

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
On Track - Undergraduate Space Education (3)

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INCLUSIVE EDUCATION TO ENABLE FUTURE HUMAN SPACE EXPLORATION

Abstract

Within our lifetime, space commercialization, travel and exploration will not only call for appropriate technology and operations, but the need for widespread and accessible human spaceflight training programs.

In the USA, astronaut applicants have a 0.6% chance of being selected by NASA to pursue a chance to space. Given these statistics, it seems economically appropriate that current STEM-related training programs position students to focus on experimentation and design as opposed to skill set preparation for potential firsthand space exploration.

To date, only a small number of educational courses put forth by public and private organizations contain applicable experiential spaceflight training. These come with restrictions to undergraduate students such as background experience requirements and high price points.

This paper shares insight into a college credit program started in 2018 called Mission Spaceflight. Created as a career development course for students of any major or background, it combines classroom-based instruction with experiential hands on training to encourage student pursuit of human spaceflight. Focused on pressure suit operations, smoke and fire response and emergency spacecraft egress, students build baseline skills designed to prepare them for the flight opportunities of tomorrow. From scheduled commercial tours to on-orbit construction, we will no longer only require pilots, engineers and research experts in space, but welders, tour guides, and flight attendants. Removing current barriers to entry allows students in traditional and nontraditional space the access to qualifications once reserved for professional astronauts. This process facilitates the inspiration and ability students from all backgrounds require to develop paths towards the stars.

This paper continues to expand on the program's progress and intentions to eliminate perceived barriers in attitudes towards human flight. Through implementation of lower price point models and online coursework the program can improve content accessibility thus negating any student anachronistic belief that human space exploration is an insurmountable education path.

As the coming decades of space commercialization, travel and exploration are more promising than ever, we must enable all corners of the workforce with the skills and attitudes necessary to realize our fruitful future in space.