

Borough of Manhattan Community College • The City University of New York
A Journal of Faculty and Student Excellence in Research and Learning
2017–2018



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his issue of Marks of Excellence will take you inside the Borough of Manhattan Community College classroom—but don't expect rows of desks or a teacher at the lectern, all eyes to the front of the room. It's not that our college doesn't value the lecture format of learning, or rows of desks, for that matter. But what we wanted to share with you in this issue is the variety of learning experiences that exist at BMCC. Drop in on a class, and you might see students gathered in groups, choreographing a movement piece to build cultural insights. You might see a student at her laptop trying out a new multimedia platform and animating a mythical creature into flight. You can find our students taking surveys in public spaces, or standing bedside in their scrubs, talking to a patient as part of their supervised nursing practicum.

The BMCC classroom spans the continent as our students share their projects in national mathematics conferences, or take their place next to fellow student researchers at an Ivy League poster presentation. Our classrooms also span the globe, in the sense that BMCC students featured in this issue have moved to New York from Egypt, Morocco, Thailand and other countries, as well as having grown up in all five boroughs of New York City and throughout the United States.

This amalgamation of perspectives deepens class discussions, as students integrate new concepts into their subject knowledge, in BMCC's almost 50 Associate degree programs. In this issue we have focused on majors ranging from Teacher Education to Engineering to Accounting. Whatever their focus, our students work with dedicated professors, leaders in their fields, and have access to opportunities that rival those at the country's best private colleges.

As you will see, the rigorous setting of a BMCC classroom is one of both inspiration and challenge. Students lay the foundation for careers and continued degrees, and tackle the most pressing science conundrums and social issues of our time; such as gender violence, resource sustainability and public corruption. They are thinking big, and working hard. We are very proud to share their stories with you.

Antonio Pérez, President

Borough of Manhattan Community College

The City University of New York



### Business Ventured, Knowledge Gained

Two business students with disparate goals and backgrounds share a high regard for strategy and hard work.

Karly Norgaisse's long-term goal is to build a client base and apply her skills in alternative health strategies—meditation, herbs and relaxation techniques—through an online presence. Emily Long's dream is to challenge the market for airline seating with an app she designed and hopes to market widely. What these disparate goals have in common is that each student found the tools to set them into motion, through the BMCC Business Management Department. Norgaisse is enrolled in the department's Small Business/Entrepreneurship program, and Long recently attended the department's Business Administration program.

Norgaisse, who moved to New York City at age 12 from Haiti, started a business with her former husband; a variety store and tax preparation service. "We never sold any merchandise—it was the tax business that kept us open," says Norgaisse. "If I had it to do it over, I would use strategies we learned in our Introduction to Small Business Entrepreneurship class—create a detailed estimate of startup funds, do an assessment of competitors, build a marketing campaign and research future costs." She plans to incorporate all of the above, as she develops her alternative

health business, and will continue honing her skills at a CUNY college after she graduates from BMCC.

Emily Long, who moved to New York from Florida, was awarded the Community College Transfer Opportunity Program scholarship at BMCC, and enrolled at New York University in 2017. "BMCC provided me with the building blocks and mentorship I needed," says Long. Her app was a finalist in the CUNY and Capital One Community College Innovation Challenge, and she continues to sharpen its function and appeal: "For example," she says, "if you want to sit by your Mom, but were assigned another seat, you could go on the app and negotiate with the passenger next to her, without having to tap on his or her shoulder."

Long and Norgaisse share one important takeaway from their studies. "My professors at BMCC saw potential in me," says Long. "They invested the time and set the tone for my academic career that was to come." In Norgaisse's words, "My professors have challenged me to think outside the sandbox. That's critical when you're starting a new business."



#### Community Health Hits Home

A top student and professional model redirects career goals to help his hometown in Oklahoma.

Community Health major Colby Brittain grew up in the Cherokee Nation capital of Tahlequah, Oklahoma. He graduated from high school in the top five percent of his 2014 class, and received a Bill and Melinda Gates Millennium Scholarship, which he applied to his tuition at Richland College, in Dallas—where he also launched a career in modeling, leading to a move to New York City.

