

Qualifications for Teachers of High School Drone Courses

A Three Level Framework Separating Federal Requirements from Educational Best Practices

Prepared for school districts, Career and Technical Education leaders, administrators, and drone program instructors

Prepared by Blue Ridge Mountain Drones Education and DronePilotsForUS

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Central conclusion Teacher qualifications should rise with the operational risk and professional complexity of the course. Federal aviation law governs who may conduct or supervise particular outdoor flights; it does not create a general federal credential for teaching drone theory. Schools therefore need both a legal operating model and a district qualification standard.

Executive Summary

High school drone education now ranges from indoor STEM activities with small classroom aircraft to outdoor Part 107 flight training and advanced instruction in mapping, inspection, public safety, and data production. A single teacher qualification standard is not appropriate for all three settings. The recommended framework is progressive: the instructor must be qualified for the highest-risk flight operation and the most advanced professional task that students will perform.

The Federal Aviation Administration does not license teachers merely to teach drone concepts or prepare students for the Part 107 knowledge test. Federal requirements attach to aircraft operations in the National Airspace System. Indoor flight is outside that operating environment. Outdoor educational flights, however, must be conducted under an authorized legal pathway: generally 14 CFR Part 107, or, for a qualifying operation, the limited recreational exception in 49 U.S.C. 44809. The FAA states that K-12 programs that are not JROTC must be chartered by an FAA-recognized community-based organization to use the educational pathway under section 44809; otherwise, they must operate under Part 107.[1]

For a Part 107 operation, the remote pilot in command must hold a Remote Pilot Certificate with a small UAS rating and have current aeronautical knowledge. A student without a certificate may manipulate the controls only while under the direct supervision of a qualified remote pilot in command who can immediately take direct control.[2] One instructor may not serve as remote pilot in command, visual observer, or control manipulator for more than one aircraft at the same time.[3] These requirements have direct implications for outdoor class size, aircraft scheduling, and staffing. For that reason, we high recommend that all students obtain their FAA TRUST certification prior to outside flight. This would then allow the student to fly under their own certification and not that of the teacher for educational purposes.

Recommended Three Level Standard

Level	Course and flight scope	Minimum legal position	Recommended teacher qualification
1	Indoor STEM, middle school, introductory coding, and classroom drones only	No Part 107 certificate is required solely to teach or fly indoors. Any outdoor flight requires a separate legal determination.	School-authorized educator; documented classroom-drone, lithium battery, propeller, emergency, privacy, and student-supervision training. TRUST before any recreational outdoor flight; Part 107 strongly preferred when outdoor flight may occur.
2	Part 107 preparation and supervised flight inside and outside the classroom	A certificated and current remote pilot in command is required for each Part 107 outdoor operation. Uncertificated students may fly only under direct supervision with immediate takeover capability.	Current Part 107 Remote Pilot Certificate; documented flight proficiency; airspace authorization, weather, risk management, emergency, maintenance, recordkeeping, and instructional-supervision competence.
3	Advanced career training for students who already hold Part 107, including mapping and professional applications	Part 107 requirements continue to govern covered outdoor flights. Part 107 does not certify competence in mapping, inspection, thermography, GIS, or client deliverables.	All Level 2 qualifications plus verified field competence in the professional application, mission software, data quality, privacy and cybersecurity, deliverable production, and applicable state or occupational restrictions.

Purpose and Scope

This white paper provides a national baseline for school leaders deciding who is qualified to teach drone courses and supervise student flight. It addresses federal aviation requirements and recommended educational practices. State teacher licensure, local board policy, workers compensation, insurance, privacy, cybersecurity, landowner permission, and occupational licensing may add requirements. District counsel, the district risk manager, and the responsible FAA office should review unusual or high-risk operations.

The framework is informed by the DronePilotsForUS and Blue Ridge Mountain Drones Courses Overview and as seen on its [DronePilotsForUS.com](https://www.dronepilotsforus.com) Website supplied for this review. Those documents establish an introductory progression that includes aviation foundations, UAS systems, charts, autonomous flight, careers, recreational procedures, safety, and performance-based flight activities. The qualification framework extends that progression into Part 107 preparation and advanced professional applications.

The Governing Principle

A course title does not determine the operating rule. The purpose, location, aircraft, and conduct of each flight determine the legal pathway. A school cannot assume that every educational flight is recreational. The FAA recognizes two principal pathways for education: the limited recreational exception and Part 107.[1] When a K-12 program cannot satisfy every condition of section 44809 through an eligible educational arrangement, Part 107 is the practical default for outdoor instruction.

