

Sinclair Community College

UAS Midwest: UAS Workforce Pipeline / Academic Programs



Dr. Andrew D. Shepherd
Executive Director & Chief Scientist
Unmanned Aerial Systems
August 7, 2019



National UAS
Training and Certification Center



UAS Training and Certification Center

Sinclair UAS Areas of Focus





UAS Training and Certification Center



COMMERCIALIZATION AND CIVIL APPLICATION ADVANCEMENT



Supporting industry adoption of UAS through collaborative development, testing, and commercialization

National UAS

Training and Certification Center
uas.sinclair.edu | Dayton, Ohio



ADVANCED SIMULATION



Enabling UAS training and operational testing through cutting-edge integrated Live, Virtual, Constructive capabilities

National UAS

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INTEGRATED DATA ANALYTICS



Providing advanced UAS data collection, processing, dissemination, and training

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APPLIED RESEARCH AND DEVELOPMENT



Advancing the UAS industry through real-world testing and analysis

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LEADING CURRICULUM AND CONSULTING



Delivering custom UAS instruction, hands-on training, and expert consulting through in-person, online, and hybrid formats

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UAS Market Growth and Need





UAS Industry Data

\$82 BILLION

Projected economic impact
between 2015-2025

100,000

New jobs in the U.S. during the first
ten years of commercial integration

\$718.5 MILLION

Investment in UAS since 2012 by
the 25 largest UAS companies

\$65 BILLION

Estimated civil UAS production
worldwide in 2016

\$166 MILLION

Venture capital funding for UAS
companies between April 2014 and
April 2015

10 PERCENT

Compound annual growth rate
expected for the UAS market from
2016 through 2021



UAS Training and Certification Center

Sinclair UAS Academic and Custom Training Programs

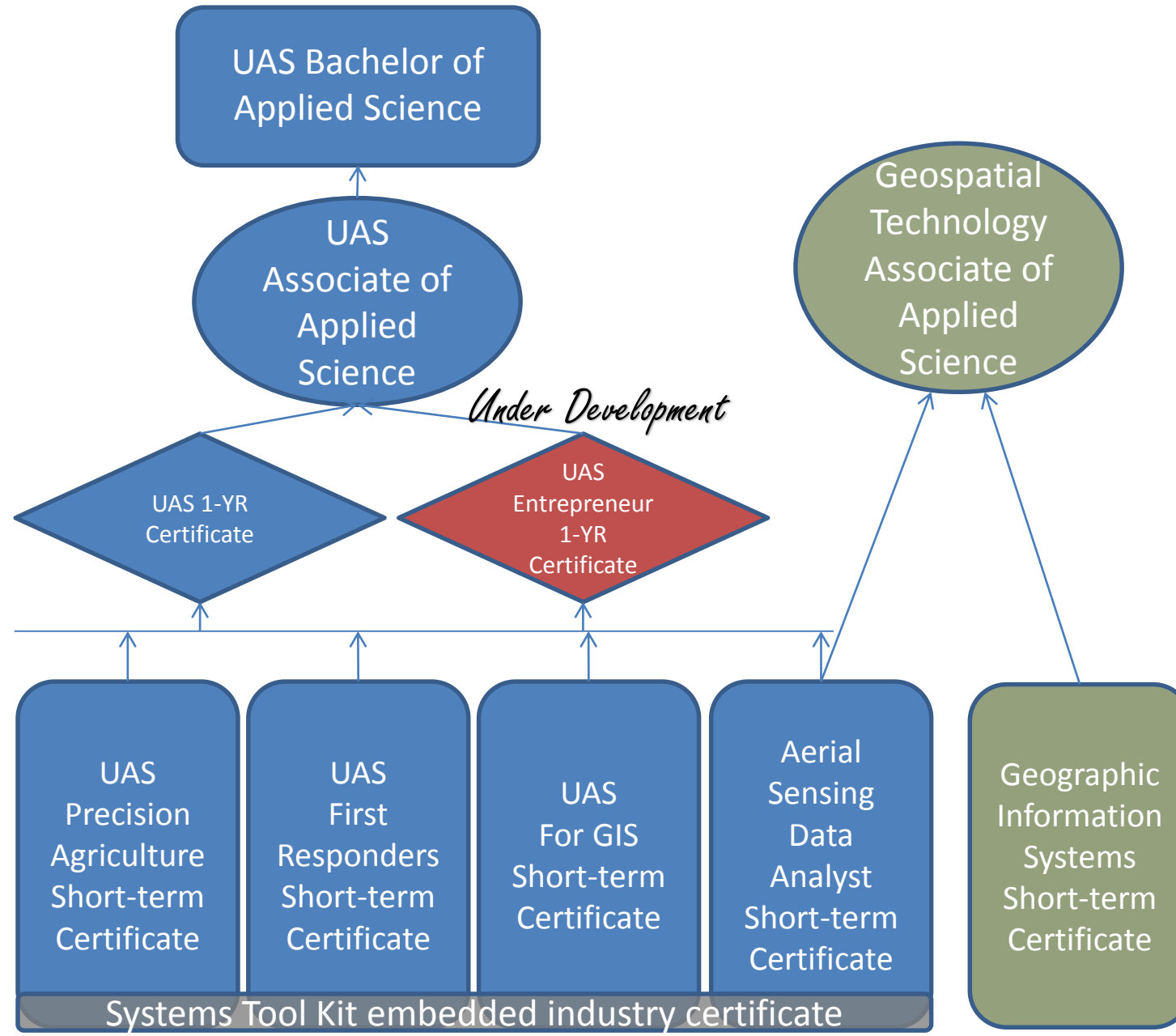




Academic Programs

- Experiential UAS programs:
 - Bachelor of Applied Science Degree
 - Associate of Applied Science Degree
 - One-Year UAS Certificate
