

UAS Drone Management System Application Certification Procedure



COURSE INTRODUCTION

The **UAS Drone Management System Applications (DMSA) Certification** is designed to evaluate a student's ability to operate within a **documentation-driven drone environment** where compliance, traceability, and data integrity are essential.

This certification shifts the focus from traditional drone flight skills to the **management and verification of operations**, ensuring that students can meet the expectations of real-world industry, regulatory, and organizational standards.

COURSE PURPOSE

The purpose of this certification is to ensure that students can:

- Demonstrate the ability to **plan and document a compliant drone mission**
 - Utilize both **manual documentation systems and digital Drone Management Systems (DMS)**
 - Maintain **accurate, complete, and traceable operational records**
 - Identify and properly document **deviations and incidents**
 - Defend mission decisions using **documented evidence**
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CORE PRINCIPLE

At the foundation of this course is the following industry-standard principle:

- **"If it is not documented, it does not exist."**

All evaluation within this certification is based on **documented proof**, not assumptions or verbal explanations.

COURSE STRUCTURE

This certification is built around a **performance-based assessment model**, where students demonstrate competency through:

- Mission planning
- System setup (manual + DMS)
- Real-time event logging
- Audit response and justification

Students will complete a structured performance task that mirrors **real operational workflows used in industry**.

SYSTEMS USED IN THIS COURSE

Students will be required to work within both:

1. Manual Documentation Systems

- Paper-based mission planning forms
- Flight logs
- Risk and mitigation worksheets

2. Digital Drone Management Systems (DMS)

- Example platform: **Aloft**
 - Mission creation and tracking
 - Authorization linkage
 - Event logging and reporting
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ASSESSMENT APPROACH

Students are evaluated based on their ability to:

- Produce **complete and accurate documentation**
- Maintain **system alignment between manual and digital records**
- Demonstrate **real-time decision tracking**
- Provide **clear, evidence-based explanations during audit questioning**

Performance is measured using a **standards-based rubric** aligned to professional expectations.

CERTIFICATION STANDARD

To successfully earn certification, students must demonstrate:

- Complete and accurate mission documentation
 - Proper use of a Drone Management System
 - Correct classification and logging of events
 - Ability to justify compliance decisions under evaluation
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INDUSTRY ALIGNMENT

This course is aligned with:

- **FAA operational expectations (Part 107 framework)**
 - **NFPA 2400 concepts of documentation and operational accountability**
 - Industry practices related to:
 - Data integrity
 - Operational traceability
 - Compliance verification
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INSTRUCTOR NOTE

This certification is not designed to measure flight proficiency alone.

- It is designed to measure whether a student can:

“Prove what they did, how they did it, and whether it was compliant.”

TRANSITION TO ASSESSMENT

The following section outlines the **DMSA Performance Assessment**, which serves as the primary method for evaluating student competency in this course.

I. **DMSA PERFORMANCE Assessment**

PROJECT PURPOSE

This performance task verifies that participants can:

- Plan a compliant mission
 - Document using **manual + DMS (Aloft)**
 - Log and classify events
 - Prove compliance under questioning
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CORE STANDARD

“If it is not documented, it does not exist.”

PROJECT OVERVIEW (60–75 MIN TOTAL)

Phase	Time	Focus
1	15 min	Mission Planning
2	20 min	DMS Entry + Setup
3	15 min	Event Logging
4	15–20 min	Audit Check

PHASE 1: MISSION PLANNING (15 MIN)

Scenario (Provide to Participants)

“Inspect a school athletic field near light poles with moderate wind conditions. Airspace authorization is required.”

Participants Must Complete (SHORT FORM)

Objective:

2 Risks:

1. _____

2. _____

2 Mitigations:

1. _____

2. _____

Authorization (Provided or Simulated):

Instructor Checks

- Is objective clear?
 - Are risks realistic?
 - Is authorization included?
-

PHASE 2: DMS SETUP (20 MIN)

Participants Must:

1. Create mission in DMS
 2. Assign:
 - Pilot
 - Aircraft
 - Link authorization
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Instructor Checks

- Is everything linked?
 - Are required fields complete?
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Critical Check

- Missing linkage = FAIL
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PHASE 3: EVENT LOGGING (15 MIN)

Instructor Introduces 2 Events:

- Wind increases
 - Flight path adjusted
-

Participants Must Log:

Time	Event	Type (Deviation/Incident)

Instructor Checks

- Are events logged clearly?
 - Correct classification?
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PHASE 4: AUDIT CHECK (15–20 MIN)

Instructor asks **ONLY 3 QUESTIONS** (streamlined):

1. “Show me your authorization.”
 2. “Explain one deviation.”
 3. “Is this mission compliant—why?”
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Participant Must

- Locate info quickly
 - Answer clearly
 - Reference documentation
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Performance RUBRIC

Criteria	1	2	3
Planning	Missing	Partial	Complete
DMS Setup	Incorrect	Partial	Correct
Event Logging	Weak	Basic	Clear
Audit Response	Unable	Limited	Confident

PASS STANDARD

- Must score **3 in at least 3 of 4 categories**

II. FINAL COURSE ASSESSMENT (30 QUESTIONS)

Format: Standardized Multiple Choice (4 options, district-ready)

Following is a practice test with only 10 questions but the final will have 30.

1. What is the primary purpose of a Drone Management System (DMS)?

- A. Increase flight speed
 - B. Replace pilot training
 - C. Document and verify operations for compliance
 - D. Control aircraft hardware
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2. Which best defines data integrity?

- A. Faster data entry
 - B. Accurate and protected data with tracked changes
 - C. Large storage capacity
 - D. Manual recordkeeping
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3. Metadata refers to:

- A. Flight altitude
 - B. Data about the data (who, when, changes)
 - C. Battery levels
 - D. GPS coordinates
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4. Authorization must be:

- A. Verbal
 - B. Stored separately
 - C. Linked directly to the mission record
 - D. Optional
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5. A deviation is defined as:

- A. Planned mission step
 - B. Change from the original plan
 - C. Equipment failure only
 - D. End of flight
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6. An incident requires:

- A. No documentation
 - B. Informal discussion
 - C. Formal reporting due to safety or compliance impact
 - D. Pilot approval only
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7. Which is required for a compliant mission plan?

- A. Drone color
 - B. Objective, risks, mitigation, and authorization
 - C. Camera settings only
 - D. Pilot preference
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8. Confidentiality ensures:

- A. Data is deleted regularly
 - B. Only authorized users can access data
 - C. Data is public
 - D. Faster access
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9. A mission without assigned pilot and aircraft is:

- A. Acceptable
 - B. Efficient
 - C. Non-compliant
 - D. Recommended
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10. If documentation is missing, the mission is considered:

- A. Complete
 - B. Partially valid
 - C. Non-existent from a compliance standpoint
 - D. Approved
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ANSWER KEY

- 1-C
- 2-B
- 3-B
- 4-C
- 5-B
- 6-C
- 7-B
- 8-B
- 9-C
- 10-C