



COMMERCIAL sUAS DRONE



PURPOSE

The Commercial sUAS Drone Competition evaluates students' readiness for careers related to the safe, responsible, and effective operation of drones within the National Airspace System (NAS). The competition emphasizes FAA-aligned knowledge, flight operations, mission planning, teamwork, communication, and professionalism, while remaining appropriate and equitable for the high school level.

ELIGIBILITY (TEAM OF TWO)

Open to a team of two (2) active SkillsUSA members from the same local chapter (school) enrolled in programs with drone technology as an occupational objective. Students must be enrolled in programs where drone technology, aviation, engineering, or related fields are an instructional focus. A full team must be registered to compete. Substitution and penalty rules follow standard competition regulations.

CLOTHING REQUIREMENT

Business Casual

- Official SkillsUSA white polo shirt
- Black dress slacks or black dress skirt (knee-length minimum)
- Black closed-toe dress shoes
- Eye protection (required in competition area)
- Improper competition clothing penalty: **10 points**

SAFETY & TECHNICAL GUIDELINES

Drones must be safely designed and enclosed • Eye protection required at all times in flight areas • Unsafe operation may result in point deductions or disqualification • Drones heavier than 3.5 lbs require special approval • No flight outside the competition area is permitted.

EQUIPMENT AND MATERIALS

1. **Supplied by the Competition:**
 - a. Field Arena
 - b. Field elements
 - c. Team identification stickers
2. **Supplied by the Competitors:**
 - a. Fully assembled and operational drone with onboard camera - either the [HolyStone HS360s](#) or the [Echo Drone](#)
 - b. Fully charged batteries
 - c. Laptop (one per competitor)
 - d. Eye protection
 - e. Surge protector
 - f. One-page resume (printed and submitted at orientation)

PROHIBITED DEVICES

Cellphones, electronic watches and/or other electronic devices not approved by a competition's national technical committee are **NOT** allowed in the competition area. Please follow the guidelines in each technical standard for approved exceptions.

Penalties for Prohibited Devices

If a competitor's electronic device makes noise or if the competitor is seen using it at any time during the competition, this may result in **score removal or disqualification**.

ONLINE SUBMISSION REQUIREMENTS

All NYS SkillsUSA competitors must submit their one-page single sided resume online.

Failure to submit any of the required document(s) listed below by the established deadline will result in a **10-point penalty**.

1. One-page single sided resume

Your submission must be saved as PDF file type using the file name format of "Your Last Name_Your First Name_Resume." For example, "Amanda Smith" would save the individual PDF submissions file as:

- Smith_Amanda_Resume

PENALTIES

- Improper competition clothing: -10 points
- Resume non-compliance: -10 points
- Professionalism -50 points

TIE-BREAKERS

- Flight Operations & Crew Communication • Autonomous Mission Planning & Execution

SCOPE OF THE COMPETITION

KNOWLEDGE PERFORMANCE

The competition consists of knowledge-based and skill-based assessments designed for the high school level.

SKILL PERFORMANCE

Teams will be evaluated and scored in following areas:

1. FAA knowledge
2. Manual flight operations
3. Flight knowledge and operational decision-making
4. Autonomous flight and data collection
5. Professionalism

COMPETITION GUIDELINES (1,000 points)

TASK 1 – Flight Operations & Crew Communication (270 points)

Teams demonstrate safe, controlled flight while communicating effectively as a flight crew.

Includes:

- Manual flight control
- Visual observer coordination
- Aviation phraseology
- Camera and system setup
- FAA operational compliance
- Scenario-based missions:
 - Environmental mapping and object search
 - Object acquisition and relocation
 - Detection avoidance
- Operational workflow:
 - Pre-flight planning
 - Pre-flight briefing
 - Launch
 - Flight execution
 - Recovery
 - Post-flight debrief

TASK 2 – Flight Knowledge & sUAS Systems Understanding (Hybrid) (250 points)

This task evaluates both individual student knowledge and team-based decision making using scenario-based assessment methods appropriate for high school students. This task does NOT require physical disassembly, repair, or modification of a drone.

Time Limit

- Task 2 is designed to be completed in **approximately 15 minutes per team.**

Part A – Individual Knowledge Assessment (150 points total)

- Each competitor is assessed **individually**

- **75 points per student**

Assessment may include:

- Oral questions
- Written responses
- Diagrams or images
- Short scenario prompts

Topics include:

- FAA regulations and airspace fundamentals
- Weather interpretation and operational risk
- Emergency procedures
- Core sUAS system concepts (motors, batteries, sensors, flight controller basics)

Part B – Team-Based Scenario Assessment (100 points total)

- Team evaluated together
- Single industry-style operational scenario

Teams must:

- Identify operational issues
- Recommend safe corrective actions
- Explain decision-making logic
- Demonstrate effective crew communication

TASK 3 – FAA Knowledge Test (250 points)

- Individual written knowledge assessment
- **125 points per competitor**
- FAA-style questions covering:
 - Regulations
 - Airspace
 - Weather
 - Operations and safety

TASK 4 – Autonomous Flight & Mission Planning (225 points)

Teams demonstrate their ability to plan and execute an autonomous mission.

Includes:

- Mission and waypoint planning
- Explanation of flight logic and decisions
- Autonomous flight execution
- Data collection accuracy
- Data delivery and explanation

TASK 5 – Professional Development Assessment (25 points)

Evaluates:

- Employability skills
- Professional conduct
- Workplace readiness



Championships for 2026

Special Instructions to Contestants

Date submitted: _____

Contest Name _____ Commercial Drone

Chairperson: _____

List any new special instructions for the contestants that are not listed or might be changed from the New York SkillsUSA Technical Standards for 2026. DO NOT list requirements already printed in the NYS standards.

Only Special Instructions received by March 1, 2026 will be posted on the website!!!

Deleted Materials & Supplies:

Under Clothing requirements:

Official SkillsUSA White Polo shirt or Plain White Polo Shirt