



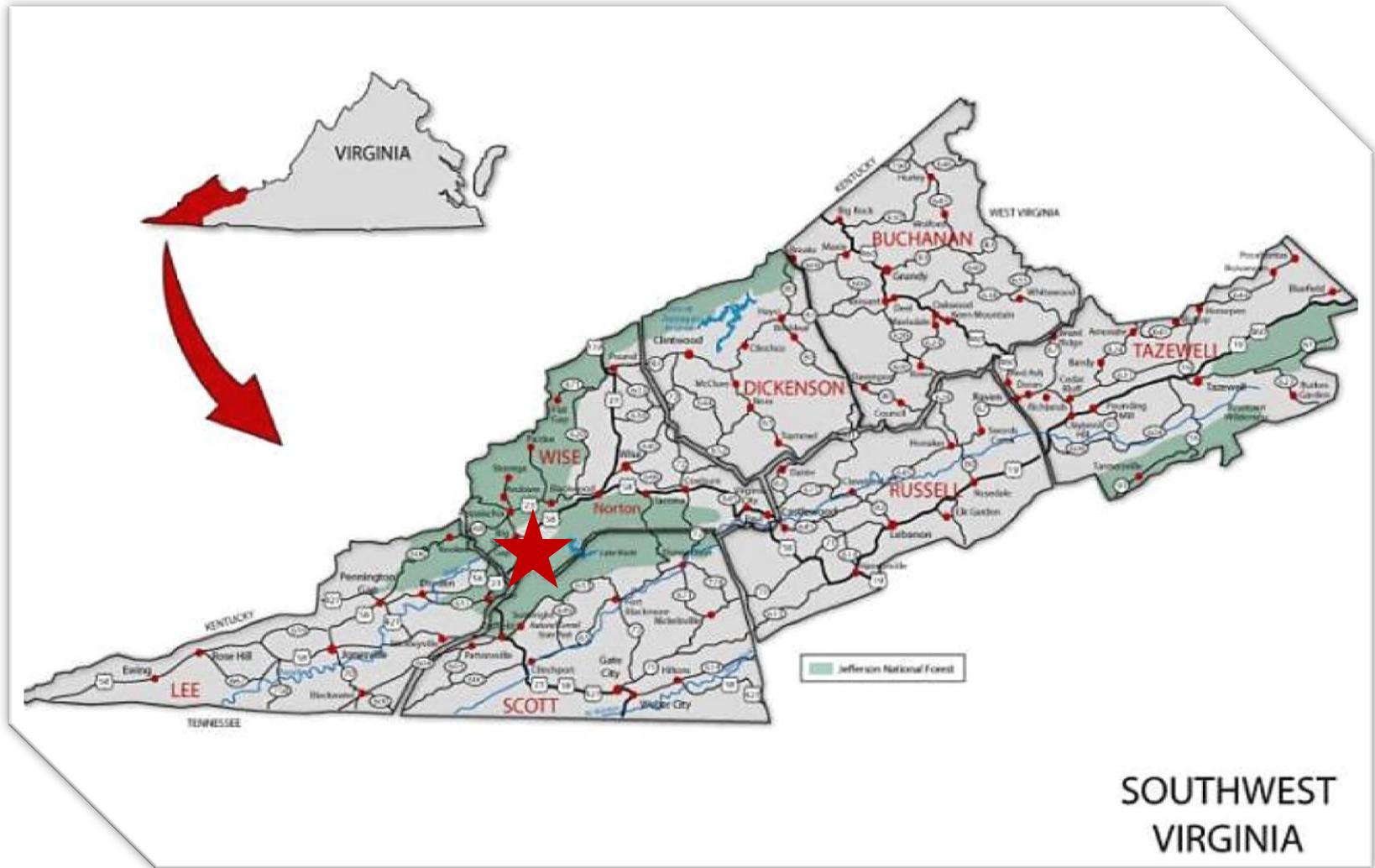
Mountain Empire
Community College

Unmanned Aerial Systems



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Where We Are/Who We Are



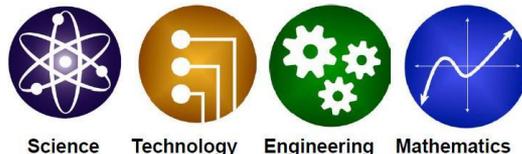
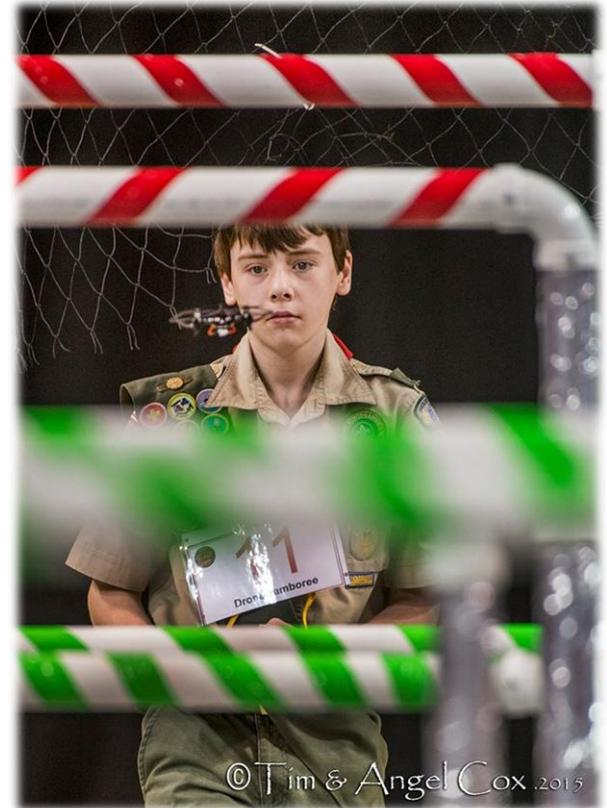
Mountain Empire
Community College



- MECC began classes in the Fall of 1972
- Over 100 academic programs of study in online, hybrid and traditional classroom formats
- More than 300 employees
- Average annualized headcount of 3,800 credit and 2,000 non-credit students
- Multiple off-site locations

Why UAS at MECC?

- ▶ Promote science, technology, engineering, and math (STEM) education and enable use of unmanned aerial systems research in areas of high poverty and unemployment
- ▶ Promote industrial and economic development through the development and promotion of the commercial unmanned aerial systems industry



Economic Development Initiatives



- ARC Grant: \$50,000 
- Wise County Industrial Development Authority
 - MECC Unmanned Aerial System Certificate Program





First FAA-Approved Drone Flight Delivery in the USA,
Wise, Virginia



<https://www.youtube.com/watch?v=RiKyDg1ShO8&feature=youtu.be>



UAS Initiatives

- Governor's School strand on manufacturing and student 3D printing project
- UAS is directly connected to MECC's advanced manufacturing programs
- Supporting regional advanced manufacturing strategy, including COE



Related Associate of Applied Science Degree Programs

- Computer-Aided Drafting & Design
- CADD – Mapping Specialization
- Computerized Manufacturing Technology
- Computer Networking Technology
- Computer Software Specialist
- Electromechanical Technology
- Industrial Electronics Specialization

Programs utilizing UAS Technology:

- Correctional Services
- Criminal Justice
- Energy Technology
- Environmental Science
- Forest Science
- Police Science
- Water/Wastewater Specialization



AVI 195– Introduction to Unmanned Aerial Systems

- Provides an introduction to the history, theory, design, construction, flight, and potential utilizations of unmanned aerial systems
- Focuses on quadcopters
- Taught Summer/Fall 2015 with 13-15 students enrolled in each class
- Will teach Summer/Fall 2016

AVI 195– Introduction to Unmanned Aerial Systems

- Students are loaned a Hubsan x4 H107C Quadcopter to practice flying throughout the semester.

