NASA-KSC/EX-E High Education
Internship Project & Abstract Form

Please provide this information requested to: rose.m.austin@nasa.gov
Telephone: 321.867.6481

Full name (First MI Last):	Jonathan M Carelli
Academic Institution:	University of Central Florida
City, State Zip Code:	Orlando, FL 32816
Program Hired Under (Funding Source):	USRP
Name of Branch or Division:	Granular Mechanics and Regolith Operations (Swamp Works)
Desk Location (Bldg Name, Cube #):	EDL
Work Phone (If Applicable):	
Cellular Phone:	
Degree of Study: (i.e. MBA, BS in Electrical Engineering, etc) Major & Minors	BS in Computer Science Minor in Physics
Expected Graduation (Month/ Year):	May 2015
Project Title:	Swamp Works – Multiple Projects

Project / Abstract Summary: (Approximately 300 words)

One complete paragraph in itself (not an introduction). It should indicate subjects while also stating objectives of the project. Newly observed facts and conclusions of project discussed must be stated in summary form. Readers should be able to understand your project and what you completed in your abstract.

My Surface Systems internship over the summer 2013 session covered a broad range of projects that ranged multiple aspects and fields of engineering and technology. This internship included a project to create a command center for a 120 ton regolith bin, a design and build for a blast shield to add further protection for the Surface Systems engineers, a design for a portable four monitor hyper wall that can extend as large as needed, research and programming a nano drill for a next generation robot, and social media tasks including the making of videos, posting to social networking websites and implementation of a new weekly outreach program to help spread the word about the Swamp Works laboratory. The objectives for the command center were to create a central computer controlled area for the still in production lunar regolith bin. It needed to be easy to use and the operating systems had to be Linux. The objectives for the hyper wall were to build a mobile transport of monitors that could potentially attach to one another. It needed to be light but sturdy, and have the ability to last. The objectives for the blast shield included a robust design that could withstand a small equipment malfunction, while also being convenient for use. The objectives for the nano-drill included the research and implementation of programming for vertical and horizontal movement The hyper wall and blast shield project were designed by me in the Pro/Engineer / Creo2 software. Each project required a meeting with the Swamp Works engineers and was declared successful.

If you are writing a paper for school or specific internship program, provide the following:

Paper Title:	**Swamp Works – Multiple Projects**
Mentor Name:	**Meredith Chandler**
Mailcode:	NE-S

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