IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Enabling the Future - Developing the Space Workforce (5)

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TECSPACE: A STUDENT RUN ORGANIZATIONAL MODEL FOR UNIVERSITIES THAT LACK AN AEROSPACE ENGINEERING FACULTY OR ACADEMIC DEGREE IN DEVELOPING COUNTRIES.

Abstract

The access to aerospace fields has been usually limited to developed nations. Developing countries struggle to get involved in these enterprises, either because of lack of funding, experts in the area and in some cases information to start researching and gaining hands on experience in space technologies. This is a problem to academic environments where students and researchers seek to get involved with space related projects. TECSpace was born as a way to address this issue.

TECSpace is a student run organization born in the Costa Rica Institute of Technology (TEC). It focuses on aerospace research via project development, lectures with experts, international competitions and workshops regarding rocketry, robotics, and other aerospace related endeavors. This is a way to let students have their first experiences developing and managing an aerospace mission. TECSpace promotes an environment of respect, perseverance, tolerance and interdisciplinary projects where soft skills such as leadership and problem solving merge to generate technical capabilities in students. The organization also promotes diversity and equality in the aerospace sector; as it follows the "3-G" Diversity principle, which seeks to promote diversity in terms of generation, geography and gender. TECSpace is an open platform where all students can participate, learn, achieve and contribute in order to help aerospace become a viable field of study and work in the country, right now TECSpace counts more than 300 members involved.

Structurally, it consists of three main branches that act as a ladder from which students can go from zero knowledge in the area to work on space related projects. TECSpace offers lectures that generate interest and inspire students to engage in the area. It then proceeds to provide basic knowledge regarding the area they want to work on in the future via workshops. Once the student has achieved the basic tools to start working on research and development they can either work on one of the TECSpace aerospace projects or participate on international competitions such as: Cansat Competition, Mission Idea Contest

and ARLISS (A Rocket Launch for International Student Satellites).

The whole idea of this student run organization is that it can serve as a replicable model for other academic institutions in developing countries, providing them with capable students who have hands-on experience and basic knowledge in the field. So that in the future they can kick-start their own aerospace endeavours and be part of the future that space development promises.