

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
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Author: Mr. Francesco Axel Pio Romio
University of Ferrara, Italy

ARCHITECTURE FOR OUTER SPACE: A NEW CHAPTER IN POST-GRADUATE EDUCATION
FOR ARCHITECTS, ENGINEERS AND DESIGNERS.P

Abstract

During the last decades, the space sector has witnessed an increasing interest from the general public due to a rising new space economy, with the creation of several new companies and job opportunities, and new inspirational and international programs and missions, such as Artemis. Within this framework, the discipline of Space Architecture, once mostly confined to the restricted sphere of national space agencies, has evolved and is continuing to do so, attracting the interest of architecture students around the world, who are intrigued by the possibility of contributing to this discipline and space programs by designing future orbital and planetary space stations. However, until recent years, training opportunities in this field were limited only to one Master's Degree program by the Sasakawa International Center for Space Architecture in Huston, USA, and few online courses. YACademy is an institution based in Bologna, IT providing postgraduate high-level training in Architecture, offering courses in Landscape Architecture, Exhibition Design, and Humanitarian and Emergency Architecture, to cite a few. For the Academy, each of the courses is an opportunity to investigate innovative and challenging topics: during 3 months, the students attend lectures from some of the most esteemed professionals in architecture, and other topics specific to the course, and develop group projects related to the workshop theme of the year, under the tutoring of worldwide best architectural firms, such as Bjarke Ingels Group, David Chipperfield Architects, Snohetta, SANAA. In this spirit of innovation, curiosity, and excellence, in 2023, YACademy created its first space architecture course: Architecture for Outer Space. First of its kind, it aims to significantly contribute to education in this field in Italy, Europe, and the World. To maximize the impact of the course, future Space Architects undergo training to develop excellent design capabilities and a critical understanding of the space environment and its economic and geopolitical background, within which the discipline is evolving. In this sense, the course curriculum comprehends contributions in Space Architecture and design, geopolitics, economics, neuroscience, cultivation in extreme environments, planetary geology, and more. This year's course was organized in partnership with the European Space Agency (ESA)'s Topical Team on Planetary Caves and the architectural firm Bjarke Ingels Group and focused on underground settlements in lunar lava tubes. This paper aims to present an overall view of the course structure and logic and its outcomes in terms of research and students' work.