

USU Extension Grant – Final Report

Project Leader: Doug Hunsaker

Project Title: An Introduction to Aerospace Engineering Through Basic Aircraft Design and Flight Mechanics

Project Duration: August 2016-November 2017

Total Requested: \$9,812.04

Project Summary

The proposed project introduces middle school and high school students to the basics of aerodynamics and aircraft design through the creation of a Discover 4-H course. University and community partners include USU Extension, the USU Aero Lab in the Department of Mechanical and Aerospace Engineering, and 4-H.

Project Results

Increased Collaboration: None

Outcomes, Outputs, and Impacts: This work resulted in a new 4H Discover course. The course will be released to the public online and will be available to a broad range of students.

Efforts to Disseminate: A rough draft of the course has been provided to InTech, a local high school with a STEM focus. These students will work through the course and visit campus for a broader introduction to aircraft design. Additionally, this course will be posted on the USU AeroLab website (aero.go.usu.edu), which receives visitors from around the world on a daily basis. This will provide access to this educational framework to a very wide user base.

Extramural Funds: This work was conducted in conjunction with a small grant from the Utah NASA Space Grant Consortium. The purpose of both grants was educational in nature, with a focus on educating students in high school about aerospace engineering. The supporting grant will continue through April 2018, and result in a significant web-interface improvement and enhancement for students and researchers alike. The grants were symbiotic, and resulting educational resources will be leveraged for future educational grants.

Lessons Learned

Doug Hunsaker presented at the Annual Conference on March 1, 2017. If an additional presentation is desired, he would be happy to present again.