

# Vaughn College

of aeronautics and technology



**UAS AWD Program  
Open House**

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# Vaughn UAS FAA AWD Grant Program

Vaughn College in Partnership with NYC Department of Education-  
Brooklyn North High Schools presents a cutting-edge program that  
prepares you to become an unmanned aircraft systems (UAS) operator  
and earn 11 Vaughn College credits while still enrolled in high school.



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# Vaughn College: Who are we?

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# VaughnCollege

## Virtual Tour

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# Greetings!

Administration  
&  
Team Introductions

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# Why UAS?

- Drones are a new growing industry with many different careers and job opportunities.
  - Drone Engineer Salary: \$80,000
  - Drone Pilot Salary: \$70,000
- Drones are now becoming more and more popular in our society!
  - NASA Perseverance Rover on Mars
    - Equipped with the Mars Helicopter, Ingenuity.
  - Real estate and documentary filming
- Jobs include:
  - Real Estate
  - Videography & Photography
  - Building Inspections
  - Search and Rescue Operations
  - Land surveying and mapping



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## Our Program Goal

- Serve 200 eligible 11<sup>th</sup> & 12<sup>th</sup>-grade students from populations traditionally underrepresented in the aviation fields.
- Offer four courses from the college UAS certificate program.
- Provide students with the tools necessary to jumpstart their career in the UAS industry.



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# Academic UAS Certificate Program Courses

**UAS 200** – Introduction to Unmanned Aerial Vehicles

3 Lecture Credits

**UAS 220** – Drone Laws and Remote Pilot Certification

3 Lecture Credits

**UAS 231** – Introduction to Drone Aeronautics

2 Lecture Credits, 1 Lab Credit

**UAS 241** – Drone Applications Series – Land Surveying using Drones

1 Lecture Credits, 1 Lab Credit

**UAS 251** – Drones Rapid Prototyping and System Integration

2 Lecture Credits 1 Lab Credit



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# Academic UAS Certificate Program Course (1)

## UAS 200

### Introduction to Unmanned Aerial Vehicles

#### 3 Lecture Credits

This course provides an introduction to UAS. It covers the design, operations, and fundamental architecture of a UAS system as a whole. Upon the completion of this course, the student will understand the entire life cycle of a UAS product from preliminary design to the development and operations and the multitude of uses of UAVs.



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# Academic UAS Certificate Program Course (2)

## UAS 220

### Drone Laws and Remote Pilot Certification

#### 3 Lecture Credits

The course will introduce the laws applied to the operation of civilian UAS (Unmanned Aerial Systems). The course will provide students with the knowledge and expertise necessary to obtain the FAA Part 107 Drone License. At the end of this course students will be able to understand the legal limitations and regulations of drone operation in industry.



# Academic UAS Certificate Program Course (3)

## UAS 231

### Introduction to Drone Aeronautics

**2 Lecture Credits, 1 Laboratory Credit**

This course covers classical and modern aerodynamics design concepts for both fixed-wing and multi-rotor UAVs. Students are introduced to aerodynamics design fundamentals and cover classical dynamic analysis of UAV using the structure and the fluid mechanics principles and modern aerodynamic design tools using computer-aided engineering (CAE) software.



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# Academic UAS Certificate Program Course (4)

## UAS 241

### **Drone Applications Series: Land Surveying Using Drones**

**1 lecture credit, 1 lab credits (3 lab hours)**

Land surveying is currently one of the most critical applications of drones. Students will learn the basic knowledge of photogrammetry, image capturing using UAVs, and GPS-based mission planning in this course. Students will also gain an understanding of post-processing and reconstruction techniques.

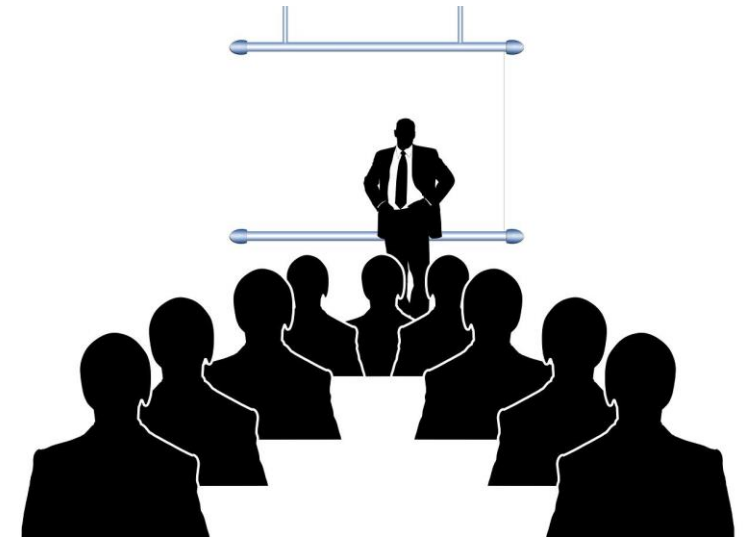


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# Speaker Seminars

- Meet current drone industry leaders and operators.
- Learn about what UAS experts do in the industry.
- Get to know about future career options with your UAS Certification.
- Learn about the stories and experiences of UAS operators.