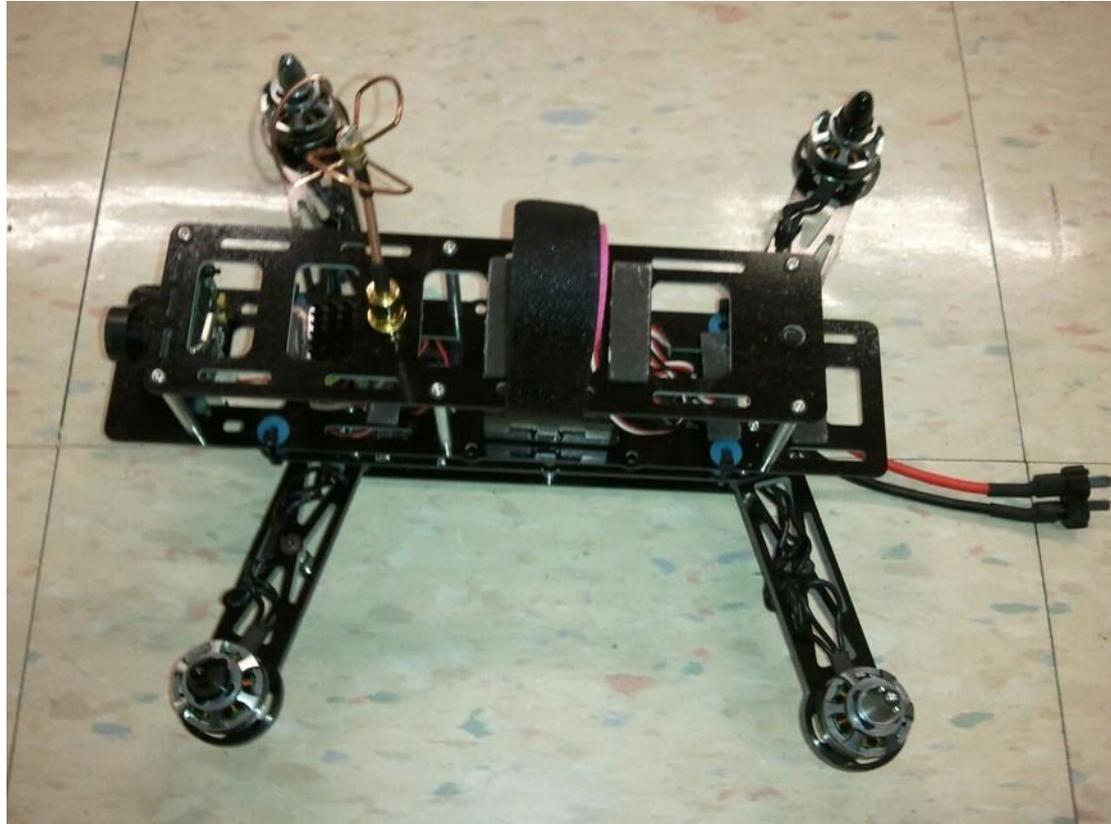


AVI 195– Introduction to Unmanned Aerial Systems

- Students assemble a drone.



UAS Technology



Petition for Summary Grant of Exemption Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012

- Submitted February 1



ARO 121 – Private Pilot Ground School

- Begins March 14
- Presents the fundamental principles of flight:
 - ✓ theory of flight
 - ✓ aircraft standards and specifications
 - ✓ basic aircraft construction
 - ✓ navigation
 - ✓ meteorology
 - ✓ principles of radio communication
 - ✓ application of aerophysics

ARO 121 – Private Pilot Ground School

- Prepares students for the FAA examination for private pilot rating
- Instructor Credentials
 - ✓ Bachelor of Science Degree in Aeronautics
 - ✓ Licensed Private Pilot
 - ✓ FAA Certified Advanced Ground Instructor

Proposed Career Studies Certificate – 24 Credit Hours

- Introduction to Unmanned Aerial Systems
- Geographic Information System I
- Devices & Applications I
- Private Pilot Ground School

- Data Acquisition & Processing
- Battery Management
- UAS Seminar & Project Fixed Wing
- UAS Seminar & Project Ground Station

Questions?



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