



TULANE UNIVERSITY

**AUTHORIZED SMALL
UNMANNED AIRCRAFT
SYSTEMS (sUAS) POLICY**

September 2017



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I. PURPOSE

The operation of Small Unmanned Aircraft Systems (sUAS), including drones and model aircraft, is regulated by the Federal Aviation Administration (FAA), as well as relevant federal, state and local law. Tulane University (TU) must comply with FAA requirements, federal, state and local applicable laws or regulations regarding sUAS. The FAA indicates that any sUAS operations related to TU activity are considered civil operations, which include activities of commercial businesses, private universities, and non-profit organizations. Inherent risks in the operation of such equipment require additional insurance provisions and policy considerations. In addition to FAA regulations, TU policy may impose additional regulations. Accordingly, Tulane has adopted policies and procedures applicable to all sUAS operations on or over TU property. No recreational use of any sUAS will be permitted by any visitor, TU student, and/or employee at any TU sponsored activity or on any TU property.

II. SCOPE AND APPLICATION

This policy applies to:

1. TU employees operating sUAS in any location as part of their TU employment or as part of TU activities.
2. TU students operating sUAS in any location as part of their TU involvement or as part of any TU activities.
3. The operation by any person of sUAS or model aircraft on or above TU property within Louisiana.
4. The purchase of sUAS with funding through TU, including university accounts, grants, or any other TU affiliated accounts.
5. The hiring for or contracting of any sUAS services on behalf of TU.

III. PROCEDURES

1. Any unauthorized use of sUAS on TU property is strictly prohibited, including official TU activity or recreational activity.
2. All members of the TU community are personally responsible for complying with FAA regulations; state, local, and federal laws; and university policies.
3. Any sUAS not used for teaching, research, or educational purposes will require further review by the Office of Insurance and Risk Management (OIRM).
4. Any TU employee or student wishing to operate a sUAS as part of their TU employment or as part of a TU program or activity have an FAA issued Remote Pilot Certificate with a small UAS rating. All operations must be conducted in accordance with Federal Aviation Regulations and
 - a. Operate under TU policies and procedures.

b. Operate under the most current revision of FAA rules in the Operation and Certification of Small Unmanned Aircraft Systems 14 CFR Parts 21, 43, 61, 91, 101, 107, 119, 133 and 183.

PART 107 sUAS OPERATIONAL REQUIREMENTS AND RESTRICTIONS

- i. Small UAS must weigh less than 55 lbs. (25 kg), including any payload. **While the FAA allows for less than 55 lbs., TU insurance only covers a sUAS up to 10lbs, therefore any sUAS purchase over 10lbs must be approved through the OIRM.**
- ii. Visual line-of-sight (VLOS) operations only; the unmanned aircraft must remain within VLOS of the remote Pilot in Command (PIC) and the person manipulating the flight controls of the sUAS. Alternatively, the sUAS must remain within VLOS of the visual observer, if one is used.
- iii. At all times the sUAS must remain close enough to the remote PIC and the person manipulating the flight controls of the sUAS for those people to be capable of seeing the aircraft with vision unaided by any device other than corrective lenses.
- iv. **Small UAS may not operate over any persons not directly participating in the operation, not under a covered structure, and not inside a covered stationary vehicle.**
- v. Small UAS operations may only take place during daylight, or with appropriate anti-collision lighting during civil twilight (30 minutes before official sunrise to 30 minutes after official sunset, local time)..
- vi. Must yield right of way to other aircraft.
- vii. May use visual observer (VO) but not required.
- viii. First-person view camera cannot satisfy “see-and-avoid” requirement but can be used as long as the requirement is satisfied in other ways.
- ix. Maximum groundspeed of 100 mph (87 knots).
- x. Maximum altitude of 400 feet above ground level (AGL) or, if higher than 400 feet AGL, remain within 400 feet of a structure.
- xi. Minimum flight visibility of 3 statute miles from ground control station.
- xii. Operations in Class B, C, D and E airspace are allowed with the required ATC permission.
- xiii. Operations in Class G airspace are allowed without ATC permission.
- xiv. No person may act as a remote PIC or VO for more than one sUAS operation at one time.
- xv. No operations from a moving aircraft.
- xvi. No operations from a moving vehicle unless the operation is over a sparsely populated area and is not transporting another person’s property for compensation or hire.
- xvii. No careless or reckless operations.
- xviii. No carriage of hazardous materials.
- xix. Requires preflight inspection by the remote PIC to ensure the sUAS is in a condition for safe flight.
- xx. A person may not operate a sUAS or act as a VO or be a direct participant in the operation if he or she knows or has reason to know of any physical or mental condition that would interfere with the safe operation of a sUAS.
- xxi. Foreign-registered sUAS are allowed to operate under part 107 if they satisfy the requirements of part 14 CFR Part 375.

