

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Lift Off - Secondary Space Education (2)

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CHALLENGES AND OPPORTUNITIES FOR STEM EDUCATION IN COSTA RICA: EXPLORING  
THE FEASIBILITY OF A SPACE BOOTCAMP.

**Abstract**

Challenges and Opportunities for STEM Education in Costa Rica: Exploring the Feasibility of a Space Bootcamp. Access to high quality and affordable STEM careers in Latin America is not meant for everybody. Lack of incentivisation and encouragement from professors and institutions towards students to pursue such careers, especially in female students, who are still a minority in these disciplines. This is reflected by the smaller number of students that enroll every year to the previously mentioned disciplines. In Costa Rica, for instance, some of the challenges in STEM advancement include i) Only 17% of students enroll in STEM disciplines. In this context, Bootcamps offer a great opportunity to learn something in a fast paced environment where students can explore and innovate in ways that are not taught in a typical classroom. They can boost their learning about one or more topics in a short period of time (typically 2-6 months). Research has proven that bootcamps offer a great opportunity to step into a new career, increase job prospects, and become more up-to-date to new trends and technology. Most bootcamps require expensive fees to get accepted due to availability, cost of materials and other resources and fixed costs related to facilities and personnel. This paper focuses on exploring the possibility of creating a 8-week space education bootcamp focused in rocketry, satellites and astronomy in Costa Rica for ages between 14 and 18 years of age, leveraging the existing capabilities of the country. Furthermore, the former follows a specific approach gathering information through both (i) surveys to academia, public institutions and non-governmental organizations and (ii) short interviews of the program's mentors, organizers, advisors, and cohort members. Understanding these is a relevant source of information for designing and or enhancing other similar programs that chooses to address space-centric education! The qualitative approach taken culminated with insights on how the bootcamp can effectively address the needs of students and the educational community.

keywords: STEM, education, astronomy, rocketry, Latin America