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

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EMPOWERING THE NEXT GENERATION: INTEGRATING STEM EDUCATION AND SPACE EXPLORATION THROUGH INTERNSHIPS AT SHARJAH ACADEMY FOR ASTRONOMY, SPACE SCIENCES, AND TECHNOLOGY

Abstract

Educational institutions globally are placing a heightened emphasis on STEM (Science, Technology, Engineering, and Mathematics; or very recently STEαM, where α is for arts) due to dwindling student interest in these fields. Addressing this trend, the United Arab Emirates has harnessed its space exploration initiatives to invigorate education, leading UAE universities to introduce degrees in space engineering and sciences thanks to governmental initiative towards a space economy. To fill the STEM knowledge void, targeted space technology internships have been established. Spearheading this effort in the Gulf region, the Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST) provides summer internships to students across the UAE, managing several cutting-edge research facilities ranging from CubeSat development to Space Artificial Intelligence.

Engineering and science students are mandated to complete an 8-to-12 week internship to proceed in their academic journey. Since 2018, SAASST has seen a marked increase in internship applications, with the number of accepted students climbing from a dozen in 2018 to roughly triple this number in 2023. While a majority of these interns are from the University of Sharjah, approximately $\sim$20% hail from other UAE universities, reflecting a wide interest in the program. Under the supervision of dedicated advisors, interns immerse themselves in a rigorous program aimed at honing their understanding of lab-focused theories, practical skills via direct training, and advanced problem-solving abilities. Additionally, they partake in weekly scholarly activities and produce a comprehensive report detailing their internship insights. This paper will explore SAASST's role in weaving STEM education into their internships, showcasing its impact on nurturing the aerospace sector's future talent.