When it comes to success in engineering studies, the data is clear: the better students do in their first-year core classes, the higher the chances that they will complete their engineering degrees.

That’s why the First Year Experience was established at the UH Cullen College of Engineering. All of the college’s eight undergraduate majors now share the exact same curriculum in the first year, fostering a community of support among engineering students during their critical first year of college while allowing for a seamless transition between engineering majors for students who wish to shift focus after their first year.

How students perform in two critical introductory engineering courses — Introduction to Engineering (ENGI 1100) and Computer and Problem Solving (ENGI 1331) — is a reliable predictor of whether or not a student will succeed in engineering. Instructional faculty and academic support staff at the college shifted both courses to project-based and team-based learning environments. Students in the courses are placed into multidisciplinary groups and must propose solutions to the National Academy of Engineers (NAE) Grand Challenges using problem-solving principles and lessons learned in their classes.

On May 1, 88 of these First Year Experience students presented their projects at the first annual First Year Experience Summit sponsored by Chevron. The event provided a platform for UH Engineering’s First Year Experience students to present their research posters, meet industry representatives and mingle with fellow students, faculty, staff and Chevron representatives during a private luncheon. A career workshop sponsored by the Engineering Career Center was also offered to students attending the event.

Instructional assistant professors Dan Burleson and Erin McCave, course coordinators in the First Year Experience program and organizers of the First Year Experience Summit, were extremely impressed with the caliber of work conducted by the first-year engineering students.
“It’s amazing to see what first-year students are capable of when provided with the right tools and analytical skills and given the freedom to go off on their own and start solving problems,” Burleson said.

McCave and Burleson were particularly impressed with a group of students who invented a “Trig Jig,” a tool for quickly and precisely drawing trigonometric shapes. “It was one of the most innovative projects presented at the event and demonstrates what our students are capable of,” McCave said. The team included undergrads Eli Cherem, Austin Farwell and Bryan Ho, who designed the tool as a cheap, portable and effective trigonometry tool for engineers or students in the field or on the go.

Representatives from Chevron met with UH Engineering undergraduate students throughout the day to learn more about their research and projects in the First Year Experience Program.

View photos from the First Year Experience Summit at https://www.flickr.com/photos/cullencollege/albums/72157683408226435

Learn more about the First Year Experience Program at firstyearexperience.egr.uh.edu

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