning this section or export controls in general should be directed to the Office of Export and Secure Research Compliance at oesrc@vt.edu.

2.5 Incident Response

2.5.1 Reporting

In the event of an incident, the pilot in command (PIC) will make an initial notification to the Virginia Tech UAS Safety Office (uassafety@vt.edu), 540-231-7484). If there is a critical reportable incident (property damage other than the aircraft or there has been an injury), the UAS Safety Office must be notified within 1 hour of the incident. All other reportable incidents (non-critical) must be reported within 24 hours. Additional information can be found at https://drones.ictas.vt.edu/. The PIC is responsible for all reporting requirements.

The PIC must complete the Virginia Tech UAS Incident Report form and submit to uassafety@vt.edu within 24 hours of the incident. An electronic version of this form and further information can be found at https://drones.ictas.vt.edu/.The UAS Safety Office, in coordination with the Unmanned Aircraft Systems Oversight Committee (UASOC), is the resource that will assist the PIC and involved parties with post-incident information, safety support, and any additional investigation. The UAS Safety Office will also assist in determining if outside reporting to the Federal Aviation Administration (FAA) or the National Transportation Safety Board (NTSB) is required, as well as aiding with that reporting.

2.5.2 Reportable Incident

A UAS reportable incident (critical and non-critical) is defined as any event or occurrence during aircraft operations that results in an aircraft failure, any injury to persons, or any damage to property. This applies to any incident, including operations that are domestic and abroad. It is important to notify the UAS Safety Office (uassafety@vt.edu), 540-231-7484) of any reportable incident as expeditiously as possible to determine if any additional actions are required. The UAS Safety Office should be contacted if there is a question regarding a UAS incident. The Office of Risk Management must be notified if there has been an injury or property damage. For incidents occurring abroad, upon notification pursuant to this procedure, the UAS Safety Office will determine further contacts, notifications, and processes.

Reportable Incidents are defined as:

- Personal injury of any kind;
- Flight control system malfunction or failure;
- Inability of any required flight crewmember to perform normal flight duties as a result of injury or illness;
- Failure of any internal engine component that results in the escape of debris other than out the exhaust path;
- In-flight fire or battery failure;
- Aircraft collision in flight;
- Any damage to the property of others;
- Release of all or a portion of a propeller blade from an aircraft, excluding release caused solely by ground contact;
- Any unanticipated event while in controlled or restricted airspace;
- Partial or total loss of aircraft power;
- Airspace encroachment/penetration;
- Aircraft fly-away;
- Any part of the UAS causes a fire or creates a hazardous condition (e.g., runaway battery);
- Outside interference with the pilot, crew, or direct participants;
- Violations of international, federal, state, local, and/or university policies or regulations.

2.5.3 Immediate Response

In the event of an injury, immediate first aid and notification of First Responders (if necessary) should be completed before any other actions.

 If there are no injuries:

- Verify that all aircraft, control, and communications systems are powered off.
- Secure the project site by stowing any equipment or supplies not needed for the recovery effort.
- Determine if the incident site is on public or private property.
    - If the aircraft is on private property, attempt to identify the landowner from on-site information. Do not proceed on to private property without permission unless any delay would result in greater risk to persons and property.
- Determine if assistance is required to recover the downed aircraft. DO NOT attempt to recover an aircraft in a hazardous location or situation.
- Document the incident and recovery by taking notes, making sketches, taking photographs, and/or segregating the equipment for further review.

2.5.4 Lost Link or Fly Away

In the event of a lost link or fly away, the PIC should evaluate the airspace affected and contact the appropriate controlling agency (i.e. control tower, airport manager, Center, Restricted Area agency, etc.) immediately with details of the flight:

- Name
- Location
- Direction of flight
- Altitude
- Speed
- Flight time remaining

3.0 Procedures

3.1 Authorization

As may be required by a protocol, anyone seeking to conduct a University UAS Operation must submit an application to the UAS Safety Office requesting flight authorization from the UAS Safety Office.

All inquiries concerning University UAS Operations should be submitted to the UAS Safety Office.

3.2 Insurance Requirements

Third parties conducting University UAS Operations shall contact the Office of Risk Management to determine insurance requirements. University-owned UAS' must be registered with the Office of Risk Management.

4.0 Definitions

Third Party: For the purpose of this policy, a third party is any individual or entity other than current university employees and students.

UAS Safety Officer: Plans, implements, and coordinates safety and flight operations in accordance with written regulations, procedures, and policies.

University Real Property: Any location, either permanent or temporary, owned or leased by Virginia Tech, and includes satellite campuses and offices. This includes but is not limited to the buildings, grounds, infrastructure, outdoor spaces and the surrounding perimeters including the parking lots, field locations, classrooms, alternate work or class locations.

Unmanned Aircraft Systems ("UAS"): An unmanned aircraft system is an unmanned aircraft and the equipment necessary for the safe and efficient operation of that aircraft.

5.0 References

UAS Operation Resource Website
https://drones.ictas.vt.edu/

Office of Risk Management Website
https://risk.vt.edu

Virginia Tech, Acceptable Use of Information Systems
http://www.vt.edu/about/acceptable-use

Student Code of Conduct
https://codeofconduct.vt.edu

Virginia Tech, Office of Sponsored Programs Procedure OSP 10016 Export Control and Sanctions, Research Security, and Industrial Security Compliance Management
https://www.research.vt.edu/content/dam/osp_vt_edu/policies/osp-10016-export-controls-and-sanctions.pdf

Virginia Tech, University Policy 7000, Acceptable Use and Administration of Computer and Communication Systems
   http://www.policies.vt.edu/7000.pdf

Virginia Tech, University Policy 13045, Export and Sanctions Compliance Policy
   http://www.policies.vt.edu/13045.pdf

6.0 Approval and Revisions

Approved August 21, 2017, by the University Safety and Security Policy Committee.

Approved August 21, 2017, by the President, Timothy D. Sands.

- Revision 1
  Technical update to add reference to UAV Operation Resource Website

  Approved December 20, 2018 by Vice President for Operations, Sherwood G. Wilson.

- Revision 2
  Added Section 2.5 to describe requirements and resources regarding incident response and reporting.

  Approved March 11, 2019 by the University Safety and Security Policy Committee.
  Approved March 11, 2019 by the President, Timothy D. Sands.

- Revision 3
  Technical update to the UAV Operation Resource Website link and policy owner.

  Approved October 4, 2019 by Senior Vice President and Chief Business Officer, Dwayne Pinkney.

- Revision 4
    - Update to UAS Oversight Committee membership and committee chair.
    - Added Section 2.3.1, Public Safety Exception
    - Technical updates to definitions, and document links and to reflect organizational changes.

  Approved October 25, 2024 by Associate Vice President for Public Safety, Michael Mulhare.