Schools should classify each activity before flight as indoor, section 44809, or Part 107 and document that choice in the lesson or mission record. Mixed-purpose programs should avoid switching casually between registration and operating categories; FAA guidance states that aircraft registered under the recreational exception cannot be flown under Part 107.[4]

Federal Requirements and Best Practices

Issue	Federal requirement	Best practice for schools
Teacher certification	No FAA rule requires a person to hold Part 107 merely to teach classroom theory or test preparation. State and local education rules govern teaching assignments.	Require credentials that match the course level. A teacher supervising covered outdoor flight should hold a current Part 107 certificate even when another legal pathway might be available.
Indoor flight	Part 107 applies to civil small UAS operations in the United States and is directed to operations in the National Airspace System; ordinary flight wholly inside an enclosed building is not a Part 107 operation.	Use propeller guards, small classroom aircraft, controlled flight zones, eye protection when risk-assessed, battery procedures, emergency stop commands, and documented student readiness.
Outdoor educational flight	Operate under Part 107 unless every condition of 49 U.S.C. 44809 is met. FAA guidance limits the K-12 educational use of section 44809 as described above.[1]	Adopt Part 107 as the district standard for outdoor curricular operations to reduce ambiguity and prepare students for professional practice.
Remote pilot in command	A Part 107 flight must have a designated remote pilot in command who holds the certificate and satisfies the 24-calendar-month recency rule.[2][5]	Name the remote pilot in command in each mission record and give that person final go or no-go authority.

Issue	Federal requirement	Best practice for schools
Student manipulation of controls	A person without a certificate may manipulate controls under direct supervision when the remote pilot in command can immediately take direct control.[2]	Use one active aircraft per supervising remote pilot in command, dual-control or rapid handoff procedures, a defined flight box, and a trained visual observer when appropriate.
Multiple aircraft	A person may not manipulate controls, act as remote pilot in command, or act as visual observer for more than one aircraft at the same time under Part 107.[3]	Do not launch a full class simultaneously under one teacher. Rotate crews or provide additional qualified remote pilots and clearly separate responsibilities.
Registration	Part 107 aircraft must be registered. Under the recreational exception, only aircraft at or below 0.55 pound are exempt when flown solely under that exception.[4]	Maintain an aircraft inventory tied to registration category, serial number, Remote ID status, maintenance history, and assigned batteries.
Remote ID	An aircraft that is required to be registered, or is registered, must comply with Remote ID unless operated within a FRIA or another rule exception applies.[6]	Purchase compliant aircraft for outdoor programs or establish lawful FRIA procedures; verify Remote ID before each applicable mission.
Preflight and condition	The remote pilot in command must assess the environment, brief participants, verify control links and power, and confirm safe condition before flight.[7]	Use written preflight, site survey, weather, airspace, crew briefing, and postflight records for every outdoor mission.
Advanced technical skill	Part 107 establishes authority and operating knowledge; it does not credential mapping, inspection, GIS, photography, thermography, surveying, or engineering competence.	Require documented task proficiency and recognize state practice restrictions before representing a student product as a survey, engineering assessment, inspection, or other regulated professional service.

Level 1 Classroom and STEM Drone Instruction

Intended Scope

Level 1 covers introductory STEM, middle school exploration, basic flight concepts, coding, teamwork, and manual flight using small classroom drones within an enclosed indoor space. The instructional purpose is technology literacy and safe foundational experience, not professional aviation operations.

What the Law Requires

Federal Part 107 certification is not required merely because a teacher discusses drones, teaches coding, prepares students for TRUST, or conducts flight wholly inside an enclosed building. The teacher must still comply with school employment requirements, manufacturer limitations, fire and building rules, and district safety policies. If the aircraft is taken outdoors, the activity must be reevaluated under section 44809 or Part 107 before launch.

Recommended Minimum Qualifications

- Valid teaching assignment or other district authorization appropriate to the grade and subject.
- Completion of a classroom drone safety course that includes aircraft setup, propeller hazards, safe separation, loss of control, battery charging and storage, and emergency response.
- Demonstrated ability to fly the classroom aircraft through takeoff, hover, orientation changes, controlled movement, and landing before supervising students.

- Ability to establish an indoor flight zone, limit simultaneous aircraft, use spotters or crew roles, and stop an unsafe activity immediately.
- Working knowledge of student privacy, image capture, school technology rules, and accessibility accommodations.
- TRUST completion before the teacher or students participate in recreational outdoor flight; Part 107 certification for the teacher is strongly recommended if outdoor curricular flight is foreseeable.

Recommended Limits

A Level 1 instructor should not independently supervise outdoor Part 107 operations, teach students to conduct professional missions, or represent classroom completion as professional pilot qualification. Outdoor demonstrations should be led by a current Part 107 remote pilot in command unless the school has documented a fully compliant section 44809 pathway.

Level 2 Part 107 Preparation and Outdoor Flight

Intended Scope

Level 2 applies when students prepare for the FAA Remote Pilot knowledge test and participate in indoor and outdoor flight. It includes airspace, sectional charts, weather, regulations, airport operations, loading and performance, crew resource management, risk management, mission planning, and supervised aircraft operation.

