College was the last thing on Jonathan Conyers’ mind. He grew up in the Bronx, the youngest of five children. His older brother, an army reservist stationed in Virginia, took custody of Conyers when he was 16 because his parents weren’t in a position to take care of him. Conyers says drug abuse and illnesses in his family — multiple sclerosis, COPD and diabetes — made his living environment untenable and prompted the move south.
In 2012, while he was attending his junior year of high school and working full-time, he found out his girlfriend was pregnant. He quickly packed his bags and moved to New York City to live closer to her and his immediate family. He says he didn’t think he’d make it to college, let alone a prestigious research institution like Stony Brook University.

Everything changed when Conyers learned about Stony Brook’s Educational Opportunity Program/Admission on Individual Merit (EOP/AIM). Funded by New York State, augmented by University munies and private philanthropy, EOP/AIM at Stony Brook was founded in 1968. It’s dedicated not only to providing access to higher education for economically disadvantaged students who possess the potential to succeed in college but whose academic background has not fully prepared them to pursue higher education successfully, but also to giving them the support they need to graduate, financial aid, academic success and career options. Students also have access to a computer lab, can receive tutoring in any subject and may attend workshops on topics like time management and study skills.

“If we are going to have an educated workforce, it is important for Stony Brook as a state university to make higher education attainable, not just by providing access and admission but also the support that students need to be successful,” says Cheryl Hamilton, assistant provost and director of EOP/AIM.

Even after he was accepted at Stony Brook, Conyers was nervous, but attending the Pre-Freshman Summer Academy put his fears to rest. In his courses, he concentrated on the STEM element of EOP/AIM, the five-week boot camp focuses on math, writing, and study skills with the aim of preparing students for the rigor of full-time university work. Taking with upper classmen — many of whom had experience similar to his own — and the support of the academy continued Conyers could succeed.

Still, once classes started he was taken aback by the challenging work. The University was asking of him. As someone who had never taken science classes before, tackling college-level coursework was daunting. The EOP tutors wouldn’t let him fall, though. Whenever he came up with excuses — he was tired, he had a baby to care for; he was too busy with work — the tutors were right there with him, countering every word.

“Every year, Conyers is the father of a 3-year-old daughter named Emily. He’s majoring in health science and studying respiratory therapy, on track to graduate in 2017. Then, he hopes, it’s on to medical school.

“Growing up in the Bronx, you don’t know people who are growing up to be doctors — it’s not realistic,” he says. Now he’s working to change that. He’s a resident assistant and a tutor, going back to the community that helped him navigate some of his most challenging classes. Conyers also spoke to high school students in New York City about his experiences at Stony Brook in the hopes of convincing them to apply to college. “We try to get kids who think that college isn’t an option, and we try to help them transition into an EOP,” he says. “Through hard work, no matter what your situation, you can still be something great.”

Conyers credits his experience at Stony Brook with changing his life. “Without EOP who knows what I’d be doing now,” he says. “It’s not just changing my life; it’s changing my daughter’s life. This can change the culture of my nieces and nephews. As this pattern continues, they’re creating a better citizens and a better country. It’s a cascade. This is how we become a better world.”

EOP/AIM is just one of several programs at Stony Brook aimed at encouraging underrepresented minority students and those from low-income families — students who possess the potential to succeed in STEM-related fields. STEM Smart’s foundational programs include the Science and Technology Entry Program (STEP), which serves students in middle and high schools in three underserved Long Island school districts, and the undergraduate Collegiate STEP (CSTEP) as well as the Stony Brook Louis Stokes Alliance for Minority Participation (LSAMP), which is funded by the National Science Foundation. Stony Brook is the headquarters for the broader SUNY LSAMP program, which involves 100 community colleges, four-year colleges and university centers.

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Each of these programs prepares students to succeed in STEM-related undergraduate programs and careers, providing career preparation workshops, tutoring services and financial support, depending on need and GPA. Typically, students are engaged in undergraduate activities throughout their undergraduate years. Special efforts are made to engage African American, Hispanic, Native American, Pacific Islander and economically disadvantaged students interested in STEM-related fields.

“The national perception is these are fields where there is not a huge representation of minorities,” says Paul Siegel, co-director of STEM Smart, but “intellect doesn’t recognize ethnic barriers.”