- xxii. External load operations are allowed if the object being carried by the sUAS is securely attached and does not adversely affect the flight characteristics or controllability of the aircraft.
- xxiii. Part 107 does not apply to model aircraft that satisfy all of the criteria specified in section 336 of Public Law 112-95.
- xxiv. The rule codifies the FAA's enforcement authority in part 101 by prohibiting model aircraft operators from endangering the safety of the National Airspace System (NAS).

c. PIC can perform under their existing Section 333 Exemption/Certificate of Authorization (COA) or under Part 107 as their option.

- 5. Each TU employee, applying for a registration of a sUAS with the FAA, is the FAA registrant on behalf of TU and must process their application with the FAA. Use of TU owned sUAS is limited to Louisiana operations only.
- 6. Any TU employee, student, or unit purchasing a sUAS (or the parts to assemble a sUAS), or sUAS services with university funds or funds being disbursed through a university account, or grant funds, must verify the purpose of the sUAS and obtain approval by contacting OIRM in order to confirm appropriate insurance coverage.

IV. INVENTORY AND REGISTRATION FOR TU OWNED sUAS

- 1. TU owned sUAS operated on or above TU property must be registered with Materials Management and must have an inventory control tag obtained from Materials Management.
 - a. The TU inventory of all sUAS consists of:
 - i. Model
 - ii. Serial number
 - iii. FAA registration number
 - iv. TU faculty, staff, or student holding FAA registration number
 - v. Multiple TU faculty, staff, or students that may hold a PIC of the sUAS
 - b. The inventory control tag from Materials Management will require the following information.
 - i. Name of the owner
 - ii. Address of the owner
 - iii. Phone number of the owner
 - iv. FAA registration number of the sUAS

V. REMOTE PILOT CERTIFICATION AND RESPONSIBILITIES

In accordance to FAA regulations:

- 1. To obtain a remote pilot certificate with a sUAS rating, an individual must pass an FAA aeronautical test. If the pilot already holds a Part 61 pilot certificate (other than a student pilot's certificate), they must complete a knowledge test.

2. The certification does not require an individual to attend ground school or to pass a practical skills exam, both of which are required to receive an airman's certificate for sport pilot and above.
3. A person operating a sUAS must either hold a remote pilot certificate with a sUAS rating or be under the direct supervision of a person who holds a remote pilot certificate with a sUAS rating.
4. To qualify for a remote pilot certificate with a sUAS rating, a person must:
 - a. Demonstrate aeronautical knowledge by either:
 - i. Passing an initial aeronautical knowledge test at an FAA-approved knowledge testing center; or
 - ii. Passed a recurrent aeronautical knowledge test covering the areas of knowledge specified in § 107.73(b); or
 - iii. Hold a part 61 pilot certificate (other than student pilot), have completed a flight review within the previous 24 months, and complete a sUAS online training course provided by the FAA.
 - b. Be vetted by the Transportation Security Administration.
 - c. Be at least 16 years old.
 - d. Be able to read, speak, write, and understand English.
 - e. Not know or have reason to know that he or she has a physical or mental condition that would interfere with the safe operation of a sUAS.
5. Part 61 pilot certificate holders may obtain a temporary remote pilot certificate immediately upon submission of their application for a permanent certificate.
6. Other applicants will obtain a temporary certificate upon successful completion of TSA security vetting. The FAA issues a temporary remote pilot certificate within 10 business days after receiving a completed remote pilot certificate application.
7. Until international standards are developed, foreign-certified sUAS pilots will be required to obtain an FAA-issued remote PIC with a sUAS rating.
8. A remote PIC must notify TUPD if any accident occurs and comply with the following:
 - a. Make available to the FAA, upon request, the sUAS for inspection or testing, and any associated documents/records required to be kept under the rule.
 - b. Report all accidents involving any TU owned sUAS to TUPD.
 - c. Report to the FAA within 10 days of any operation that results in at least serious injury, loss of consciousness, or property damage of at least \$500 (other than to the sUAS itself) if they involve a TU owned sUAS. An acknowledgement form is required from the PIC, so they understand their obligation to report any incident.
 - d. All bird strikes are reportable to the National Transportation Safety Board (NTSB). The report must include the bird remains for identification purposes. Refer to <http://wildlife.faa.gov/strikenew.aspx> for instructions on how to collect the bird remains and submit the required report.
9. A remote PIC may deviate from the requirements of this rule in response to an inflight emergency.
10. FAA airworthiness certification is not required under aircraft. However, the remote PIC must conduct a preflight check of the sUAS to ensure that it is in a condition for safe operation.
11. The remote PIC must be free of any alcohol and/or controlled substance eight (8) hours prior to flying a sUAS. The remote PIC cannot operate a sUAS under the effects of alcohol or drugs.
12. The remote PIC is required to carry the flight plan and the FAA remote pilot certification card when operating a sUAS for TU sponsored activity.

