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SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
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APPROPRIATE ASSESSMENT OUTCOMES FOR COMMERCIAL SPACE OPERATIONS UNDERGRADUATE DEGREE PROGRAMS

Abstract

Embry-Riddle Aeronautical University's Commercial Space Operations (CSO) Bachelor of Science is a non-engineering, interdisciplinary undergraduate degree offered in the Applied Aviation Sciences department of the College of Aviation. The author developed courses that are core curriculum requirements for both tracks that are currently offered: Space Policy Operations and Operations Science Technology.

Accreditation for the College of Aviation is achieved by compliance with the Aviation Accreditation Board International (AABI) using criteria that include articulated student learning outcomes. Using these aviation-specific outcomes when designing courses for a space sector program is not optimal. While the general outcomes are broad enough to provide guidance, the aviation core guidelines are not sufficiently on point to provide meaningful evaluation of the CSO courses.

The paper describes a Scholarship of Teaching and Learning study designed to address the problem of identifying appropriate outcomes for a commercial space operations program in the context of applied sciences and presents its results. The research is not only useful for the author's home institution, but also timely and appropriate for the larger universe of pedagogy because it represents a method of transitioning existing curriculum as social changes and technology advancement drive an institution's mission forward. These are challenges faced by all educators everywhere. However, this study is of particular interest to space studies educators.