

North Dakota State University

Unmanned Aircraft System Procedure – Educational Use

1. Scope

This document describes procedures for a student to operate small-unmanned aircraft systems (sUAS or drone) for educational purposes under Model Aircraft Rules as described in an FAA Memo dated May 2016. This procedure does not apply for research activities.

1.1 Background Information

In May 2016, the FAA issued an interpretation memo titled “Educational Use of Unmanned Aircraft Systems (UAS)”. A few key excerpts from this memo are provided as follows:

“The FAA recognizes that UAS increasingly are being used in education, including science, technology, education, and math (STEM) education.”

“A student may conduct model aircraft operations in accordance with section 336 of the FMRA in furtherance of his or her aviation-related education at an accredited educational institution.”

“We find that the use of small unmanned aircraft by students at accredited educational institutions as a component of science, technology and aviation-related educational curricula or other coursework such as television and film production or the arts more closely reflects and embodies the purposes of “hobby or recreational” use of model aircraft and is consistent with the intent of section 336 of the FMRA.”

“Student operation of UAS for the professional research objectives of faculty renders the operation non-hobby or non-recreational. Accordingly, a faculty member conducting research may not rely on section 336’s concept of “hobby or recreational use” to either operate a UAS or direct student UAS operations in connection with such research.”

2. Procedure

Public Law 112-95, Section 336 – Special Rule for Model Aircraft establishes the requirements to be followed. The general requirements are as follows:

- Unmanned aircraft must weigh less than 55 lbs. (25 kg)
- The aircraft must be operated within visual line-of-sight (VLOS) only.
- Pilots must always yield the right of way to manned aircraft.
- Pilots must notify the airport and air traffic control tower before flying within 5 miles of an airport.
- Pilots must follow community-based safety guidelines.

Fly at or below 400 feet

Keep your UAS within sight

Never fly near other aircraft, especially near airports

Never fly over groups of people

Never fly over stadiums or sports events

Never fly near emergency response efforts such as fires

Never fly under the influence

Be aware of airspace requirements

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2.1 Department Oversight

The instructor will guide students in the use of UAS for the course and must monitor that flights are conducted in accordance with the Model Aircraft Rules and in a safe manner. The instructor is not allowed to fly the aircraft under Model Aircraft Rules for course-related flight activity. Model Aircraft Rule flights by definition must not be conducted for purposes related to one's employment. For this reason, the university requires the instructor to obtain their Part 107 Remote Pilot Certificate. This provides a legal basis for the instructor to fly the aircraft as needed.

In some cases, this oversight by the instructor could be provided by another designated faculty/staff member within the department.

A point of contact at NDSU for assistance with the process is:

Aaron Reinholtz, NDSU Office of Research and Creative Activity
Research 2 Office 102E; aaron.reinholtz@ndsu.edu Ph. (701) 231-5338

2.2 Insurance

The ND Risk Management Fund does not provide insurance coverage to the student operating the aircraft. A "[Participation, Waiver, and Release of Liability Form](#)" must be filled out by each student operating a sUAS.

2.3 Aircraft Registration

Any university-owned aircraft that weighs over 0.55 pounds, must be registered with the FAA. The registration process can be completed online at www.faa.gov/uas/. It requires the make, model, and serial number for the aircraft. After a registration number is obtained, the aircraft must be marked. Figure 1 describes the FAA's instructions for marking the unmanned aircraft. The registration information must be provided to the NDSU UAS Coordinator.

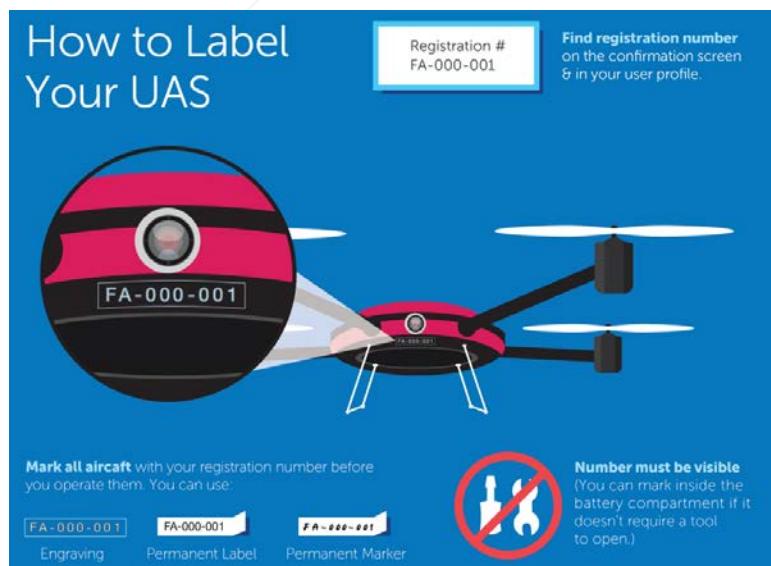


Figure 1: Marking Instructions for Registration Number

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2.4 Pilot Requirements

There are no formal pilot training requirements to operate a sUAS under the Section 336 Model Aircraft Rules. From a practical consideration, it is highly recommended to obtain some training under the guidance and supervision of a person that is already proficient in that aircraft type or a similar aircraft. This process will be under the discretion of the department coordinator.

2.5 Operational Areas

Under Model Aircraft Rules, any flight operation within 5 miles from an airport requires coordination with the airport and air traffic control.

A smartphone app called B4UFLY has been developed to help operators determine if there are any restrictions or requirements in effect at the location they wish to fly.

2.6 Flight Plan Form and Review

A Flight Plan form must be filled out for each academic course in which students will fly UAS under this FAA Education Use provision. The form must be submitted to the NDSU UAS Coordinator. The Flight Plan will be reviewed by the UAS Advisory Panel to ensure regulatory requirements and university procedures are being followed. They will also assess the risk level of the flights that are planned. The form must be updated and resubmitted if there are any substantial changes to the flight plans for the course.

2.7 Pre-Flight Check

Although not required by Model Aircraft Rules, it is highly recommended that students utilize a preflight checklist. A checklist might be available from the aircraft manufacturer, but in many cases, it will need to be developed.

2.8 Incident Reporting

An incident report must be submitted to the NDSU Safety Office within 24 hours if an incident or accident occurs. This information must also be provided to the NDSU UAS Coordinator.

[Incident Report for Employees](#)
[Incident Report – Non-Employee](#)

2.9 Data Collection and Management

Careful consideration needs to be given for any data that will be collected during UAS flights, particularly aerial image sensor data. A few questions to consider are as follows:

- What areas will be imaged? Is it NDSU property? Other public property? Private property?
- During the flights is it possible you would be imaging over adjacent land that is not part of the project? If so, might that imagery be sensitive and if so how will that be handled?
- Where will you store the data?
- Who will have access to the data? Does it need to be secured?
- How long will the data need to be stored before being destroyed?

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Answers to these types of questions should be determined as the flight activity is being planned.

REVISION HISTORY

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