

## For a Big Impact, Go Small

STEM EDUCATION, ACADEMICS, FEATURE

By Marc Airhart

Every week, as Sneha Patel stood in front of the roughly 20 freshmen she mentored and gave tips on how to navigate college, she would see a lot of heads nodding—but not in the back of the room. There sat one girl, always with her headphones on, not participating. Patel was surprised when the student signed up for one of the individual sessions she offered to each of her mentees. *She probably won't even show up*, Patel thought. When the student did arrive for her meeting, she was very quiet at first. Then something shifted.

"She told me that she had moved here with her family from Africa a couple of years ago," says Patel. "She said the transition to college was extremely hard—the culture, people, classes, dorm life, everything."

Their meeting, scheduled for 20 minutes, ended up taking an hour. After that, the student stopped sitting in the back of the weekly meetings. She made friends in the group and started participating in discussions.

"By having that one-on-one experience, she could open up to somebody, and she realized this was a safe community where we help each other," says Patel. "That really resonated with me, that I was able to help her become more comfortable here."

For students, the transition from high school to college can be a shock. You're living in a totally new place, away from friends and family. The coursework is harder and there's much more of it. Your roommate keeps leaving dirty clothes everywhere, and, meanwhile, you're having second thoughts about your chosen major. All of this makes the first semesters of college a vulnerable time of heightened risk, when many students veer off course.

### We're Here to Help

This past fall, the College of Natural Sciences launched CNS Cornerstones (sometimes called CNS 101), a support program that assigns every first-year student to a small cohort of about 20 students with similar majors or career goals. It provides a structured experience to help guide them past potential pitfalls. The students take their core classes in biology, chemistry and math together. They study for tests together. They also have weekly meetings and social activities with an adult facilitator and a peer mentor.



Credit: Brett Buchanan





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“The university is larger than many people’s home towns,” says David Vanden Bout, associate dean for undergraduate education. “We need to provide a way for everyone to have a community from the day they set foot on campus.”

Freshman biology major Miranda Weed is from Lake Jackson, Texas (population 27,500). Some of her first classes had hundreds of students.

“In such a huge class, you sit by different people every day, and you can’t really make connections with other students,” says Weed. “So it’s nice to have a different place where you can meet people in your class and you can study with them and you can talk to them about the class or see if they’re having the same issues as you.”

Vanden Bout has four goals for the program: to help students succeed academically; to get them acclimated to life in college; to ensure they know how to navigate the university; and to encourage students to explore educational opportunities and career paths.

Each CNS Cornerstones small group has a peer mentor, like third-year biology major Sneha Patel. Peer mentors bring the first-hand experience of having gone through many of the same challenges just a few years earlier.

“The peer mentors share stories about how they, too, were worried about passing their classes, but then figured out how to go to office hours for help or met with their TAs every week to talk about their homework,” says Vanden Bout.

“I’m a first-generation college student,” says Weed. “Without this program, and especially Sneha, I would have no clue about what I need to do to become pre-med and get into medical school. She’s been a big help with that.”

### **Lasting Connections**

The program leverages existing mechanisms at the university such as the longstanding First-year Interest Groups that allow student groups to meet weekly with both an adult facilitator and the peer mentor and infuses those programs with the Cornerstone ideas for what a freshman needs to be successful in the College of Natural Sciences. Topics range from time management to efficient study strategies to how to find university resources or how to explore majors and career paths. Professors that students would typically only see during class time in large lecture halls visit the weekly meetings to talk about their own personal stories and answer students’ questions.

Mentors also organize social events—such as bowling, a campus scavenger hunt or a chemistry review disguised as a Jeopardy-style game show—to further cement friendships, orient students to the university and make learning fun.

Unlike most other programs at the university designed to help students adjust to college life and be academically successful, CNS Cornerstones has students continue meeting regularly and taking courses together throughout their first year. Based on past experience with small academic community programs, Vanden Bout and others anticipate that many of the students will continue being friends and studying together for years after.

“The greatest thing we’ve done for the students is to put them into small groups and give them the same classes,” says Vanden Bout. “So many great things come out of that.”

He notes that for most students, the first semester of college feels like the hardest, even though academically they’ll go on to encounter much more difficult material. Their academic success, in large part, depends on how well they cope with the transition from high school to college.

“Hopefully it won’t be the most critical semester soon,” says Vanden Bout. “Hopefully we’ll start thinking, ‘What’s the next big hurdle for everyone?’ And it’ll no longer be the first semester because we’ll have figured out how to transition everyone into the university, and we can move on to the next big task.”

### **Blueprint for Success**

The Texas Interdisciplinary Plan (a.k.a., TIP Scholars) program dates back to 1999 and was part of the inspiration for CNS Cornerstones. TIP Scholars’ proven success at helping incoming freshmen who are considered at risk of not graduating on time, because of their socioeconomic background, academic performance or other factors, earned the program, and UT Austin, front-page coverage in the New York Times Magazine last May.

Selected students join a small community that does a variety of structured activities together: studying, participating in social activities and attending core classes, including a critical thinking seminar.

Students who participate in TIP Scholars have a 70 percent higher graduation rate than comparable students who don’t. Students often say it’s where they made their most important friends and academic contacts.

Isaac Chavez, currently a Ph.D. candidate working with physics professor Mark Raizen, credited a TIP mentor with telling him about opportunities to do research as an undergraduate, which ultimately influenced his educational and career path.

"I didn't know you could do research as an undergrad," says Chavez. "I ended up doing it and I loved it."

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