SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
On Track - Undergraduate And Postgraduate Space Education (2)

Author: Mr. David Vaccaro
Futron Corporation, United States, dvaccaro@avascent.com

Mr. Joseph Fuller
Futron Corporation, United States, jfuller@futron.com
Mr. Ian Christensen
Futron Corporation, United States, ichristensen@futron.com
Mr. Dustin Kaiser
Futron Corporation, United States, dkaiser@futron.com

MAPPING GLOBAL SCIENCE AND ENGINEERING EDUCATION

Abstract

This paper will help frame the session on Undergraduate and Postgraduate Space Education by providing metric data on numbers of first-level science and engineering students by world region.

Annually across the world, approximately 2 million students earn first-level (bachelor's-equivalent) degrees in science and engineering fields that are either directly related to space (as in the case of aerospace engineering) or indirectly by providing a skills and training base that could be leveraged toward development of space science and industry. These students have a surprisingly even distribution by major world region, indicating that developed-world graduates are increasingly being joined in the science and technology workforce by a similar number of developing-world counterparts. There is also a growing degree of gender equity in the science and engineering workforce, which has become more apparent in tracking over the past decade.

Although doctoral and post-doctoral students in the space disciplines are far fewer in number, they can also be mapped along geographic and gender lines. Emerging patterns among these advanced students will have deterministic relevance in shaping the nature of tomorrow's national and private-sector space programs. This paper will profile these space science and engineering trends across the undergraduate and postgraduate student demographic, mapping students by region, disciplined, and gender. This snapshot of the "global space student body" will provide valuable context in framing the larger session discussion of Undergraduate and Postgraduate Space Education.