

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

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EDUCATION OPPORTUNITIES UNDER THE UNITED NATIONS ACCESS TO SPACE FOR ALL
INITIATIVE: ACHIEVEMENTS IN 2022-2023

Abstract

The United Nations Office for Outer Space Affairs (UNOOSA) works to promote international cooperation in the peaceful use and exploration of space and in the use of space science and technology for sustainable economic and social development. As part of its work and under the Access to Space for All Initiative, UNOOSA provides tracks that offer gradual learning steps to help participants develop capabilities. Each track contains a variable number of opportunities under a theme and currently, there are three tracks; Hypergravity/Microgravity Track: designed with the end goal of developing the capacity of running space experiments onboard orbital vehicles or space stations; Satellite Development Track: aiming at building the capacity to design, develop, test, operate and utilize a satellite; and Exploration Track: designed to cover aspects related to space exploration beyond the geostationary orbit.

Each track is underpinned by three components; the hands-on component, tools component, and education component, to provide a complete capacity-building programme. Under the hands-on component, UNOOSA provides 9 on-ground and on-orbit experiment opportunities. The tools component is a collection of open and free software and tools that can support the implementation of the different activities for the hands-on component. The education component provides the theoretical foundations needed to take part in the opportunities under the hands-on component and utilize the tools provided under the tools component. The education component consists of workshops, webinars, fellowships, and teachers' guides. A curriculum for academia and research institutes and a series of Massive Open Online Courses (MOOCs) for applicants of the hands-on component are being developed aiming at helping capacity building in developing countries.

The Initiative is supported by governmental, intergovernmental and private sector entities, which are providing access to world-class facilities and infrastructure to support the development of technical and scientific capabilities in the different tracks. Partnerships are a distinctive feature of the Initiative. UNOOSA is working on establishing new partnerships to cover some of the gaps identified in the Initiative and expand its portfolio. New contributions to the initiative are possible and encouraged.

This paper will provide an overview of the activities carried out under the initiative, especially focused on the education component together with lessons learned, future prospects, and upcoming application opportunities.