Top modeling assignments were filling his schedule, but Brittain was determined to continue his education, and enrolled at BMCC, where he has maintained a 4.0 GPA. "Modeling is great, but it's not a forever thing," he says. "It's sort of like winning the lottery, but meanwhile I've always had my eye on the future."

Possibilities for that future began to take shape in an *Introduction to Community Health* class Brittain took at BMCC, with Professor Lesley Rennis, Chair of the Health Education Department. In a group project, he and his classmates developed a model needs assessment for a health education program centered on HIV awareness and testing.

"We focused on funding, designed a priority matrix and created a program proposal. It was eye opening," said Brittain, who had always had an interest in nutrition, but didn't realize how many directions a career in healthcare could actually take—and this was a game changer.

Oklahoma, where Brittain grew up, has the nation's ninth highest obesity rate, according to a 2017 Trust for America's Health and the Robert Wood Johnson Foundation study. For Native Americans, that rate is often much higher than both state and national averages. Keenly aware of these statistics, Brittain plans to earn his Associate degree in Community Health Education at BMCC and continue his higher education with a bachelor's degree, eventually bringing what he has learned back to his hometown.

"Native Americans are one of the most deeply affected groups, when it comes to diabetes and other obesity-related diseases," said Brittain. "Having a background in nutrition and working in healthcare will allow me to make a difference, and that is my ultimate goal. I want to give back to my tribe and my people."



# Community College Students Join the Ivy League

Three BMCC student researchers are accepted into the 2018 National Collegiate Research Conference at Harvard.

"When I was growing up in Morocco, we knew about Harvard," says BMCC behavior of the "vacancies" or spaces that occur when an atom of oxygen is Science major Younes Zerhouni. "So did we," says BMCC alumnus Zead Elzoeiry, who grew up in Egypt with his brother and fellow BMCC student, Marawan Elzoeiry. All three aspiring scientists took their first trip to Cambridge, Massachusetts in January 2018 when they presented their BMCC research projects at Harvard's highly competitive 2018 National Collegiate Research Conference (NCRC).

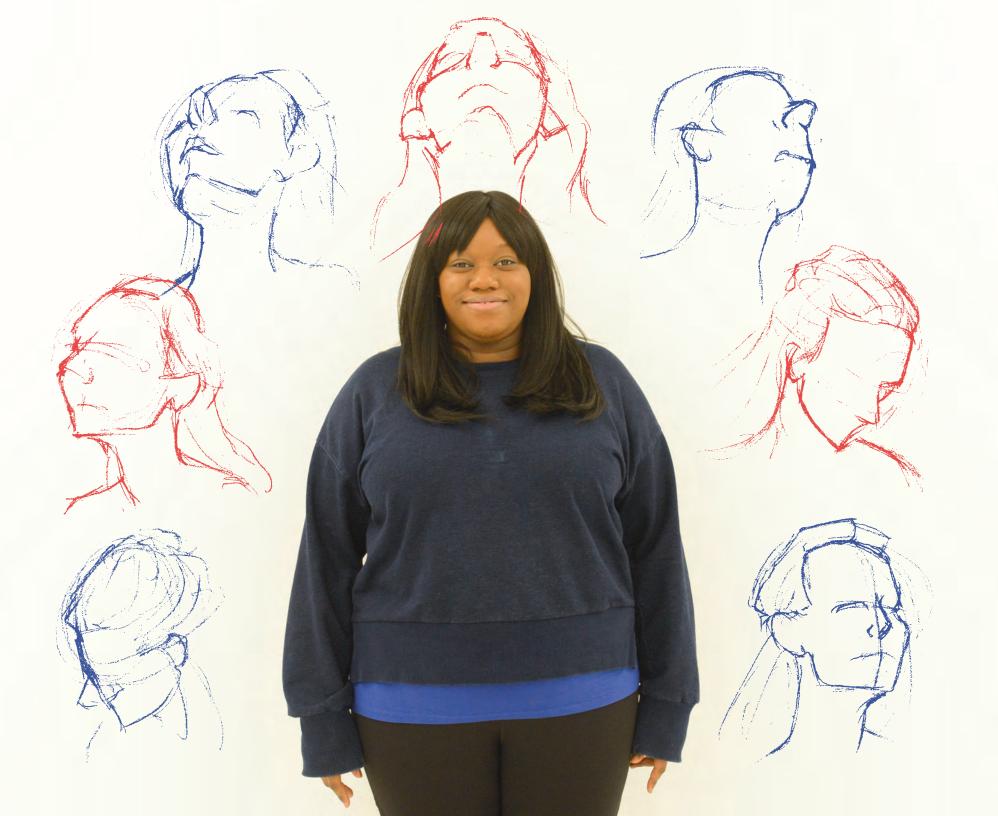
"We were the only ones from a community college," Marawan says, but the shared global perspective he found at the conference balanced out that difference. "We met student presenters from Turkey, Saudi Arabia, Russia, biomedical engineering and take part in cancer research, has valued Canada, China, Pakistan, New York and all around the world," says Zead.

