



The First-Gen Initiative

by Bruce E. Beans

PHOTOS: DAN Z. JOHNSON

Tools, tips and community connections to help students—the first in their families to attend college—thrive at Temple and CST

Even though she graduated from renowned Central High School in Philadelphia, Michelle Tanujaya didn't know much about navigating college before the South Philadelphia resident arrived at Temple University as a biology major two years ago.

Tanujaya's father, who drives people to their factory jobs, never attended college. Her mother, who was unable to complete high school, is a machine operator. Her unfamiliarity with higher education was understandable.

Yet, thanks to her participation in the College of Science and Technology's First-Generation Initiative (FGI), this past summer she spent nine weeks in a Brown University research laboratory using zebrafish to study Sox9, a sex-determining gene whose mutations can cause fatal genetic disorders in human fetuses.

"I'm so grateful for the time I was able to spend at Brown growing as a scientist," says Tanujaya, a junior who intends to pursue a PhD in biomedical research.

She credits the FGI director, Frank Nelson, an associate professor of instruction in biology, for some of her success. "Going into college, I felt lost," says the member of Temple's Honors Program. "I didn't know a lot about a lot of things. He helped guide me, encouraged me to network and reach out to juniors and seniors and other professors to figure out what kind of career I wanted to pursue."

'FIRST GENS' ARE EVERYWHERE

CST's First-Generation Initiative launched in 2020 under former dean Michael L. Klein. If you look, 'first gens' are everywhere at the college. CST Dean Miguel Mostafá, who has enhanced first-gen funding, and Senior Associate Dean Susan Jansen Varnum were first-generation college students. That's also true of the core FGI staff:

Nelson; Uloma Opara-Osuoha, associate professor of instruction in the Biology Department; and Carlos Bates, a CST academic advisor.

"We all went through what they are experiencing," says Nelson. "So, they can ask us a random question and not feel like, 'How come I don't know this?'"

"You don't know it because, why would you?"

"It's easy for some first-generation students to fall by the wayside and feel frustrated," adds Opara-Osuoha. "They have love from their families, but when it comes to mentoring them and providing individualized knowledge and resources to help them achieve their academic and professional goals, they need a group of people to guide them and make them feel comfortable on campus."

Bates, the initiative's academic advisor, formerly worked for the School District of Philadelphia on students' college and career readiness. The Temple graduate encourages students to drop into his office a couple days per week for advice and one-on-one tutoring provided by two first-gen students who are STEM fellows, as well as volunteer student peers.

Bates also requires students to check in every other week either in-person or via email. "It's so gratifying to hear them having that 'Aha!' moment when their improved study habits are finally working for them."

"Some have told me that, 'I wasn't going to tutoring because I felt dumb.' But then they realize a lot of students are going through the same thing and now they're not afraid to ask questions."

TRI-ALPHA PRESIDENT AND ASPIRING DENTIST

Some of the tutoring and peer mentoring is offered by the members of Alpha Alpha Alpha (Tri-Alpha), the national honor society for first-generation



college students, including Nikki Cao, the Temple chapter's first president since fall 2022. She is the daughter of Chinese immigrants and restaurateurs who came to the Philadelphia area 20 years ago.

For Cao, her "greatest satisfaction comes from bringing older and younger students together and hearing the first-year students and sophomores say, "I really appreciate this. It makes me feel like I'm not alone."

Cao, a biology major who wants to go to dental school, spent the summer of 2023 shadowing dentists during the Summer Health Professions Education Program at the University of Nebraska Medical Center. Since January, she's also been a research assistant at the Lewis Katz Medical Center's Center for Asian Health and has helped biology students as a peer laboratory assistant.

"It's really taught me a lot," says Cao, whose letter of recommendation was written by Nelson.

'SO MUCH I DIDN'T KNOW'

"There's so much I didn't know about college," says Katie Lazaro, a junior biology major from West Grove, Pa. Her mother owns a cleaning business and her father operates Daddy's Kitchen, a Chester County restaurant where Lazaro has worked since she was 14.

One of her first-year seminar assignments was to interview one of her professors. She chose Nelson and was surprised to learn that his parents also were not college graduates. "Ever since, we've bonded and I got involved with the First-Generation Initiative," explains Lazaro.

That involvement includes being the recipient of a First-Generation Scholarship and managing social media for Temple's Tri-Alpha chapter. Also, as a STEM Leadership Fellow, she works with her mentor, introductory biology lab coordinator and assistant professor of instruction, Jay Lunden, also a first-gen college student. Her role: helping first-year biology lab students.

Lazaro, who hopes to serve her Hispanic community as a physician's assistant, says, "Thanks to the First-Generation Initiative, I've definitely been able to get out of my comfort zone, meet new people and collaborate with so many others, not only students but also professors and doctors."

EARLY MATH PROGRAM PAVES THE WAY

Born and raised in Pennsylvania, Juan Diego Cervantes Ramirez moved with his parents

and younger brother and sister to Oaxaca, Mexico, his parents' home town, in 2013. He didn't return with his family until his senior year of high school.

"I wasn't expecting to go to college right after I moved back," the son of a landscaper recalls. "I was worried about my credits and the language barrier."

Nonetheless, after he applied to Temple, Nelson recommended that he enroll in FGI's First Summer Math Bridge Program. The dedication and academic perseverance he demonstrated in that program were some of the factors that led to a four-year annual \$5,000 First-Generation Scholarship.

"The summer program really helped me familiarize myself with college and be better prepared for math," says Ramirez, a chemistry major. Now considering a career in forensics, he finished his first year with a 3.80 GPA.

CONFIDENT YOUNG RESEARCHER

Tanujaya's summer research experience at Brown University built upon her experiences at Temple, which have included working two years in a research laboratory at Temple University Lewis Katz School of Medicine with Parkson Lee-Gau Chong, a professor of medical genetics and molecular biochemistry; serving as an undergraduate research peer mentor for other students; and serving as president of the Temple chapter of Foundations of International Medical Relief of Children, which combats health inequities both locally and abroad.

"With the growth I have experienced in Dr. Chong's lab," she says, "I know my abilities and definitely feel more confident in myself and my ability to do research—both by myself and helping others."

To help students thrive, CST's First-Generation Initiative offers:

- First Summer Math Bridge Program: Presented the summer before enrollment, the four-week online program helps students transition to college-level math
- Four-year, \$5,000 annual First Generation Scholarships for five students in each class who demonstrate academic potential and economic need
- First-year seminars for groups of 20 students that cover registering for classes, applying for scholarships and grants and study and time-management skills
- Social events that foster community and workshops on topics such as paying for school
- Sessions on building resumes, applying for internships and networking at Temple and beyond, hosted jointly with CST's Office of Student Professional Development
- Alpha Alpha Alpha (Tri-Alpha): Temple sponsors a very active chapter of this national honor society for first-generation college students

