



# Unmanned Aircraft Systems

## A Technical Certificate Program

### PROGRAM DESCRIPTION

The Unmanned Aircraft Systems certificate program will teach students aircraft aerodynamics, drone operations in the national airspace system, safety, ground operations, and the ability to safely fly a drone in various environments. The students will also learn digital photography and graphics to assist in the gathering and editing media.

### PROGRAM ARTICULATION

The Unmanned Aircraft Systems certificate program will articulate into the Associate of Applied Science degree program in General Technology.

### APPLICATION PROCEDURE

A student desiring to pursue a certificate in must:

1. Submit the Northeast State Application for Admission to the Office of Admissions and Records.
2. Indicate Unmanned Aircraft Systems certificate as the desired major on the Northeast State application.
3. See a faculty advisor from the Unmanned Aircraft Systems program prior to registering for classes.

### GAINFUL EMPLOYMENT DISCLOSURE

As required by the U.S. Department of Education  
[https://apps.northeaststate.edu/  
GainfulEmployment/](https://apps.northeaststate.edu/GainfulEmployment/)

### TYPICAL PROGRAM OF STUDY

Course No.	Course Title	Credit
<u>FALL</u>		
ART 1600	Introduction to Digital Media	3
AVIT 1010	sUAS FAA Regulations, Airspace, and Navigation	3
AVIT 1020	sUAS Mechanics of Flight	3
AVIT 1030	sUAS Fight and Safety Operations	4
<u>SPRING</u>		
ART 2401	Commercial Art/Graphic Design I	3
ART 2600	Digital Photography	3
AVIT 1040	FAA Part 107 Commercial Pilot	3
AVIT 1050	sUAS Industrial Inspections	3
Total Credit Hours		25

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## TYPICAL JOB OPPORTUNITIES

**Unmanned Aircraft Systems Operator:** Pilot unmanned aircraft also known as a drone. Check drones before a flight to ensure safe and proper operation. Analyze weather forecasts to ensure safe flights. Document pre- and post-flight logs. Monitor drones during flight. Plan drone flight routes. Navigate drones along designated paths. Gather information or produce aerial photographs, as needed. Perform equipment testing, troubleshooting, and maintenance.

**Drone Farmer:** Use unmanned aircraft equipped with infrared imaging cameras to create detailed maps of crops. Then use drones programmed with GPS coordinates to fertilize the plants that need it most.

**Wildlife Conservationist:** Monitor, protect and collect data on fragile species in danger zones across the planet using drones.

**Delivery/fulfillment Pilot:** Pilot unmanned aircraft to deliver packages and supplies to the homes of private customers or between company warehouses.

**Search and Rescue Worker:** Save lives after disaster strikes by using drones to survey damage and locate people in need of help.

**Energy Inspector:** Use drones equipped with thermal cameras to detect leaks along oil pipelines or to monitor and inspect turbine blades on wind farms.

**Drone Journalist:** Capture breaking news footage from above with camera-equipped unmanned aircraft.

**Geographic Information Systems Mapping Technician:** Use drones to map out remote or hard-to-reach areas of the Earth for scientific studies and commercial research.

**Police Drone Operator:** Track fugitives, monitor large crowds, and keep people safe using drone technology.

**Drone-Assisted Property Manager:** Inspect and survey the hard-to-reach exteriors of homes with unmanned aircraft; or create dynamic real estate

listings with drones.

## PROGRAM COMPETENCIES

Graduate is competent to:

1. Operate a drone (unmanned aircraft system) safely and within the limitations of the Federal Aviation Regulations.
2. Operate a drone for commercial compensation.
3. Take aerial footage and edit video for the final product.

## FOR FURTHER INFORMATION CONTACT:

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Northeast State Community College is part of the Tennessee Board of Regents system, Tennessee's largest higher education system, governing 40 post-secondary educational institutions with over 200 teaching locations. The TBR system includes 13 two-year colleges, 27 colleges of applied technology, and TN eCampus, providing programs to students across the state, country, and world.

Northeast State Community College does not discriminate on the basis of race, color, religion, creed, ethnic or national origin, sex, disability, age status as a protected veteran or any other class protected by Federal or State laws and regulations and by Tennessee Board of Regents policies with respect to employment, programs, and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Linda W. Calvert, Vice President for Inclusive Excellence and Sponsored Programs, AffAct@NortheastState.edu, P.O. Box 246, Blountville, TN 37617-0246, 423.323.0222.

Northeast State Community College's policy on nondiscrimination can be found at <https://apps.northeaststate.edu/ie/policymanual/pol.asp?p=254>.

Northeast State Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award the associate degree. Northeast State also may offer credentials such as certificates and diplomas at approved degree levels. Questions about the accreditation of Northeast State Community College may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website ([www.sacscoc.org](http://www.sacscoc.org)).