When Younes, Zead and Marawan each received the email accepting their application to present at the NCRC, "We first called our mentors," Zead says. He and Younes have worked with BMCC Professor Abel Navarro on the bio-removal of toxic dyes from water supplies, using materials such as tea leaves. Marawan, who is interested in the mining and processing of oil and minerals, has worked with Professor Daniel Torres to analyze the

removed from a mixed-oxide catalyst.

"I want to be part of extracting oil as a resource from the floor of the ocean," says Marawan, who plans to pursue a career in chemical engineering. Zead, meanwhile, is studying Medical Laboratory Science at Hunter College, CUNY, and plans to earn a master's degree in organic chemistry and contribute to the research on leukemia.

Younes, who wants to continue his higher education with degrees in education, he says, since he started school in a mosque at age four. "I learned to read and write from the sheikh, the first teacher that made an impression on me," he says. In fact, all three researchers share an appreciation for teachers and leaders in their fields. "We realized at Harvard that what we have accomplished in two years at BMCC, other people might not have accomplished in several years," says Marawan. "We came from a community college, but our mentoring was better than theirs."



#### Creativity Breaks the Rules

An animation major uses cutting-edge technologies and lessons learned in drawing class.

For a media artist immersed in new technologies—Cinema 4D, Adobe Flash MX—Animation and Motion Graphics major Tara Harvey-Ingram credits, at the core of her skills, expertise with the oldest media process on earth, putting pencil to paper.

"There is a stereotype that animators or comics illustrators neglect the human body," she says. "I didn't want to do that. In a life drawing class, I can learn things like where to begin and stop the arc when I'm animating a character's arm." In other words, she says, "Learn the rules of human movement, so you can break them plausibly in your animation."

Life Drawing I and II is taught through the Music and Art Department at BMCC, while the Animation and Motion Graphics program is in the Media Arts and Technology Department. In an interdisciplinary exchange of skills, Animation majors build the underpinnings of their work through assignments such as one in which they merge two animal characters. "Mine is the Magical Snail Hawk," Harvey-Ingram says. "We're working in Cinema 4D, a program that makes us create a skeleton, then position it inside the figure to direct its movement."

Having drawn the human form with awareness of muscle and tissue, "I feel more able to create layers that make my creature believable," she says. Also, in life drawing classes, "We work with models that are all types; tall people, small people, old, young. Animators can be guilty of something called 'same face syndrome,' so this stops you from drawing the same face over and over."

Born and raised in Brooklyn, Harvey-Ingram plans to stay in New York and transfer to Queens College, CUNY; Pratt Institute or the School of Visual Arts, once she earns her Associate degree at BMCC. "I want to focus on 3D animation and feature films," she says. "I'm also interested in gaming. You don't see women as lead designers but you do see them as 3D animators. We're slowly leveling the playing field for women in that area, but we have a ways to go."

Her "dream game" would bring users together around a character that inspires them in their lives. "I want to promote acceptance and change how we relate to one another—regardless of what we've been taught," she says.



#### The Will to Win

A star on the basketball court shines just as brightly in the classroom.

Nikola Zilakova had been a high school basketball star, playing on the Czech about myself and how we communicate in different settings, both National Team in Prague before moving to New York in 2016 and enrolling verbally and nonverbally." at BMCC. Soon after, she attended a Lady Panthers game—not realizing the college had a top-ranked team—and contacted BMCC Basketball Coach Ben Newberg, who invited her to a practice session.