VI. SAFETY MANAGEMENT FOR sUAS USE

1. Responsible faculty, staff, visitors, and contractors using sUAS and their designated operators/PICs/VO must always keep safety in mind, particularly the risk of injury to people.
2. The risk of property damage must be considered and minimized by following safety procedures at all times.
3. Remote PICs must be aware of potential failure modes for their sUAS (battery failure, weather conditions, control signal loss etc.) and plan accordingly minimize the risk to persons and property on the ground and other aircraft.
4. Remote PICs must ensure the sUAS and associated equipment are in a condition for safe operation. Pre-flight checks must include verification that built-in safety features (such as lost-signal return and kill switches) are working properly.
5. Remote PICs must establish/keep detailed and thorough checklists for all necessary preflight/flight/post flight procedures and highlight important safety events (such as arming motors). All checklist must contain the minimal requirements as mandated by the FAA, however, this does not prohibit any department from being more restrictive with their checklist, including the manufacturer's checklist.
6. Where applicable, remote PICs must place safety barriers around, or visual indicators of, any areas of potential danger when sUAS are being tested or are in use.
7. Remote PICs must ensure detailed/thorough training of all system operators and all parties involved in the flight, such as the flight crew.
8. Biannual competencies must be completed through TU and all operators must stay abreast of any FAA updates. Minimal competencies are required as dictated by the FAA.

VII. APPROPRIATE / PROHIBITED USES AND SANCTIONS

1. Without specific permission from the OIRM, there will be no use of sUAS indoors on TU property for any TU sponsored activity.
2. **The use of a sUAS for hobby or recreational use on or above university property is not permitted.**
3. In operating a sUAS for purposes of recording or transmitting visual images, operators must take all reasonable measures to avoid violations of areas in which one would normally enjoy a reasonable expectation of privacy. This would include areas that cannot be viewed from a public vantage point or are not knowingly exposed to the general public.”¹
4. Small UAS must not fly over private property or be used to take photos or videos of persons or property without the express written permission of TU, the property owner and/or the persons involved. This consent will allow inspection of the design/build projects, and other private property locations affiliated with TU.
5. Small UAS must not be flown over people not directly involved in flight operations, not under a covered structure, and not inside a covered stationary vehicle.
6. Small UAS may not be operated in populated areas or near large groups of people, (such as sporting events, concerts, festivals). They may not be flown anywhere on the TU uptown campus on football game days. The FAA prohibits all flight activity within three (3) nautical miles and up to 3,000 feet above ground level (AGL) of a sporting event stadium having a seating capacity greater than 30,000 people one hour prior to an NCAA event through one hour after conclusion. See the specific temporary flight rules (TFR) for more information about restrictions around sporting events. (http://tfr.faa.gov/save_pages/detail_4_3621.html)

¹ *Katz v. U.S.*, 389 U.S. 347, 351 (1967).

