Unmanned Aerial Systems Apprenticeship

This presentation consists of general capabilities information that does not contain controlled technical data as defined within the International Traffic in Arms (ITAR) Part 120.10 or Export Administration Regulations (EAR) Part 734.7-11.1.
A Strategic Alliance

The Nation’s First and Only Federally Certified Unmanned Aerial Systems Apprenticeship Program

Academia

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 ASSURE

The FAA’s Center of Excellence for UAS Research

Alliance for System Safety of UAS through Research Excellence

Industry

Bell

Beck

Aon

L3

Communications

RoboTAL

Griffon Aerospace

Government

North Central Texas Council of Governments

Federal Aviation Administration

Department of Labor

United States of America

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Russell Julian

- 22 years in U.S. Army Military Intelligence Officer
- Professional Aviator (FAA ATP, CFI, CFII, MEI, Comm Helicopter, Remote Pilot) (EASA Synthetic Flight Instructor)
- Trained 220 Pilots from 14 different nations in 9 different aircraft
- Why create a UAS Apprenticeship?
- UAS Industry Brief
- Apprenticeship Concept of Operations
- Questions

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Kelvin Solco
Retired FAA Southwest Regional Administrator
32 years at FAA
Certified Civil Engineer

Mark Sutton
“THE WIZARD”
Over 25 years in DFW RC Community
Founding member of RCDUG
UAS Industry Snapshot

UAS technology is the most significant Military to Commercial Transfer since GPS...

Remote Inspection $11.6B
Agriculture $5.9B
$20.6B Global Total Addressable Market
Live Events $0.5B
Insurance $1.4B

The Top Ten Drone States

Part 107 licences issued 2017, cumulative numbers

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Like PCs and the Internet, UAS Technology will impact industries far beyond Aerospace, like:

- Precision Agriculture
- Meteorology
- Aerial Surveying
- Highway Design
- Oil Spill Tracking
- Food Delivery
- Culture Preservation
- Sea Level Change
- Power Plant Emission
- FEMA
- Home Security
The number of UAS Jobs has increased by **420%** over the past year.
Why A UAS Apprenticeship?

• Standardization
• Safety
• Professionalism
• Aeronautical Decision Making (ADM)
- Non Line of Sight (NLOS)
- Night Operations
- >55 lbs
- Flight over Crowds
- Concurrent Operations
- Collision Tolerant and Confined Space Operations
- Crew Resource Management for UAS
- PEDS (Processing, Exploitation and Dissemination)
- UAS Maintenance
Manned Unmanned Integration Within the Region
Apprenticeship Structure
Professional Drone Operation is:

-30% Aeronautical Skills

-70% IT/Telecom/Project Management skills
Apprenticeship Completed in 3 Phases
2080 hours OJT
Competency based, 500-1,000 hours of RI

Phase 1: Aeronautical Phase
(Approx. 4 Months)
Objective: Develop a standardized safety focused airman who is capable of planning and executing UAS Operations in the National Airspace System

Student Pilot

Remote Pilot

Adv Gnd Instructor

Instrument Gnd Instructor

FCC Restricted Radiotelephone Operator License

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Phase 2: Technology Phase (Approx. 2 Months)

Objective: Build a firm technical and project management foundation

- The Internet of Things (IoT)
- GPS
- Telecom and Wireless
- Basic Electronics
- UAS Software packages

Phase 3: Specialized Work Experience

Objective: Via a series of 2 week rotations, Apprentices will have the opportunity to apply and develop their skills and ratings working in actual UAS jobs
UAS Apprenticeship Participant Requirements

- Read and speak English
- U.S. Citizenship
- No felonies involving illegal narcotics

Unmanned Aerial Systems (UAS) is the Future of Aerospace