

**Virginia Space Grant Consortium (VSGC)
Graduate Research Fellowship**

Aerospace Workforce Research & Analysis: Assessing and Defining the Workforce Needs in Virginia

Performance Period: May 27 (or ASAP) – August 15, 2026

Compensation: \$5,000 fellowship plus up to \$1,000 in travel support

Virtual Fellowship with some Onsite Visits to Employers

Research Mentor: Bud Oakey, Virginia Aviation Business Association

VSGC Contact: Chris Carter, cxcarter@odu.edu.

Open to any graduate student attending a VSGC member institution (Hampton University, Old Dominion University, University of Virginia, Virginia Tech, William and Mary)

1. Statement of Need

The Virginia Aviation Business Association (VABA) and Virginia Space Grant Consortium (VSGC) have identified a critical need to better understand and communicate the diversity of jobs within the aerospace sector in Virginia. The current public and academic perception of aerospace careers is narrow, often limited to pilots, astronauts, engineers, and airline staff. However, the industry encompasses a much broader array of roles—including analysts, logisticians, metal shapers, fabricators, electricians, programmers, technicians, aviation maintenance professionals, and more. Many of these jobs fall under various Standard Occupation Codes (SOC) and Standard Industrial Classification (SIC) codes and are not easily identified as “aerospace” positions.

This lack of awareness hinders effective workforce development and academic programming and pathways offered by K-12 schools, Career and Technical Education (CTE) programs, community colleges, trade schools, and higher education. There is a pressing need for targeted research to map these opportunities and inform stakeholders.

2. Fellowship Objectives

VSGC will fund a student fellow to work with VABA and the VSGC to perform research, engage stakeholders, analyze results of a workforce survey, conduct analysis on existing job opportunities and positions, and provide a report and recommendations. The fellow will also contribute to the full final report prepared by VSGC and VABA. Ideal candidate would be a graduate student with strong data and analytical skills and good communication skills. The position duties include interviewing employers to gain insight into their workforce needs. An interest in a career in the field of aerospace is helpful, but not required.

The fellow will be mentored by Bud Oakey at VABA. Oakey and Carter will assist the fellow with getting connected to stakeholders and other partners to facilitate the initial stage of

the research. VSGC will host the online survey and provide a link that can be disseminated to target audiences.

Research Tasks:

- **Research Aerospace Job Openings and Position Descriptions:** Review current job ads and openings in Virginia in the Aerospace sector and compile a list of what employers are seeking, including: desired education/degrees, credentials, certifications, competencies, skills experience, and other qualifications. This will assist the Fellow in understanding the aerospace sector and workforce tasks/duties.
- **Employer Engagement and Interviews:** Conduct site visits to aerospace employers in Virginia to interview workers and observe the work being done. VABA/VSGC will coordinate 2-3 site visits during the period. About 10-12 virtual interviews will also be arranged to talk with business owners to identify job roles, consistent hiring needs, and required skill sets.
- **Review and Analyze Survey Data:** Review data and summary report from the online survey results and integrate into the report. Contribute to the full final report.
- **Analysis & Reporting:** Synthesize findings into actionable insights for workforce development and academic alignment.
- **Professional Development:** Ensure the fellow gains meaningful experience, develops research and communication skills, and produces a tangible work product.

Deliverables

- Compile a list of aerospace-related businesses (general aviation, advanced air mobility, UAS, manufacturing, maintenance, etc.). Reference industry directories, association lists, and state economic development resources.
- Review current job ads and openings in Virginia in the Aerospace sector and compile a list of what employers are seeking.
- Notes and transcripts from employer interviews.
- Analysis of interviews, survey data, and online research to identify trends in workforce demand and skills gaps.
- Prepare a final report summarizing findings, including:
 - Inventory of aerospace jobs and businesses
 - Analysis of workforce needs and gaps
 - Recommendations for academic and workforce development alignment
 - Appendices with interview notes and data tables

- Contribute to the full final report to assess aerospace workforce needs.

Expected Outcomes

- **VABA:** Actionable intelligence to inform advocacy, policy, and program development.
- **For the Fellow:** A professional research report, enhanced communication and analysis skills, and direct engagement with industry stakeholders.
- **For Stakeholders:** Improved understanding of aerospace workforce needs, supporting targeted education and recruitment efforts.

Final Work Product Outline

Title: Virginia Aerospace Workforce Inventory & Analysis

Sections:

1. Executive Summary
2. Introduction & Background
3. Methodology
4. Industry Overview
5. Business Inventory & Interview Findings
6. Workforce Demand Analysis
7. Recommendations for Workforce Development & Academic Programs
8. Appendices (Interview Questions, Data Tables, Business List)

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More information about Virginia Space Grant Consortium, <https://vsgc.odu.edu/>

VSGC Graduate Research Fellowships are add-on awards for research of specific interest to NASA. These Fellowships can complement and enhance existing research being conducted by the student.

Fellowships are awarded by VSGC with funds from NASA Space Grant or the Commonwealth of Virginia (for students receiving federal funding). Old Dominion University (ODU) is VSGC's host institution. VSGC is an affiliate of the ODU Research Foundation which serves as VSGC's fiscal agent.

To apply, send a letter of interest and resume to Chris Carter, VSGC Director, cxcarter@odu.edu.