7. Any violations of TU policies by an individual will be subject to applicable TU policies and procedures, which may include disciplinary actions and/or Student Code of Conduct hearings up to and including termination from the university.
8. Legal prohibitions regarding physical presence on campus/trespassing and other legal action may also be pursued against third parties that operate sUAS in violation of this policy.
9. All fines and/or damages incurred by individuals or units that do not comply with this policy, FAA regulations, or applicable federal state or local laws will not be paid by TU and will be the sole responsibility of those persons involved.
10. Effective August 1, 2016, La. R.S. 14:337 restricts the intentional use of sUAS to conduct surveillance of, gather evidence or collect information about, or photographically or electronically record schools or school property, petroleum and alumina refineries, chemical and rubber manufacturing facilities, and nuclear power electric generation facilities without the prior written consent of the owner of the facility. It also prohibits the intentional use of sUAS over the grounds of a state or local jail, prison, or other correctional facility without the express written consent of the person in charge of that state or local jail, prison, or other correctional facility. However, this statute does not apply to: “(1) Any person operating an sUAS in compliance with federal law or FAA authorization or regulations or to any person engaged in agricultural commercial operations as defined in R.S. 3:41. (2) **The operation of a sUAS by institutions of higher education conducting research, extension, and teaching programs in association with university sanctioned initiatives.**”
11. La. R.S. 14:63 includes sUAS operation in criminal trespassing laws. As a result, it is unlawful to operate a sUAS on the property of another with the intent to conduct surveillance of the property or of any individual lawfully on the property without express, legal, or implied authorization of the property owner. This statute does not apply to any person operating a sUAS in compliance with federal law or FAA regulations or authorization. Further, exceptions are granted for law enforcement, emergency personnel, certain government employees, those authorized by a court of law to enter or remain on immovable property, and any person exercising the right of passage to an enclosed estate, as otherwise provided by law. There are also limited exceptions for land surveyors, state contractors, deliverymen, and others.
12. Per La. R.S. 3:41-48, registration with the Louisiana Department of Agriculture & Forestry is required for sUAS commercial agricultural use. Commercial agricultural use includes agricultural research, which extends to certain animals and farm equipment.
13. Small UAS may not be flown on or above TU property without permission of the Tulane Police Department (TUPD) three (3) weeks prior to the use of the sUAS. The PIC must provide the Student Acknowledgement Form(s) and the TU flight plan which includes the date/time, purpose, and length of sUAS operations, as well as the area of the campus where the sUAS will be used. The TU flight plan must contain all minimal requirements mandated by the FAA.
14. TU holds the right to immediately terminate the operation of a sUAS if it creates any type of electronic interference, poses a hazard to sensitive campus equipment, interferes with any TU activity, or poses a threat of bodily injury or damages.
15. No person may operate a sUAS in a manner that interferes with operations and traffic patterns at any airport, heliport, or seaplane base.²
16. The use of any TU sUAS by any FAA registrant/operator for personal use is strictly prohibited.
17. Any fines or violations received as a result of operations of a TU sponsored owned sUAS is the responsibility of the FAA registrant.

² 14 C.F.R. §107.43 (2016).

VIII. THIRD PARTY USE

1. Third party operators should submit the standard Facility Use Request required to hold events or reserve TU property when testing or flying a sUAS on TU property. The form is available through the TU website. <https://facilityrequest.tulane.edu/>.
2. Any third party wishing to use a sUAS or model aircraft over TU property or for a TU sponsored activity must first receive approval from OIRM to confirm appropriate insurance coverage.
3. Third parties planning to use a sUAS must also provide in writing proof of FAA certification, Part 107, and/or Section 333 or COA, if applicable³
4. The third party must also provide proof of aviation insurance to the OIRM that names the university as an additional insured.
5. The third party is required to submit a flight plan to the OIRM and carry the flight plan along with the FAA remote pilot certification card when operating a sUAS for TU sponsored activity or on any TU facilities.

IX. STUDENT USE OF sUAS

1. No recreational use is permitted by students for any sUAS activity on TU property or for any TU sponsored activity.
2. Per the 14 CFR Part 107, it is required that all remote PICs hold a remote pilot certificate with a sUAS rating or be under the direct supervision of a person who does hold such a certificate.
3. Therefore, a TU student may operate a TU owned sUAS without the direct supervision of a TU employee, if they specifically hold a remote pilot certificate with a sUAS rating. However, the TU student may only do so for TU activity, provided the activity has been approved by the FAA registrant of the sUAS in writing.
4. Any TU student participating in the operation of or activity related to a sUAS must be at least 16 years of age.
5. Any TU student involved with the use of sUAS for TU activities will be required to sign an acknowledgement form stating they understand all applicable FAA regulations and will comply with all federal, state, and local laws, as well as all TU policies and procedures as they relate to the use of sUAS.

X. RECORDKEEPING

1. FAA records must be kept for all TU sUAS activity in association with university sanctioned initiatives.
2. The TU department (and employee) that owns the TU sUAS is responsible for maintaining all records, including any electronic records, for the sUAS activity to include the following:

³ A UAS may be governed by a 333 Exemption which is a FAA exemption based on Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA) and grants the Secretary of Transportation the authority to determine whether an airworthiness certificate is required for a UAS to operate safely in the National Airspace System. This exemption was effective prior to the provisions of Part 107, effective August 29, 2016 of the Operation and Certification of Small Unmanned Aircraft Systems 14 CFR.

