



UNCREWED AERIAL SYSTEMS CERTIFICATE PROGRAM LEARNING OUTCOMES

1. Develop in-depth knowledge of FAA regulations, operational limits, and safety standards essential for the responsible and legal operation of uncrewed aerial systems (UAS), including environmental impacts and privacy concerns.
2. Gain practical skills in UAS flight operations, maintenance, and troubleshooting. Apply basic aeronautical principles and technical knowledge to ensure effective, proficient, and safe UAS operation in real-world scenarios.
3. Acquire advanced knowledge and hands-on experience with remote sensing technologies, including radar, LiDAR, multispectral, hyperspectral, and infrared imaging. Interpret and analyze data collected from various remote sensing platforms for informed decision-making.
4. Understand the engineering principles and technical specifications required to design, construct, and integrate UAS components. Develop practical skills in materials selection, fabrication techniques, and assembly procedures. Apply UAS technology in multiple industries and diverse fields such as agriculture, urban planning, environmental monitoring, and construction by creating high-resolution maps, 3D models, and conducting spatial analyses.
5. Gain comprehensive technical knowledge and hands-on skills in drone operations, mapping software, weather and meteorology, airport and FAA terminology, radio communication, and geo-spatial/GIS tools. Prepare for employment by mastering drone photogrammetry, aerial data collection, 3D modeling, and utilizing industry-standard mapping and media editing software for quality control and analysis.