

## **MUREP High-Volume Manufacturing and Supply Chain Management (MUREP High Volume)**

**Title: NASA MUREP Aerospace and Advanced Manufacturing Education and Training Program at ECSU**

**Institution: Elizabeth City State University**

**City/State: Elizabeth City, NC**

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### **Summary:**

The proposed project seeks to establish a regional aerospace high-volume manufacturing educational and training hub at Elizabeth City State University (ECSU). The goals of the proposed project are to:

- Develop organizational systems and mechanisms required to meet the workforce needs of the aerospace manufacturing industry in the region.
- Strengthen education capacity at ECSU and partnering high schools and community.
- Generate interest in aerospace manufacturing careers among the future workforce and increase the pipeline of qualified workers.

The roots of aerospace and defense industrial base are planted in the broader manufacturing ecosystem, which is the backbone of the nation's aerospace and defense technical advantage. It continues to be one of the largest contributors to the nation's economy. Several industry reports have indicated that there is currently a skills gap affecting the manufacturing industry. The result has been manufacturers that are facing difficulties filling open positions due to a lack of qualified and skilled applicants. An assured domestic skilled workforce will be key to meeting the demand. Further, a vibrant, diverse supply chain network needs to be ready to meet the needs of high-volume manufacturing as well as maintenance support.

ECSU's project site will collaborate with small businesses, industry and economic development alliances, non-profit organizations, and other institutions of higher learning to implement a comprehensive strategy to address the need for aerospace manufacturing future needs. The outcomes will directly support the NASA Office of Education Multi-Year Performance Goal and Annual Performance Indicators.

The proposed MUREP project will support student development through activity components that are fully integrated to form a comprehensive support system. The key components of the project activities are:

1. Redesign and enhance existing courses in the curriculum.
2. Provide targeted training for meeting industrial certification competencies.
3. Provide internship opportunities.
4. Engage students in real-world (authentic) design and manufacturing projects.

The proposed project will increase the number of students prepared to enter college and pursue STEM degrees. The NASA MUREP Aerospace High-Volume Manufacturing project at ECSU will also serve as an educational, research and development resource to assist school districts and

community colleges in designing innovative, career-relevant curricula, instructional approaches and uses of technology. The site's role in support of other districts in the region is to serve as a model for infusing aerospace manufacturing education and cutting-edge technology training and be a technical resource for small businesses and entrepreneurs.

The project team is committed to conducting both formative and summative evaluation and report results to the NASA Office of Education on a regular basis. Additionally, the project team will disseminate project results through a dedicated website, social media, program brochures, news releases, project newsletters, and publications in technical and educational conferences/journals.