



# TWIN CITIES DRONE SCHOOL Programs for Educators

INTEGRATING DRONES INTO EDUCATION

WHAT YOU NEED TO KNOW

## Is A License Required To Use Drones At School?

by Joel Roggenkamp

Last year, the FAA passed new rules requiring anyone who uses a drone, except for hobby or recreational purposes, to obtain an FAA Remote Pilot Certificate.

### What Is “Hobby Or Recreational Use”?

An FAA memorandum issued on May 4, 2016 clarifies what “hobby or recreational use” means within the context of an educational institution.

Clearly, commercial operations, including flights that are in furtherance of a business, or incidental to a business, **always require a license**, even if no money is changing hands.

The agency identified three types of operations at schools that do **not** require a license: non-compensated flights at community-sponsored events, certain use by students, and certain use by faculty.

#### #1: Non-Compensated Flights At Community-Sponsored Events

Students and staff may operate a drone at educational institutions and community-

sponsored events without a license provided that the person is (1) not compensated, and (2) any compensation received is neither directly nor incidentally related to that person’s use of the aircraft.

#### #2 Student Use of Drones

Many schools are keenly interested in having students operate drones in connection with their academic coursework in STEM courses, as well as video and photography courses. The FAA’s interpretation of the rule does allow these types of student operations without any license required, provided the flights follow the other provisions of the Special Rule for Model Aircraft.

#### #3: Faculty Use of Drones

Faculty operating drones as part of their courses or for other purposes incidental to their jobs at school are using the drones for hire, and are therefore **not** considered recreational operators. **Because they are being compensated, faculty members flying drones need a license.**

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### How To Get Your FAA License

Students and faculty may need an FAA license for using drones at school. Getting a license is easier than you probably think.

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### Drone Career Options for Students

The FAA projects that by 2021, there will be 10 times as many commercial drones in the US than there is now. What opportunities does this open up for students?

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# Is A License Required?

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The FAA does provide one exception to the above rule. If the faculty's use of the drone is **limited** to simply supervising a student's flight, or assisting a student take off and land, then the student is considered the primary operator, and no license is needed by the faculty member.

If, however, more than limited assistance is being provided, then the faculty member is flying the drone in connection to his or her job, the flight is being compensated, **and a license is required.**

## What Is The Special Rule For Model Aircraft?

Even if the operation does not require a license according to the above rules, all flights must still be conducted in accordance with the Special Rule For Model Aircraft, which says that the aircraft must be:

1. Operated in accordance with the Academy of Model Aeronautics Safety Code;

2. Limited to not more than 55 pounds;
3. Operated in a manner that does not interfere with and gives way to any manned aircraft; and
4. When flown within 5 miles of an airport, prior notice is given to the airport and control tower.

Please visit

<http://twincitiesdroneschool.com/education>

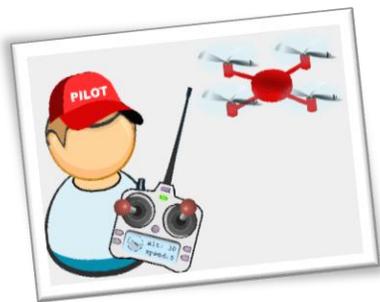
for more information.



### WHEN IS A LICENSE REQUIRED?

The question of whether or not a license is required to operate a drone at school is not so straightforward. Please visit our website for the full text of the FAA interpretation of the rule as it applies to students and faculty.

<http://twincitiesdroneschool.com/education>



All drone operations, except those that are purely for hobby or recreation, require the operator to hold an FAA Remote Pilot Certificate. So how do you get one?

## How To Get Your FAA License

by Joel Roggenkamp

Getting your FAA license is easy: just follow these three steps:

1. Take a class.
2. Pass the test.
3. You're done!

### Where Do I Take The Class?

Twin Cities Drone School provides classes that are open to the public. Two of them are coming up on January 6<sup>th</sup> and February 17<sup>th</sup>, and you can register for them on our website.

We also provide private group training, where will we come to your school on your schedule and train a group of staff and students. This option is lower cost because we do not need to rent a training room.

### What's The Test Like?

You must take the test at an FAA Approved Knowledge Test Center. A list of these is provided during the class. It's a computerized, 60-question, multiple choice test, and you need to score 70% or greater to pass.

### Are There Other Requirements?

Yes. To qualify for the Remote Pilot Certificate, you must be 16 years old, pass a TSA security check (no extra charge), and be able to read, speak, and write the English language.