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# Course Schedule

- **Summer Session I:** May 2022 ~ June 2022
  - UAS 220: Drone Law and Remote Pilot Certification
- **Summer Session II:** July 2022 ~ August 2022
  - UAS 200: Introduction to Unmanned Aerial Vehicles
  - UAS 231: Introduction to Drone Aeronautics
- **Fall Session:** September 2022 ~ December 2022
  - UAS 241: Drone Application Series: Land Surveying Using Drones

# Campus Locations

- **Summer Session I:** May 2022 ~ June 2022
  - Virtual Campus on Zoom via D2L Brightspace
- **Summer Session II:** July 2022 ~ August 2022
  - At one of three education hubs
    - Brooklyn Technical High School
    - Franklin K. Lane Campus
    - Transit Tech Career and Technical Education High School
- **Fall Session:** September 2022 ~ December 2022
  - Vaughn College Campus

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# Program Application & Application Process

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# High School Seat Allocations

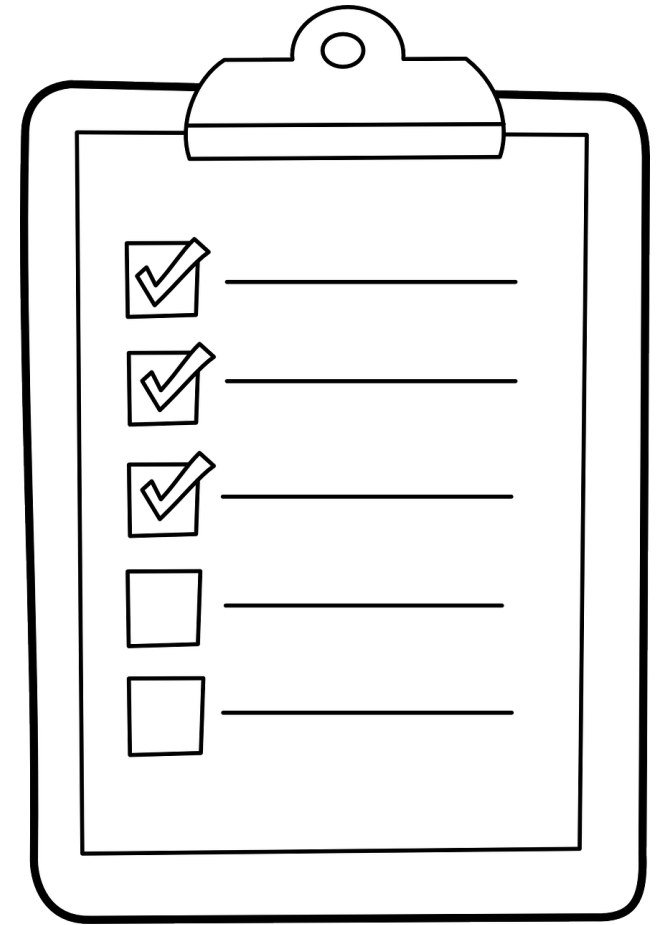
- George Westinghouse Career & Technical Education High School – 15 Seats
- Brooklyn Technical High School – 15 Seats
- The Williamsburg High School of Art and Technology- 10 Seats
- Multicultural High School- 15 Seats
- Brooklyn Lab High School – 15 Seats
- Cypress Hills Collegiate Preparatory High School – 15 Seats
- Transit Tech Career and Technical Education High School  
- 15 seats

## Who Can Apply?

- Any current rising seniors (11<sup>th</sup> grade) are welcome to apply for the program.
- Successful completion of at least:
  - Two (2) credits of mathematics
  - Three (3) credits of English.
- Must be 16 years of age and older.

# Requirements for Students

- Completed application form.
- Official high school transcript that shows a cumulative GPA of 2.5 or higher
- Signed and dated letter of recommendation written by a mathematics or science instructor.
  - Letter must address the student's dedication and commitment to learning and his/her ability to succeed in a STEM discipline.



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# Drone Demonstrations!

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# Questions and Discussion

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AWD = Aviation Workforce Development Grants

UAS = Unmanned Aerial Systems

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