



Program: FY22 SURP Strategic Focus Area: Systems architecture

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Objectives

The objective of the JPL and ASU collaboration is to bring industry relevant experience to the students participating in the ASU Space Works program. The ASU Space Works program itself intends to teach students the ability to work through the processes of mission design, fabrication, and testing of space systems. This work is done in the ASU Space Works Instrument Incubator, a 3,000 sq. ft. facility of engineering maker space that has all of the software and hardware to prepare students for the present workforce needs.



Background

The JPL-ASU Space Works collaboration serves to enhance the ASU Space Works courses goals of student workforce development. The ASU Space Works courses' leverages academic and industry partners to develop course curriculum in a way that the content of the program is directly rooted to evolving industry needs. JPL provided a series of Systems Engineering lectures to both the ASU Space Works 1 and 2 courses. These Systems Engineering related lectures will provide students the knowledge to implement industry standard Systems Engineering practices in the managing of their course project's subsystems, higher level systems, and system interfaces.

National Aeronautics and Space Administration

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Approach

Course will focus on:

- Systems Engineering Traits
- Project Life Cycle: Understanding of different project phases
- Requirement Verification & Validation

Plan JPL-ASU Trip to enable:

- Onsite student to professional engineer/scientist interaction
- Speakers covering the bridge between coursework/ teachings and JPL applicability
- Student professional development and networking opportunity

Results

- JPL provided an introduction to Systems Engineering to the Fall 2021 ASU Space Works 1
- JPL hosted ASU Space Works Students on 8/15/2022 and 8/16/2022 (group picture above)
- ASU student feedback on the course and tour has been extremely positive

Significance/Benefits to JPL and NASA

The JPL-ASU collaboration has enforced the development of the ASU Space Works courses by aligning their content to the needs of JPL and NASA. The students in the ASU Space Works courses offer the potential for future JPL collaborations and will also make ideal candidates for the JPL and NASA workforce.

Publications:

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