

AN Out-of-Classroom EXPERIENCE

JSC education program gives community college students real world exposure

by Kim Hulseley



Each year, almost 300 community college students and 30 professors have the opportunity to learn outside of their classroom walls with the Community College Aerospace Scholars (CAS) Program. Participants experience the excitement and reality of an engineering career while interacting with NASA engineers and scientists during a two-day visit to JSC. The program involves a team project directed by NASA employees, a tour of JSC facilities and interaction with other students from across the state.

"The goal of CAS is to encourage scholars to pursue their four-year degrees and careers in one of the STEM (science, technology, engineering and mathematics) areas," said CAS Program Manager Linda Smith. "We want to provide the opportunity for students to make informed choices."

Prior to arriving at JSC, the students are assigned to six fictional companies and meet each other for the first time upon arrival. The scholars must select their project engineer and system managers, communicate effectively, attend meetings, meet deadlines, work the budget and present information – all to compete for a proposal request to build a Mars Autonomous Roving Survey Utility Vehicle.

Javier Garcia, a professor at Texas Southmost College, said that students in the program "learn the importance of teamwork with NASA."

"It's like it is in real life," said Claudia Taylor, a student at San Jacinto College South.

J.B. Groves, a professor at Wharton County Junior College, shared similar thoughts about CAS. "I think it's a great program," he said. This is the second year that Groves and Garcia have participated in the program.

While the program is designed for students, Smith noted that the volunteers have responded enthusiastically as well. "I believe many of them enjoyed the event as much as the scholars did," she said. Each team is paired with a JSC employee who serves as the "CEO" of the team's fictional company.

Philip Beebe, a Senior Software Engineer in Safety and Mission Assurance, participated in the program as a CEO. Beebe looks forward to one day working with the CAS students he has mentored.

"I have met students in the Texas Aerospace Scholars Program that I continue a regular correspondence with," he said. "They are making their way to becoming scientists and engineers and possibly joining us here at NASA. For me, this is the greatest benefit."

"CAS empowered its participants, students and teachers alike, with an awareness that simply cannot be learned in a classroom or, in many cases, on the job," said student Neil Jouvenat. "It was intense and often stressful. It was hard work. Above all, though, it was exciting, insightful and incredibly rewarding, even though our team took last place."

"The response of the scholars and colleges has been phenomenal. They responded that they were challenged and inspired by the event," said Smith.

Future plans are being made to expand the program into the fall semester as well. Currently, there are three sessions from late March to early April. JSC is also looking into partnering with other states and NASA centers to create equivalent programs across the nation.



PHOTOS CLOCKWISE FROM TOP

The green team participates in the rover competition. During the competition, each team's rover has 16 minutes to retrieve 'rocks' from around the course and bring them back to home base.

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The Community College Aerospace Scholars tour the historic Apollo Mission Operations Control Room.

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The red team tests its rover before the competition.

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The green team tests its rover's abilities on an incline. The teams could not see the competition courses beforehand and had to prepare for as many contingencies as possible, just as NASA engineers plan for a variety of scenarios.

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The red team meets to work out details. Teams had to funnel all questions and concerns through their Project Engineers, who served as liaisons to the JSC employees participating in the event.

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