



# base<sub>11</sub> PROJECT

## The Aerodrome

“ Our partnership with Base 11 will position thousands of low resource, high-potential students for high paying jobs in the UAS industry. ”

- Jon Rimanelli ,Founder/CEO, Detroit Aircraft, LLC.

The Aerodrome, the Base 11 “teaching airport”, consists of an educational network of pilots, UAS designers, maintenance and repair technicians, innovators, academic and business partners, and students from elementary schools to the graduate level. Equipping STEM students from underserved communities with the excitement of unmanned aircraft systems, Aerodrome provides access to top-notch aerospace designing and manufacturing opportunities as it exposes the workforce of tomorrow with the opportunity to build, fly, maintain and repair unmanned aircraft systems that will change the future of the aviation industry

The Aerodrome seeks to pave the aviation industry road forward, laying the foundation for future UAS workforce and entrepreneurs.

### Goals & Objectives

- Create the knowledge and skill levels required to fast track the job-readiness of students interested in pursuing high-wage positions in UAS design, maintenance, repair, piloting, aviation law, engineering, aeronautics, and aerospace.
- FAA certificates in maintenance and repair
- Establish new and innovative aerospace technologies, and small business entrepreneurs and owners in STEM fields

### Expected Outcomes

- Give students real-world, hands-on experience in unmanned aircraft systems
- Supply workforce base in the STEM fields of tomorrow

### Key Success Milestones

- Engage students in firsthand experience with emerging technologies starting in Summer 2015 at The Aerodrome @ Bullock Field in Boulder City NV, and building it out to other locations across the nation
- Proof-of-concept for educational model by reaching desired student reach of 700+ per enrollment

### Instructional Components

- Classroom and hands-on training, apprenticeships, job placement and entrepreneurial development



# base 11 Aerospace Fellowship

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## Overview

Base11's Aerospace Fellowship Program awards scholarships to selected persons<sup>1</sup> based on a demonstrated academic achievement, a financial need and an interest in the aerospace field. The objective of the Base 11 Aerospace Fellowship is to guide and empower high potential low resource students to achieve one or more of the following three goals by the conclusion of the two-year program:

- To gain acceptance at a 4-year degree college or university
- To receive an offer of employment within a STEM related industry
- To launch a STEM (Science, Technology, Engineering, & Math) related business enterprise.

## Program Details

Each two-year fellowship award includes the following:

- Paid tuition at Orange Coast Community College or West LA College
- Books
- Housing
- A Student Cohort Leader
- Personal development coaching
- Weekend labs at hanger/offsite
- Eligibility for a scholarship to a 4 year college or university to pursue an aerospace related degree
- An academic advisor and a specialized course work (curriculum) plan
- Opportunities for paid internships

## Eligibility

Students applying for this fellowship must satisfy the following criteria:

- Students should demonstrate an interest and aptitude in aerospace and aviation
- Students must have a minimum 3.0 GPA
- Students must demonstrate a financial need

## Requirements While in Program

Accepted students must maintain the following minimums:

- Must maintain a 3.0 GPA
- Must have a minimum of 90% attendance to all activities (prior notice of cancellation necessary)
- And if necessary, follow an Academic Enrichment Plan\*

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<sup>1</sup> Persons include - High school students, community college students, persons returning to the workforce, veterans, etc.

**\*Academic Enrichment Plan**

Any student unable to maintain the minimum requirements during the program will be placed under an Academic Enrichment Plan. This plan requires that the students perform the following actions:

- Student will have one semester to reach the 3.0 GPA requirement
- Student is mandated to check-in weekly and provide a status report to their Student Cohort Leader
- Student is mandated to attend tutoring sessions
- Student is mandated to attend all program events

## **CALTECH AEROSPACE MENTORSHIP PROGRAM FOR STEM STUDENTS**

### **STUDENTS**

The students in the Aerospace Mentorship Program will be identified by Base11 and accepted for participation by the Director of the Aerospace Department (GALCIT) at Caltech. Eligibility criteria include a demonstrated interest and aptitude in aerospace engineering and aviation, and a minimum 3.0 GPA.

### **PROGRAM DESCRIPTION**

The Aerospace Mentorship Program has two parts:

**1. Academic Year Mentorship for a small group of eight to ten students.**

The student participants will visit the Graduate Aerospace Laboratories at Caltech one day a month as a group. Opportunities will be provided for

- one-on-one mentorship from the Aerospace Graduate Student STEM Fellows
- attending research conferences and lectures
- exposure to current research projects in Aerospace
- learning about the experimental environment, how problems are identified and projects defined to achieve a better understanding and work towards solutions
- laboratory tours of specialized research facilities such as the hypersonic shock tube, the wind tunnel, and space structures lab
- interaction with current graduate students in Aerospace

**2. Participation in a summer undergraduate research program in Aerospace for four students.**

The summer program will introduce students to research under the guidance of graduate students in the Aerospace Department at Caltech. Student participants will experience the process of research as a creative intellectual activity as part of the Graduate Aerospace Laboratories at Caltech (GALCIT). The program is modeled on the grant-seeking process and will be integrated with the Caltech SURF and WAVE programs:

- Students collaborate with mentors to define and develop a project
- Participants write research proposals for their projects, working with their graduate student mentors
- The proposals are reviewed by Faculty advisors
- Students carry out the work over a 10-week period in the summer, mid-June to late August

- **At the conclusion of the program, they submit a technical paper and give an oral presentation in the department modeled on professional technical meetings**
- **Participating students receive a \$6,000 stipend for the ten-week period.**
- **For enrichment to the research experience, the participating students are invited to attend the following:**
  - **Informal talks and research group meetings with GALCIT students and faculty**
  - **Weekly seminars by Caltech Faculty**
  - **A professional development series sponsored by the Student-Faculty Program on developing a research career, graduate school admissions, and other topics of interest to future researchers**
  - **Various social and cultural activities**
  - **Special field trips**