"Once I saw her on the court, I knew she was going to be a star in this league," says Newberg, whose prediction proved true as Zilakova garnered honors including being named a CUNY All Star two years running, and received the National Junior College Athletic Association (NJCAA) Region 15 Honorable Mention Award. She was named CUNYAC Community College Athlete of the Week three times, and voted among the top five women's basketball players in the region for the 2017 season.

Zilakova's will to win has also extended to the classroom. She maintained a 3.9 GPA, despite having struggled with English. "One of my favorite classes has been Interpersonal Communications with Professor Mark Janis," she says. "I learned so many interesting things

That interest in communication evolved into a career goal, as Zilakova continued to shine on the court. "She has been a model student-athlete who has battled many injuries, but her love for the game keeps her going," said Coach Ben Newberg. "She also leads by example and encourages her teammates," even recruiting other international students to play for BMCC.

Although Zilakova could pursue basketball scholarships across the country, she is applying to CUNY colleges so she can stay in New York City. "I love the diversity in this city; the whole world comes here," says Zilakova.

Long term, her goal is to work in the sports media industry, overseeing social media platforms for a professional basketball team. "At BMCC, I realized I can become whatever I set my mind to," Zilakova says. "I want to continue learning how to communicate well, not just with people on a daily basis, but in business. If you want to win, effective communication is key."



## Learning the Choreography of a New Community

In a seminar on the Greater Antilles, students build cultural fluency through dance.

"Choreography is like language," says Bilingual Childhood Education major Jessica Herrera, "and dance is part of language learning." That observation originated during an activity in her Modern Language class, Literature, Culture and Civilizations of the Greater Antilles. The course is taught by BMCC Professor Laurie Lomask, who invited choreographer Megan Curet to present a movement workshop to her students.

The class broke into two groups and each choreographed a series of movements, and then came together to share their work. "It was like a conversation," Herrera says. Or as Professor Lomask puts it, "Dance is a lens that gives a different perspective to the history of the island countries we are studying."

Dance, especially the rhythms rooted in the Ashanti, Yoruba, and Kongo peoples of Western Africa, says Lomask, "has blended with indigenous and European instruments and beats to centralize the living culture, the stories of survival, the sharing, communication and syncretism that make this region vibrant." Dance is also a way to create community.

"When the choreographer came to our class, at first, everyone was shy," Herrera says, "but when we came together with our dances at the end, it felt easy to communicate that way."

Communication was a struggle for Herrera when she first moved to New York from the Dominican Republic, and worked full time as an assistant manager in a retail store in Brooklyn. Her goal was to enroll at BMCC, but first, she improved her English through the CUNY Language Immersion Program (CLIP). Exploring the culture of New York City was part of that process.

For example, she says, "In the clubs in New York, people dance separately but together, and in the Dominican Republic we were more paired off." Herrera plans to apply what she has learned as she has acclimated to a new culture—as well as what she has learned at BMCC—to her career as a bilingual teacher.

"Sometimes you feel like you don't belong, when you're new to a country," she says. "Someday, I want to help children, my students, who feel that way, and I definitely plan use dance to help them relate to each other."