OPENING DOORS

AT THE START

More than half of Stony Brook students come from families earning less than $75,000 a year. The average family income of EOP/AIM students is $14,000.

REACHING OUT

Nearly 80 percent of EOP/AIM students graduate within six years, one of the highest rates in the country.

SUCCESSE

STEM Smart programs serve more than 800 K-12, undergraduate and graduate students, including an average of 245 underrepresented students in grades 7-12.

THRIVING

LSAMP students represent the highest academically achieving group of underrepresented minority students majoring in STEM at Stony Brook.

Above: Originally from Haiti, Wesley Francillon, ’14, came to Stony Brook through STEP to attend a summer residency program for three years. She took her first college-level class at Stony Brook in ninth grade, and she’s worked hard ever since. \n
Wesley Francillon was born in Haiti and grew up in Brooklyn and on Long Island. Her mother, who went to college when she was in high school, instilled in her the importance of, education, but as a first-generation American, she didn’t have the traditional guidance or tools to navigate the higher education system. Her high school’s STEP program set him on his path toward Stony Brook and a PhD in materials science and engineering.

Originally, Francillon was set on attending the University of Florida at Gainesville, but once she was on the Stony Brook campus, the school’s attention to her needs and willingness to provide support convinced him she was in the right place. STEM Smart recognizes the difficulties that minority students and low-income students face while attending college. Francillon says, “Stony Brook is one of the few places where they care about the students. They’re exceptional at making sure every student counts.”

Taking advantage of GIE prep courses, tutoring programs and other programs enabled him to take the next step in his education. After graduating with a degree in engineering science in 2006, he went on to earn a PhD in materials science and engineering, and now works at New York University’s Materials Research Science and Engineering Center, where he does outreach and facilitates collaboration among scientists.

Andy Clavel ’14, too, came to Stony Brook through STEP to attend a summer residency program for three years. She took her first college-level class at Stony Brook in ninth grade, and she’s worked hard ever since. Clavel says, “In a school where there’s a lot of science and math, you look around and there’s not a lot of females.”

As an undergraduate, she received a stipend to do research, which was a big difference. “It takes a lot of pressure off,” Clavel says. “And I worked in the lab so it was meaningful for me, and it helped me launch my career.”

In materials science and engineering and in 2009 and now works at the RTI Materials Research Science and Engineering Center.

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Clavel recently completed a medical physics program at Columbia University in New York after graduating from Stony Brook with a degree in applied mathematics and statistics and a minor in physics.

Research is a key element of the STEM Smart programs. It’s what led Kamal James, a Stony Brook senior, to pursue a degree in biomedical engineering with a goal of studying cancer. Stony Brook, he says, pushed him in the direction of research.

In his first lab assignment, he helped a PhD student studying carbon nanomaterials. Now he’s working on cell cultures, researching the effects of an antibody on the regeneration of bone tissue. “I’ve learned a lot about what I’m capable of,” James says. “I’ve grown not only as a student but as a researcher.”

Stony Brook is full of these success stories, says STEM Smart’s Siegel. He’s been on campus for more than a decade and never tires of hearing about how students have used the Stony Brook support system to excel in their classes and then later on in their respective careers.

“I don’t take credit for anything my students do — they have to take the tests and do the exams,” he says. “It’s like planting trees. You put a seed in the ground, and you watch it grow, and that’s what I see from these students. It thrills me to know that they’re doing well and that I played a part in their future.”

One of those students is Sabrina Thompson, who is now an aerospace engineer at the National Aeronautics and Space Administration Goddard Space Flight Center in Maryland. Thompson graduated from Stony Brook in 2007 with a degree in mechanical engineering, then received a master’s in aerospace engineering at Georgia Tech. She’s been working for NASA for six years, designing spacecraft trajectories with the jet propulsion group and helping maneuver spacecraft.

“I say, ‘Hey, we need to get from Earth to Mars,’” and I need to know if they can design a jet propulsion system to get there,” she says. “Once the spacecraft is up in space, we monitor it and execute the maneuvers we designed.”

Thompson grew up in Roosevelt, one of the poorest communities on Long Island. As a child, she loved math and science, going so far as to ask her teachers for extra homework so she could further explore the worlds of STEM. Stony Brook, it follows, was a perfect fit.

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