Program-Title University Nanosatellite Program (UNP) **STEM Inventory**

Entry# 115

Professional Association-based | Non-Profit-based | Government-based Org-Type

AFRL/VS. AFOSR, AIAA Lead PoC

N/A

PoC-Phone N/A PoC-Email nanosat@kirtland.af.mil

Address

URL

Service-Region Nationwide

Type Student Program

Space | Engineering | Technology **Subjects**

Level Undergraduate

Other-Objectives The main focus of this program is small satellite research and development.

Demographics Served-per-Year

Content

The Nanosat Program has two distinct stages. The first stage is a Nanosat design and protoflight build phase, which lasts approximately two years and culminates in the AIAA Student Satellite Flight Competition Review (FCR). All universities are partially funded by the AFR and construct a protoflight Nanosat while participating in various design reviews and program-sponsored hands-on activities and workshops throughout the two-year period. All universities are evaluated based on several criteria, including Student Participation/Education, Technical Relevance/Excellence, and Flyability (meaning that the hardware adheres to strict quality assurance and spaceflight qualification practices). FCR judges are a distinguished panel of government and industry professionals. The second stage of the Program begins after the Nanosat is selected for flight integration and test via the Flight Competition Review at the end of the two year competition period. The university-built flight Nanosat is expected to be flight-ready (standards for spaceflight hardware and associated documentation has been tracked through a rigorous quality and configuration management process) and delivered to AFRL immediately following the FCR. This second phase consists of accelerated integration with a separation system and environmental test of the protoflight Nanosat in the months following FCR, and culminates in a potential launch opportunity.

Outcomes

The objectives of the program are to educate and train the future workforce through a national student satellite design and fabrication competition and to enable small satellite research and development (R&D), payload development, integration, and flight test.

Funded-Through Started

Length Cost

Primary-Funding Primary-\$

Materials

Other-Funding How-Assessed

Best-Practice-Why

Promising-Practice

Sponsor-Org Sponsor

Sponsor-Phone Sponsor-Email

Other-Orgs