



sUAS Resources

v1.1

Abstract

This is the beginnings of a master-list that represents the AGIC sUAS Work Groups' collective knowledge of current educational resources, available training and relevant credentialing that relates to sUAS or the sciences surrounding it.

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Foreword

This is a living document and it thrives on input! If you, the reader, have identified any resources you feel would be relevant to AGIC's interests, feel free to email the document's author Brett Seidell at btseidell@gmail.com and advise him of a request for inclusion of your resources.

Pilot Knowledge

The importance of possessing real, time-tested pilot knowledge and skills will increase your success rate for missions. During the FAA waiver process, your likelihood of gaining approval increases dramatically if you effectively communicate a command of this knowledge through the associated aviation vocabulary.

Aeronautical Information Manual

https://www.faa.gov/air_traffic/publications/media/AIM_Basic_dtd_10-12-17.pdf

Pilot's Handbook of Aeronautical Knowledge

https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/

FAA WINGS pilot proficiency program

https://www.faasafety.gov/WINGS/pub/learn_more.aspx

Part 107 Resources:

<https://forum.dji.com/thread-90806-1-1.html>

Professional Certifications

Certification through trusted and respected third parties is an excellent way to showcase time spent in your career and highlight your skillsets. The study materials recommended for these certifications is often of high quality, so pursuit of these certifications as a means of learning or acquiring new knowledge is a viable strategy.

ASPRS

Intro to program

<https://www.asprs.org/certification-program/introduction-to-asprs-certification-program>

Certification Exam Matrices

<https://www.asprs.org/asprs-certification-program/certification-examination-matrices>

Reference materials suggest by ASPRS for their certifications:

General Reference Materials*

- Remote Sensing and Image Interpretation - 7th edition, Lillesand and Kiefer 2015 •
- Elements of Photogrammetry 4th edition: With Applications in GIS, Wolf, Dewitt and Wilkerson, 2014 •
- Manual of Photogrammetry, 6th edition, J. Chris McGlone, editor, ASPRS, 2013
- Manual of Geographic Information Systems, Marguerite Madden, editor, ASPRS, 2009
- Manual of Airborne Topographic Lidar, Michael S. Renslow, editor, ASPRS, 2015
- Glossary of Mapping Sciences, Stephen DeLoach, editor, ASPRS, 1994
- Fundamentals of Remote Sensing and Airphoto Interpretation, Avery & Berlin, 5th edition, 1992

*These are suggested references, not authoritative sources for all exam questions

UAS Reference Materials*

- Introduction to the Unmanned Aircraft Systems, edited by Richard K. Barnhart, Stephen B. Hottman, Douglas M. Marshall J.D., Eric Shappee.
- Introduction to UAV Systems (Aerospace Series) 4th edition, By Paul G. Fahlstrom, Thomas J. Gleason. 2012, Wiley, John & Sons, Incorporated

*These are suggested references, not authoritative sources for all exam questions

NSPS CST

National Society of Professional Surveyors, Certified Survey Technician, Level 1-4
Spearheaded and maintained by the NSPS

<http://www.learnkst.com/>

AUVSI TOP Operator

Landing page

<https://www.auvsi.org/topoperator>

Certifying bodies

<https://www.auvsi.org/find-certifying-body>

Training providers

<https://www.auvsi.org/find-top-training-provider>

Local Training

Civil Air Patrol (CAP)

The civil air patrol has incorporated model aviation as part of their Aerospace Education initiatives for many years; however, new for 2019 are sUAS designations of 'mission pilot' and 'mission technician' for senior or cadet members. These designations fall under the CAP's 'Emergency Services' branch of operations. These profiles come with an associated list of standard requirements that you will be assisted in training towards and becoming proficient in.

<https://www.gocivilairpatrol.com/>

Arizona Model Pilots Society (AMPS)

Robust, AMA gold member model aviation club with a roster of some 200+ members. Strong participation from a core group of enthusiasts. Intro pilot training available from multiple, highly skilled club members. AMPS resources available during initial training. As an example, new pilots are trained on AMPS-owned E-flight Apprentice and Flyzone Sensei.

A large auxiliary field is sectioned off for helicopters and multi-rotors. Field goes deep into the desert and is replete with native foliage that serves as a natural obstacle course for practice.

