

AABI International

LIBERTY UNIVERSITY SCHOOL of AERONAUTICS	LIBERTY UNIVERSITY
	SCHOOL OF AERONAUTICS
	B.S. UNMANNED AIRCRAFT OPERATIONS
November 30, 2021	STUDENT ACHIEVEMENT DATA

Liberty University School of Aeronautics Pillars:

- Ensuring a world-class aeronautics experience
- Practicing stewardship to provide exceptional value to our students
- Training Champions for Christ to change the world

Our Vision: Advance the Great Commission by developing and training aerospace professionals through a distinctive Christian education

Our Mission: Equip, Mentor, and Send Champions for Christ into the Aerospace Community

1. Specific educational goals: LUSOA Unmanned Aircraft Operations (UAS)

- **Create graduates with technical competence:** Through a combination of both classroom and flight training, UAS majors will acquire the following certificates and ratings during their degree program: FAA Airplane Pilot ratings for Private and Instrument; FAR Part 107 certification; medium UAS certification.
 - All graduates of the UAS program are required to complete FAA Private and Instrument. One way we measure our technical competence goal (completion of required FAA certificates) is through graduation. See our results in section 3 below.
- **Prepare men and women of character:** The purpose of the UAS degree program is to prepare students to impact the UAS industry with world class knowledge, skills, and abilities. These aviation professionals will possess sound judgment and strong Christian character.
 - In order to be eligible for graduation, all Liberty University students are required to complete an average of 20 hours of supervised service each semester. One way we measure our character goal is by tracking Christian Service during each Fall semester. See our results in section 3 below.
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2. Program Assessment Measures: LUSOA Unmanned Aircraft Operations

In addition to the above specific measures, we assess program effectiveness in three general ways:

- Institutional Effectiveness (Documented processes with evidence archives)
- Strategic Planning (Culture of continuous evaluation, review, and improvement)
- Course Assessment Review Process (Stems from program learning outcomes)

LUSOA Unmanned Aircraft Operations: Learning Outcomes

- Apply Biblical principles within the unmanned aircraft industry.
- Apply science, technology, and mathematics to unmanned aircraft disciplines.
- Promote a healthy organization of safety culture in the UAS industry.
- Apply policies, regulations, and procedures to UAS flight operations.

Liberty University Institutional Effectiveness information: <https://www.liberty.edu/institutional-effectiveness/smart-numbers/fall-2020-smart-numbers/>

SOA conducts program assessment activities in a culture of continuous improvement:

- Comprehensive Assessment Plan on file with the Liberty University Office of Institutional Effectiveness (working document updated periodically)
- Assessment of each course by Residential faculty, documented in Course Assessment Reports (CAR) filed in Dropbox
- Liberty University's Office of Institutional Effectiveness leads a comprehensive assessment process documented in Chalk and Wire and managed by the designated SOA IE representative
- SOA's Dean conducts semi-annual strategic planning sessions and monthly goal meetings
- SOA's Dean hosts bi-weekly Chair and Deans' council meetings
- SOA's Associate Dean hosts weekly meetings with faculty and leadership to discuss curriculum, teaching, goals, assessment, and other priorities
- Semi-Annual Industry Advisory Board meetings
- Semi-Annual SOA administrators' review of student end-of-course surveys
- Annual Associate Dean Goals Report - Completed at end of academic year

Additional Program Assessment Measures

Procedures used to assure students meet all program requirements include:

- Incoming students take Math and English placement tests
- Required FAA medical certificates for all flight course students
- Students complete courses in applicable DCP; monitored by advisors; tracked by ASIST (Automated Student Information Services Tool) tool
- Students must pass 100-200 level courses with a D grade or higher
- Students must pass 300-400 level courses with a C grade or higher

Annual Assessment Day

Likert scale surveys, built from questions used in the focus groups, were sent to first-year SOA students, and SOA Junior and Senior classification students.

For each group, fifteen students were randomly selected and invited to attend the focus group discussion session.

- **First Year Students' Focus Group** (*Focus group forum limited to one hour.*)
 - Focus group comprised of 10 to 20 first year students sampled from any student who has taken AVIA 102 in the 2020 Fall or 2021 Spring semester.
- **Upper Classmen Focus Group** (*Focus group forum limited to one hour.*)
 - Focus group comprised of 10 to 20 upper classmen sampled from AVIA 460 or AVIA 491.

3. Graduation (Unmanned Aircraft Operations)

Integrated Post-Secondary Education Data System (IPEDS) is a system of interrelated surveys conducted annually by the U.S. Department's National Center for Education Statistics (NCES). IPEDS gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid programs. Liberty University's overall graduation rates can be found at the NCES webpage. The graduation rates are based on 150% of the time to complete a four-year degree (six years).

We extracted the information for Unmanned Aircraft Systems/Program graduates by year:

Year	Fall 2015	Fall 2014	Fall 2013	Fall 2012
Unmanned Aerial Systems/Program	73%	100%	71%	33%
All School of Aeronautics	66%	53%	69%	63%

During Fall 2021, the School of Aeronautics adopted a goal to measure completion of Christian Service (CSER) during each fall semester. Analysis of student participation in CSER among students in the Unmanned Aerial Systems Program is as follows:

Note: Overall measures include all residential Aeronautics students.

Year	Aeronautics Majors	CSER Completed	Rate	UAS	CSER Completed	Rate
Fall 2021	615	pending	-	39	pending	-
Fall 2020	523	218	42%	34	16	47%
Fall 2019	464	297	64%	36	27	75%
Fall 2018	415	252	61%	42	26	62%

4. Rates and Types of Employment of Graduates (2016-2020)

Annual Alumni Survey

Liberty University’s annual Alumni Survey is conducted each Fall semester. Alumni from the most recent academic year as well as 5, 10, and 20-year cohorts are invited to participate. Survey content is developed to align with reporting needs for both regional and programmatic accreditors, as well as national surveys. The survey contains both a core and department-specific section of questions. The survey core includes questions regarding gainful employment, skill preparation, and overall satisfaction with the school. Academic departments include items for their graduates in the department-specific sections. Feedback is used to inform improvement efforts and for accreditation reporting needs.

Unmanned Aviation Operations (UAS)	Survey Year (cohort)				
	2016 (16*)	2017 (16/17)	2018 (17/18)	2019 (18/19)	2020 (19/20)
Survey Respondent (n)	5	7	3	5	1
Employed/Placed (n)	5	7	3	4	1
Job Directly or Somewhat Relevant (n)	2	2	2	4	1

**In 2017 we began sending the alumni survey to the academic year cohorts, thus 2016 has only those who graduated in Spring 2016 and not Fall 2015. Employed/placed includes alumni who reported the following: full-time or part-time employment, military, self-employed, or placement in mission or volunteer services. It excludes the following: retired, continuing education, other, no answer, and caring for home/family.*

Employers and Job Titles:

- Department of Homeland Security, Transportation Security Agency (2016)
 - Transportation Security Officer
- HAZON Solutions (2016)
 - Remote Pilot in Command
- Textron Systems (2016)
 - UAS Operator
- Occupations provided with no employer listed
 - Server (2016)
- AquaPhoenix (2017)
 - Industrial Production Associate
- Broadridge Corporate Issuer Solutions (2017)
 - Consultant
- UAV (2017)
 - Drone Pilot
- Go Unmanned (2018)
 - Part 107 Instructor/ Sales Support
- Horizon Flight Center (2019)
 - Certified Flight Instructor

Types of Employment:

- Aviation Management
- Flight
- Aviation Electronics
- Safety
- Material or Equipment Supplier