What the Law Requires

A teacher does not need an FAA certificate merely to teach the written content. Once the class conducts an outdoor Part 107 flight, however, every operation must have a designated, certificated, and current remote pilot in command. The remote pilot in command is directly responsible for and is the final authority over the operation.[2] Students may manipulate the controls without certificates only under the supervision and immediate-control condition in section 107.12. Students must be at least 16 years old to qualify for a Remote Pilot Certificate and must meet the language, physical and mental condition, and aeronautical knowledge requirements in section 107.61.[8]

Recommended Minimum Qualifications

- Current FAA Remote Pilot Certificate with a small UAS rating and completion of recurrent training within the preceding 24 calendar months.
- Documented manual flight proficiency on each aircraft family used by the program, including abnormal procedures, return-to-home behavior, lost link, low battery, flyaway response, and safe termination.
- Demonstrated competence in airspace classification, sectional charts, LAANC or other authorization procedures, weather interpretation, notices and restrictions, operations over people, night operations, Remote ID, registration, and recordkeeping.
- Training in adolescent flight supervision, crew roles, communication, immediate takeover, and the one-aircraft-per-person limitation.
- Ability to maintain aircraft, battery, incident, authorization, and training records and to apply district emergency and reporting procedures.
- Annual proficiency review or flight check conducted by the district, a qualified program lead, or a competent third-party evaluator.

Recommended Staffing Model

For Part 107 student flight, schedule one active aircraft for each remote pilot in command who can meet all responsibilities for that operation. Other students can serve as non-flying crew members when properly briefed. A single teacher should not attempt to supervise several aircraft in flight at once. Larger classes should rotate through ground stations or add qualified remote pilots.

Level 3 Advanced Professional Drone Instruction

Intended Scope

Level 3 applies when students already possess Part 107 knowledge or certification and are learning professional missions such as two-dimensional and three-dimensional mapping, photogrammetry, inspections, public safety workflows, construction documentation, agriculture, thermal imaging, LiDAR, autonomous missions, or data management.

What the Law Requires

Part 107 remains the baseline for covered outdoor flight, but the certificate is not proof of competence in a professional application. If a certificated student is designated as remote pilot in command, that student assumes the regulatory responsibility for the operation. The school should not leave roles implicit: each mission must identify the remote pilot in command, person manipulating the controls, visual observer if used, instructor, and data lead. Waivers, airspace authorizations, operations over people, night requirements, Remote ID, and other operating limits must be addressed as applicable.

Recommended Minimum Qualifications

- All Level 2 qualifications, including a current Part 107 certificate and demonstrated operational proficiency.
- Documented successful completion of the same type of missions the teacher will instruct, using the program aircraft, payloads, applications, and processing workflow.
- Competence in mission design, ground sampling distance, overlap, altitude selection, lighting, georeferencing, checkpoints or control where appropriate, quality assurance, error recognition, and repeat-flight decisions.
- Ability to produce, interpret, and evaluate deliverables such as orthomosaics, point clouds, meshes, elevation products, inspection imagery, and mission records without overstating their accuracy or legal status.
- Working knowledge of GIS, coordinate reference systems, file management, metadata, data retention, privacy, cybersecurity, and client or stakeholder communication.
- Awareness of state laws and licensed-practice boundaries. Mapping instruction must not be represented as licensed land surveying, engineering, or another regulated professional service unless appropriately authorized.
- Current manufacturer or software training when a platform materially affects mission safety or data quality; field-specific credentials when required by the application or employer.

Student Certification Does Not Replace Teacher Competence

A class of Part 107-certified students still requires an instructor who can teach, evaluate, and intervene in advanced operations. Student certification may allow a student to serve as remote pilot in command, but it does not establish the teacher's competence in mapping, data quality, safety management, or the professional field being simulated. Schools should qualify the instructor for both aviation operations and the application being taught.

District Qualification and Authorization Process

Districts should authorize drone instructors by level and should not rely on job title, course completion, or possession of a certificate alone. A practical authorization process follows.

1. Classify the course and every flight activity as Level 1, Level 2, or Level 3.
2. Identify the legal pathway for outdoor flight and document whether the operation is under Part 107 or a qualifying section 44809 arrangement.
3. Verify educator licensure or assignment requirements under state and local rules.
4. Verify FAA certificates, aeronautical knowledge recency, aircraft registrations, and Remote ID status when applicable.
5. Conduct a practical flight and emergency-procedure evaluation appropriate to the aircraft and course level.
6. For Level 3, review evidence of application-specific competence and sample deliverables.
7. Approve written standard operating procedures covering flight areas, supervision, weather, airspace, batteries, maintenance, data, privacy, incidents, and parent or guardian requirements.
8. Issue a written district authorization specifying the course level, approved aircraft, approved sites, and any restrictions.
9. Review authorization annually and after an incident, major equipment change, regulatory change, or substantial course expansion.