- a) Flight logs must contain:
 - i. PIC of the sUAS and all parties involved in the flight
 - ii. Date and time of sUAS flight
 - iii. Length of flight
 - iv. Inventory records including FAA registration number
 - v. Pre-flight, in flight, and post flight check list completed
 - vi. Purpose of the flight, including course or program
- b) Registration records
- c) Battery logs
- d) Maintenance logs

XI. TRAINING

1. The FAA registrant will be individually responsible for all training associated with becoming a remote PIC with a sUAS rating for the use of any TU owned sUAS. Self-study of the FAA regulations and guidelines is acceptable.
2. The FAA registrant is responsible for ensuring all of their participants have completed the on-line training through the Tulane Training Wave before they can participate in any TU sponsored sUAS activities and/or operate any TU owned or sponsored sUAS.

XII. DEFINITIONS

1. **Covered Structure** - A structure with a covering that is capable of protecting a person from a falling sUAS.
2. **Directly Participating in Operation**- “Specific personnel that the remote pilot in command has deemed to be involved with the flight operation of the small unmanned aircraft. These include the remote pilot in command, the person manipulating the controls of the sUAS (if other than the remote pilot in command), and the visual observer. These personnel also include any person who is necessary for the safety of the sUAS flight operation.”⁴
3. **Flying over** – The term “over” refers to the flight of the sUAS directly over any part of a person. For example, a sUAS that hovers directly over a person’s head, shoulders, or extended arms or legs would be an operation over people. Similarly, if a person is lying down, for example at a beach, an operation over that person’s torso or toes would also constitute an operation over people. An operation during which a sUAS flies over any part of any person, regardless of the dwell time, if any, over the person, would be an operation over people. The prohibition of any flight over persons not directly participating in the sUAS operation is only waivable with permission from the FAA.
4. **Helipad** - Per the FAA Pilot/Controller Glossary, a helipad is “a small, designated area, usually with a prepared surface, on a heliport, airport, landing/take off area, apron/ramp, or movement area used for takeoff, landing, or parking for helicopters.”⁵ The helipad is the actual landing surface for a helicopter.⁶

⁴ 81 FR 42063 at 42128.

⁵ Pilot/Controller Glossary, Federal Aviation Administration (May 26, 2016), http://www.faa.gov/air_traffic/publications/media/pcg_4-03-14.pdf.

⁶ See *Id.*

5. **Heliport** - “An area of land, water, or structure used or intended to be used for the landing and takeoff of helicopters and includes its buildings and facilities if any.”⁷ The heliport is the area in which helicopters take off and land.⁸
6. **Model Aircraft** - Model aircraft are defined differently by the FAA than other sUAS and are subject to different regulations. Model aircraft are not used for business purposes, only for hobby and recreation. (Use of sUAS related to TU does not qualify as model aircraft regulations.) Model aircraft must be kept within visual line of sight of the operator, and should weigh under 55 pounds unless certified by an aero modeling community-based organization. Model aircraft must be flown a sufficient distance from populated areas.
7. **Operator** - Person who manipulates the flight controls of a sUAS.
8. **Remote Pilot in Command (PIC)** - A certificated airman and will have the final authority and responsibility for the operation and safety of a sUAS operation. 14 C.F.R. §107.19 (2016).
9. **Small Unmanned Aircraft Systems (sUAS)** - sUAS are also known as or may be characterized as Drones. According to the FAA, a sUAS is the small unmanned aircraft and all of the associated support equipment, control station, data links, telemetry, communications and navigation equipment, etc., that are necessary to operate the unmanned aircraft. sUAS may have a variety of names including quadcopter, quadrotor, etc. FAA’s Part 107 regulations apply to sUAS regardless of size or weight (less than 55 lbs including payload). Model aircraft are not considered by the FAA to be sUAS and have different regulations.
10. **Tulane University (TU) Property** – Buildings, grounds, and land that are owned by Tulane University or controlled by Tulane University via leases or other formal contractual arrangements to conduct ongoing TU operations.
11. **Tulane University (TU) Related Activities** – Activity that is TU run, managed, or operated and activity that is part of TU approved curricula, as well as instances where TU grants credit, allows the activity to count towards graduation, or permits a TU certificate of participation.
12. **Visual Observer (VO)**- A person who is designated by the remote pilot in command to assist the remote pilot in command and the person manipulating the flight controls of the sUAS to see and avoid other air traffic or objects aloft or on the ground.
13. **Mission** - a flight operation of a sUAS in the performance of a set pre-established and often self-imposed objective or purpose.

Addendum A: FAA Fact sheet

Addendum B: Student Acknowledgement Form

Addendum C: Flight Plan

⁷ Id.

⁸ See Id.