

NFPA 2400 Operational Readiness Teacher Packet



Course: NFPA 2400 Public Safety UAS

Instructor: _____

Class Date: _____

Module: Operational Terminology & Mission Readiness

Total Points: 100 (+20 Bonus)

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1. INSTRUCTOR OVERVIEW

This activity moves students beyond vocabulary memorization and into **operational application** aligned with NFPA 2400 mission standards.

Students will demonstrate:

- Operational terminology mastery
- Command authority awareness
- Airspace compliance understanding
- Emergency response readiness
- Documentation procedures

This activity is suitable for:

- End-of-unit assessment
- Certification readiness check
- Midterm evaluation
- Tabletop scenario training

Estimated Completion Time: 45–60 minutes

2. LEARNING OBJECTIVES

Upon completion, students will be able to:

1. Identify correct operational terminology in mission scenarios.
 2. Apply NFPA 2400 safety systems to real-world situations.
 3. Demonstrate understanding of chain-of-command authority.
 4. Evaluate airspace classification and ATC requirements.
 5. Properly document post-incident procedures.
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3. STUDENT ACTIVITY (REPRODUCIBLE PAGES)

(Distribute the following section to students.)

NFPA 2400 Operational Readiness Activity

Name: _____

Pilot #: _____

Date: _____

PART 1: Scenario Application (40 Points)

Scenario 1 – Lost Signal During SAR Mission

You are operating a drone during a SAR mission in wooded terrain. At 240 feet AGL, telemetry data freezes, and you lose control input. The aircraft begins hovering in place.

A. What condition is occurring?

B. What system should activate?

C. What feature should safely recover the aircraft?

D. What documentation is required after landing?

Scenario 2 – Flying Near an Airport

You are deploying a UAS 3 miles from a regional airport for HAZMAT monitoring.

A. What type of airspace are you likely operating in?

B. What approval may be required?

C. What system manages this airspace?

Scenario 3 – Public Event Deployment

A TFR has been issued during a large public event.

A. What does TFR stand for?

B. Can you fly? Why or why not?

C. What operational role may coordinate approval?

Scenario 4 – Pre-Launch Safety Review

A weather check, battery verification, geofencing confirmation, and mission review are conducted.

A. What process is being performed?

B. What document governs how this is done?

C. What environmental limits are being evaluated?

PART 2: Operational Matching (15 Points)

Function	Term
Prevents flight into restricted areas	_____
Backup systems to ensure safety	_____
Remote control communication link	_____
Authority to start/stop the mission	_____
Automated return after signal loss	_____
Evaluating mission hazards	_____

PART 3: Role Identification (15 Points)

1. Overall flight safety authority: _____
 2. Oversees emergency response scene: _____
 3. Maintains documentation: _____
 4. Ensures Part 107 compliance: _____
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PART 4: Airspace Decision Matrix (15 Points)

Airspace ATC Required?

Class G _____

Class C _____

Restricted _____

TFR _____

Explain one mission where VLOS is insufficient:

PART 5: After-Action Documentation (15 Points)

Hard landing due to wind shear. List required post-flight actions:

1. _____
 2. _____
 3. _____
 4. _____
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4. INSTRUCTOR ANSWER KEY

PART 1

Scenario 1

- A. Lost Link
- B. Failsafe or Flight Termination System
- C. Return-to-Home (RTH)
- D. Flight Log and Incident Reporting

Scenario 2

- A. Controlled Airspace
- B. ATC Authorization (LAANC if applicable)
- C. Air Traffic Control (ATC)

Scenario 3

- A. Temporary Flight Restriction
- B. Only with authorization; restricted for safety/security
- C. Incident Commander

Scenario 4

- A. Pre-Flight Checklist
 - B. Standard Operating Procedures (SOP)
 - C. Weather Minimums
-

PART 2

Geofencing
Redundancy
Command and Control Link (C2 Link)
Operational Control
Return-to-Home (RTH)
Risk Assessment

PART 3

Remote Pilot in Command (RPIC)
Incident Commander
RPIC (or designated operator per SOP)
RPIC

PART 4

Class G – No
Class C – Yes
Restricted – Yes (authorization required)
TFR – Yes (authorization required)
VLOS Insufficient Examples:

- Wildfire perimeter mapping
- Large SAR grid search
- Infrastructure corridor inspection

PART 5

Post-Flight Inspection

Flight Log entry

Incident Reporting

UAS Maintenance evaluation

5. GRADING RUBRIC (100 Points)

Section 1 – Scenario Application (40 pts)

- Terminology Accuracy (20)
- Operational Action Correctness (10)
- Clear NFPA-based reasoning (10)

Section 2 – Matching (15 pts)

6 × 2.5 points

Section 3 – Role Identification (15 pts)

4 × 3.75 points

Section 4 – Airspace Matrix (15 pts)

Airspace Correct (8)

VLOS Explanation (7)

Section 5 – After-Action (15 pts)

Required documentation identified (10)

Logical sequencing (5)

6. PERFORMANCE SCALE

90–100 → Operationally Ready

80–89 → Certification Prepared

70–79 → Developing Operator

Below 70 → Remediation Required

7. REMEDIATION & EXTENSION

If Student Scores Below 70:

- Assign targeted terminology review
- Conduct tabletop emergency scenario drill
- Require rewritten mission response

Advanced Extension (Optional +20 Bonus)

Students write a 1-page wildfire mapping mission plan, including:

- RPIC designation
- Risk assessment
- Weather minimums
- Payload selection
- Emergency procedures
- Data retention compliance