 - One-Year UAS Entrepreneurship Certificate
 - Short-Term Technical Certificates
 - First Responder Leadership
 - Precision Agriculture
 - Geospatial Information
 - Aerial Sensing Data Analyst
- **393** total program enrollments across all certificate and degree programs

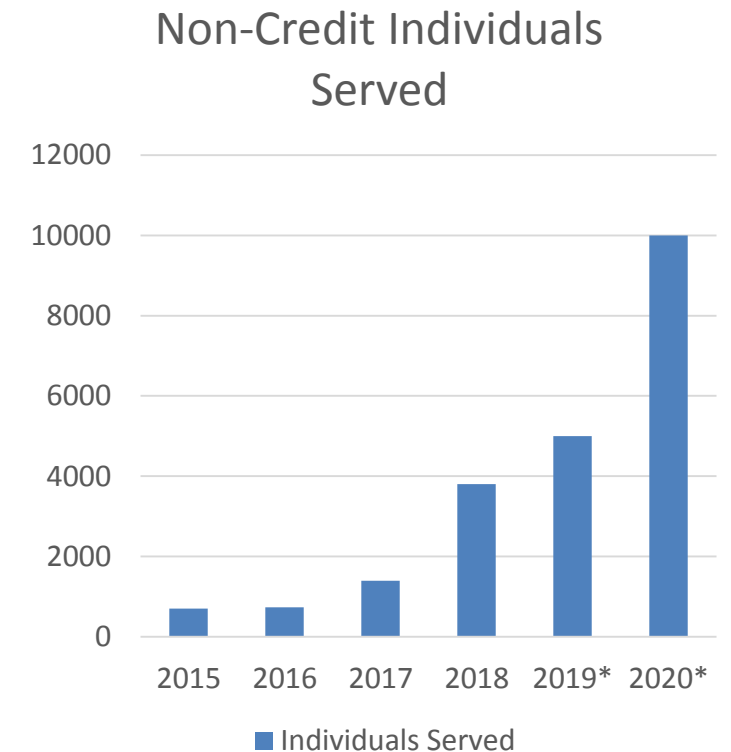






UAS Workforce Development and Custom Training

- Individuals Served (non-academic credit)
 - 2015: 701
 - 2016: 736
 - 2017: 1,401
 - 2018: 3,805
 - 2019: >5,000 (projected)
 - 2020: >10,000 (projected)





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Original Equipment Manufacturer (OEM) Training Partners





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UAS Entrepreneurship





NSF ATE Award Fast Facts

- Awarding Program
 - National Science Foundation: Advanced Technological Education
- Project Title
 - Integrated Entrepreneurial UAS Technician Education and Model
- Award Funding
 - \$546,207
- Period of Performance
 - October 1, 2019 – September 30, 2022
- Sinclair Project Leadership
 - Principle Investigator
 - Dr. Andrew D. Shepherd (UAS)
 - Co-Principle Investigators
 - Mr. Jeffrey A. Miller (UAS)
 - Dr. Jacqueline Housel (GEO)
 - Mr. Benjamin Sears (AVT)
 - Mr. Rocky Belcher (MAN)
- Projected Individuals Served
 - 120 undergraduate students
 - 15 college faculty
 - 700 pre-college (preK-12) students
 - 30 pre-college (preK-12) teachers
- Major Products
 - One-Year Certificate in UAS Entrepreneurship
 - UAS Entrepreneurship model and competition
 - High School STEM content



Core Project Partners





Intellectual Property Collaborators





UAS Training and Certification Center

Unmanned Systems Academic Summit - 2019





Unmanned Systems Academic Summit

- What
 - Fifth Annual Unmanned Systems Academic Summit
 - Co-sponsors:
 - The Ohio State University College of Engineering
 - Sinclair College National UAS Training and Certification Center
 - Expert presentations, demonstrations, and networking reception
- When
 - September 17, 2019: 7:45AM – 6PM
- Where
 - Sinclair Conference Center & National UAS Training and Certification Center
- Cost
 - Standard participants: \$125
 - Students: \$30