<https://www.ampsr.com/>

General Training

Academy of Model Aeronautics (AMA); AMA Flight School

“We, the Academy of Model Aeronautics, are the pathway to the future of modeling and are committed to making modeling the foremost sport/hobby in the world.” - AMA

The AMA is a keystone organization in model aviation. Their flight school is the collection of all their programs and resources available for teaching and learning. Youth members up to 19 are allowed an AMA license free of charge. Model Aviation Student Clubs (MASC) enable special privileges to students and free membership for club leader.

<http://www.amaflightschool.org/programs>

DART Drones

Frontrunner in national sUAS training. Large variety of offered courses, including aerial photography, aerial videography, general flight training and advanced flight training through the AUVSI TOP Operator courses. Many other courses available.

<https://www.dartdrones.com/>

Universities

ASU

Aeronautical Management Technology (unmanned aerial systems)-

<https://poly.engineering.asu.edu/aviation/unmanned-aerial-systems-bs/>
<https://webapp4.asu.edu/programs/t5/majorinfo/ASU00/TSAMTUASBS/undergrad/false>

Unmanned Vehicle University

www.uxvuniversity.com

-Coursework & Certificates-

General Pilot Training

Aerial Cinematography Training

UAV moving vehicle Operations

UAV Thermal Infrared Operations Certificate

Professional Certificate in Unmanned Aircraft Systems Project Management

-Degreed Programs-

Master's Degree in Unmanned Systems Engineering

Doctorate Degree in Unmanned Systems Engineering

Yavapai College

AAS in Unmanned Systems

<https://www.yc.edu/v5content/pathways/auxillary/aviation/uas.htm>

AAS Aerospace science (plane/heli/UAS)

http://catalog.yc.edu/preview_program.php?catoid=13&poid=2731&returnto=1206

Embry Riddle-Prescott

BS in Unmanned Aircraft Systems

<https://erau.edu/degrees/bachelor/unmanned-aircraft-systems/>

Minor in Unmanned Aircraft Systems

<https://catalog.erau.edu/prescott/academic-programs/minors/unmanned-aircraft-systems/>

Embry Riddle-Worldwide

--Professional Development--

Professional Program in Small Unmanned Aircraft Systems (sUAS)

<https://proed.erau.edu/programs/small-unmanned-aircraft-systems/>

SUAS-1500 Fundamentals for Starting an sUAS Small Business

<https://proed.erau.edu/courses/fundamentals-for-starting-an-suas-small-business/>

SUAS-1300 Global Unmanned Aircraft Systems Risk Management

<https://proed.erau.edu/courses/global-unmanned-aircraft-systems-risk-management/>

SUAS-3000 SUAS Fundamentals for Public Safety

<https://proed.erau.edu/courses/suas-fundamentals-for-public-safety/>

SUAS-2000 SUAS Ground School

<https://proed.erau.edu/courses/suas-ground-school/>

SUAS-1400 SUAS Inspection Course

<https://proed.erau.edu/courses/suas-inspection/>

sUAS for Public Safety Certificate

<https://proed.erau.edu/programs/suas-for-public-safety/>

--Degreed Programs--

Master of Science:

Unmanned & Autonomous Systems Engineering

<https://erau.edu/degrees/master/unmanned-autonomous-systems-engineering/>

Master of Science:

Unmanned Systems

<https://erau.edu/degrees/master/unmanned-systems/>

Bachelor of Science:

Unmanned Systems Applications

<https://erau.edu/degrees/bachelor/unmanned-systems-applications/>

Penn State

Remote Sensing and Earth Observation- Graduate Certificate

<https://www.ems.psu.edu/academics/find-program-study/remote-sensing-and-earth-observation-graduate-certificate>

Professional Organizations

ASURE

<https://asure.asu.edu/>

Arizona Geospatial Information Council

<https://gis.azgeo.az.gov/agic/welcome-agic>

Aerospace Arizona

<https://www.aerospacearizona.org/>

AUVSI, Saguaro Chapter

<http://www.auvsi.net/saguarochapter/home>

Conferences

AGIC Symposium

<https://www.agicsymposium.org/>

AUVSI XPONENTIAL

<https://www.xponential.org/xponential2019/public/enter.aspx>

Aerospace Arizona Hosting the Arizona State Pavilion @ AUVSI XPONENTIAL

<https://myemail.constantcontact.com/You-re-Invited-to-Join-us.html?soid=1127068605595&aid=YdGgk8bq1HQ>