Teacher Qualification Evidence

Evidence	Level 1	Level 2	Level 3
District teaching authorization	Required	Required	Required
Classroom drone safety training	Required	Required	Required
TRUST	Recommended; required for a person flying under the recreational exception	Useful background; not a substitute for Part 107	Useful background; not a substitute for Part 107
Current Part 107 certificate	Not required for indoor-only scope	Recommended as district minimum and legally required to serve as remote pilot in command	Required as district minimum
Practical flight evaluation	Basic indoor	Outdoor operational and emergency proficiency	Advanced mission and platform proficiency
Application-specific portfolio	Not required	Optional	Required
Annual review	Recommended	Required by district policy	Required by district policy

Model District Policy Position

A school district may adopt the following position:

Teachers shall be authorized to instruct drone courses at one of three levels based on the course's flight environment, regulatory pathway, and professional complexity. Possession of an FAA Remote Pilot Certificate is required for any teacher designated as remote pilot in command of a Part 107 operation and is the district minimum for teachers who independently supervise outdoor curricular flight. Part 107 certification alone does not qualify a teacher to instruct advanced professional applications. Level 3 instructors must also

demonstrate competence in the aircraft, software, data workflow, quality-control methods, and occupational practices included in the course. All outdoor flights must have a documented legal operating basis, designated crew roles, and compliance with applicable FAA, state, local, and district requirements.

Implementation Checklist

- ☐ Course level assigned and scope approved
- ☐ Indoor and outdoor activities clearly identified
- ☐ Legal pathway documented for each outdoor activity
- ☐ Remote pilot in command identified for each Part 107 flight
- ☐ Teacher Part 107 certificate and recency verified when required
- ☐ Aircraft registration category verified
- ☐ Remote ID or FRIA status verified
- ☐ Airspace authorization process established
- ☐ One-aircraft-per-responsible-person limitation built into scheduling
- ☐ Practical flight proficiency documented
- ☐ Battery, maintenance, incident, and emergency procedures approved
- ☐ Privacy, imaging, records, and cybersecurity procedures approved
- ☐ Advanced application competence verified for Level 3
- ☐ State occupational licensing boundaries reviewed
- ☐ Annual review date assigned

Conclusion

The safest and most defensible approach is a graduated teacher qualification system. Level 1 emphasizes classroom safety and sound instruction. Level 2 adds current Part 107 authority, outdoor flight competence, and the ability to supervise students in compliance with federal rules. Level 3 adds verified professional application competence and data-quality responsibility. This structure respects the difference between what federal law requires and what schools should require to protect students, employees, equipment, and the credibility of the program.

For most high school programs that include routine outdoor curricular flight, the recommended district standard is straightforward: the lead instructor should hold a current Part 107 Remote Pilot Certificate, pass a practical proficiency evaluation, and be formally authorized under the district's UAS procedures. For advanced courses, the district should require additional evidence that the teacher can perform and evaluate the professional work being taught.

Legal and Regulatory Sources

[1] FAA Educational Users. FAA explanation of educational operations under section 44809 and Part 107, including the K-12 chartering limitation. https://www.faa.gov/uas/educational_users

[2] 14 CFR 107.12 and 107.19. Certificate and direct-supervision rules; designation, responsibility, and authority of the remote pilot in command. <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-107>

[3] 14 CFR 107.35. Prohibition on one person manipulating controls, acting as remote pilot in command, or acting as visual observer for more than one aircraft at a time. <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-107/section-107.35>

- [4] **FAA Drone Registration.** Registration thresholds, categories, possession of registration documentation, and registration-type limitations. https://www.faa.gov/uas/getting_started/register_drone
- [5] **14 CFR 107.65.** Aeronautical knowledge recency within the preceding 24 calendar months. <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-107/section-107.65>
- [6] **FAA Remote Identification of Drones.** Remote ID applicability and compliance options, including FRIAs. https://www.faa.gov/uas/getting_started/remote_id
- [7] **14 CFR 107.15 and 107.49.** Safe-condition, preflight assessment, briefing, control-link, power, and payload requirements. <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-107>
- [8] **14 CFR 107.61.** Eligibility for a Remote Pilot Certificate, including minimum age of 16 and aeronautical knowledge requirements. <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-107/section-107.61>

Regulatory currency statement: Federal sources were reviewed in September 2026. The eCFR displayed Title 14 as current through September 10, 2026. Districts should verify current requirements before implementation.

This white paper provides policy and program guidance and is not legal advice. It does not replace FAA regulations, state law, local policy, insurance conditions, or advice from legal counsel.