Get started today at [twincitiesdroneschool.com/education](http://twincitiesdroneschool.com/education).

# Drone Career Options For Students

by Joel Roggenkamp

The exciting thing for today's students is that the FAA projects a tenfold increase in the commercial drone fleet by the year 2021. I often get questions from potential drone students about the career opportunities for drone pilots. I'd like to answer that question in two parts: where things are today, and where I see things going in ten years. For simplicity, I'll keep the discussion limited to civilian drone use.

## Where The Drone Industry Is Today

Let's get the bad news out of the way first. You won't be able to flip to the Help Wanted section of the newspaper and find any "Drone Pilot" jobs. It is extremely rare to have a full-time job as a dedicated drone pilot.

Instead, the big opportunities are in companies that are brining in drones to help them do work they were already doing.

For example, insurance companies are now using drones to do hail damage inspections on roofs, eliminating the need for people to climb on ladders. MnDOT is using drones to inspect bridges, again eliminating the need for people to climb out over water. Power companies are using drones to inspect wind turbines; mining companies are using drones to plan blasts; and farms are using drones to inspect crops.

There is no doubt that drones make these jobs easier, faster, safer, and cheaper. But companies are opting to train their existing employees as drone pilots rather than hiring for a dedicated "drone pilot" position.

## Freelancers

If you want to make money with your drone on your own, the best bet right now is to get into freelancing. Demand for aerial pictures is soaring in real estate and for special events, including weddings. The most successful people I've seen are those who already have a photography or video production business, and who are using drones as an add-on product.

Just owning a drone is not enough to make you successful; millions of people now own drones. To be a successful freelancer, of course you'll need maverick piloting skills,

but you'll also need exceptional photography skills. Even more important, you'll need to know how to find customers and do marketing. And, of course, as a freelancer, you'll be responsible for all other aspects of your business, including accounting, insurance, taxes, and so on.

Freelance rates for drone photography are quite high, sometimes bringing in \$200 per hour or more. So there is money to be made. But photography and business skills will determine if you are successful, not simply the fact that you own a drone.

The most successful freelancers are the ones who choose a niche and then stick to it. Rather than advertising themselves as a "drone pilot", they advertise themselves as a "real estate photographer offering aerial photos" or "wedding photographer offering drone videos". To your clients, the end product is what's important; the drone is simply a tool to help you do your job.

## What Does The Future Hold?

All projections indicate that the drone industry is set to explode in the next decade. Like any technology, drones make certain jobs faster, cheaper, easier, and safer. Companies will invest in drone technology as long as it continues to save money.

We've just started to realize the benefits of drones in business, and there are many areas that could be used to save money but currently are not.

My other prediction is that, as current drone use proves successful – for example, as it is proven that drones really are the best way to do hail damage roof inspections – more companies will take them up. Right now, a small handful of insurance companies are doing inspections with drones; in a couple years, I expect all of them to be.

Lastly, as the industry matures, I expect drone insurance rates to go down precipitously, and I expect regulations to allow more types of operations, including flights over people and beyond visual line of sight. These industry and regulatory changes will open up even more opportunities.

## HOW ARE DRONES BEING USED NOW?



### Agriculture

Drones are being used to assess plant health and for crop dusting.



### Utilities

Power companies are using drones to inspect wind turbines and power lines.



### Mining

Mining engineers are using drones in Hibbing to plan, record, and analyze mining blasts.

# Our Programs

## Public Drone Certification Courses

This is a one-day seminar that will fully prepare you for the FAA Remote Pilot Certificate written test. Our next classes will be held on January 6<sup>th</sup> in Brainerd and February 17<sup>th</sup> in Eagan. Cost for the class is \$399.

## Discounted Drone Certification Training For Staff And Students - We Come To You

We will bring the drone certification class to your school or business for groups of two or more. This program is eligible for special discount pricing depending on group size. The class can be done in one day or broken up into multiple days.

## Free Program: Classroom Guest Speaking

We would love to come into the classroom and talk to your students about opportunities in the drone industry. This program is free, but slots are limited.

## Free Program: Drone Demos

We're happy to come to your school and do an outdoor demonstration of our Phantom 4 drone for your students. This program is free, but slots are limited.

## Aerial Photography Services

We offer professional aerial photography services for school events.



<http://twincitiesdroneschool.com/education>