#### Building a Career in Engineering

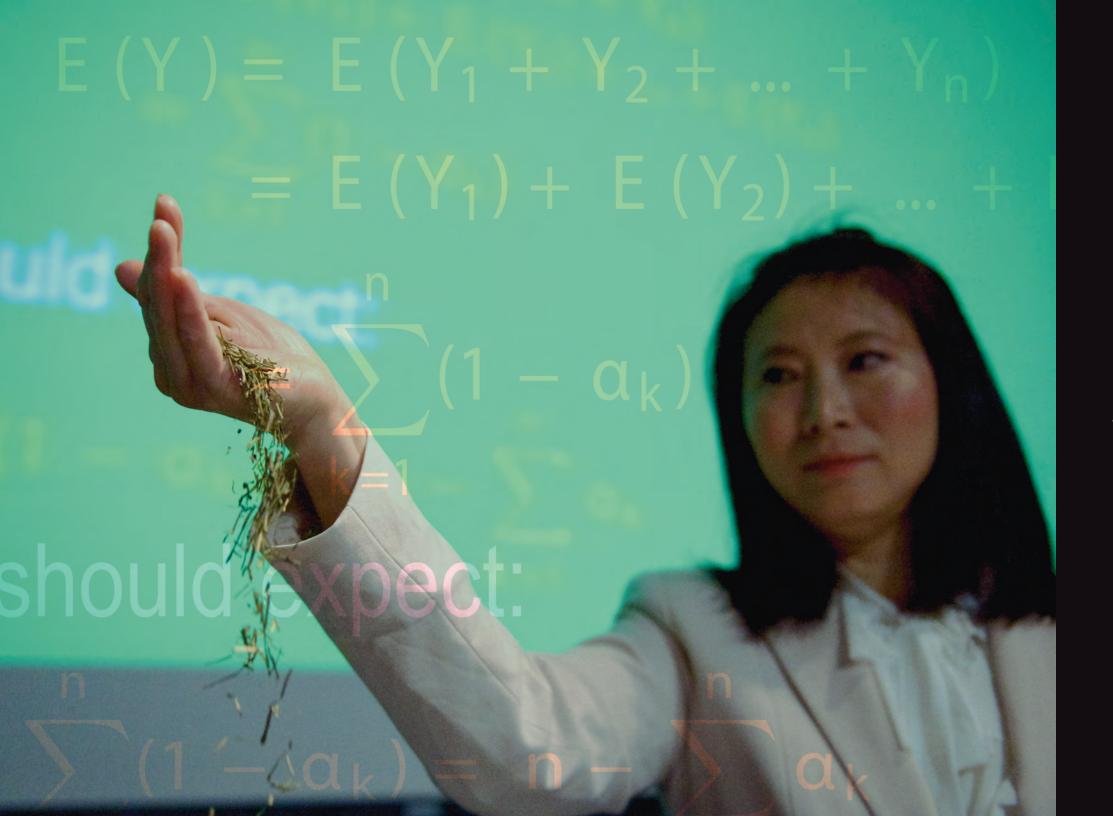
Through robotics, mentoring and hard work, Krongchai Prapopoj pursues a career and pulls others up with him.

Krongchai Prapopoj grew up in Thailand and started college there, "but I didn't like their view of engineering," he says. "It was more about fixing, a table. than building. At BMCC, it's more about building." Prapopoj got his introduction to building as a teenager helping his father, a civil engineer and project manager constructing airplane hangars for the Royal Thai Air Force. "I worked on adjusting blueprint measurements and calculating to mentor the Robotics Club. "I'm paid for some of the time and the costs," says Prapopoj, who was learning new skills but already had his sights set on New York City.

While working toward his Associate degree in Engineering Science at BMCC-which he received in 2017-Prapopoj studied engineering graphics with Professor Mahmoud Ardebilli, and learned the basics of 3D modeling and production techniques such as laser cutting. "Everything around you, even the mouse and keyboard you're using, was designed on the computer before it went into production," says Prapopoj, who completed an Honors engineering project with Professor Ardebilli. Through funding from the Collegiate Science and Technology Entry Program (CSTEP) and the BMCC Robotics Club, he created a robot that featured a microcontroller and could be programmed to collect balls and deliver them to designated pockets in

Now working toward a bachelor's degree in electrical engineering at the City College of New York, CUNY, Prapopoj returns to BMCC each week rest is volunteer," he says. "I don't see it as work. I see it as sharing access to a playground of resources that we create with. That's what robotics is." He also prepares the club for national robotics competitions, paying forward his own success. "When I was at BMCC," he says, "we won third place regional and fifth place national, in the American Society for Engineering Education 2017 competition."

Eventually, Prapopoj wants to help design computerized prosthetic legs, a career interest born on the New York City subway. "There was a man with no legs, asking for change," he says. "It made me realize prosthetic legs are not affordable for everyone, and when they are, they're not computerized. Why can't I help design something like that? If possible, I want to go to Carnegie Mellon University or Stanford and make that happen."



## Mathematics: The Language of Success

Ai Ngo, who grew up speaking Malay, English and Mandarin, excels in the universal language of mathematics.

"Mathematics is challenging, but it is also interesting," says BMCC Math major Ai Ngo. "People from all over the world can communicate using this universal language." Ngo, who grew up in Johor Bahru, Malaysia, spoke Malay in school, where she also learned English. Her family spoke a dialect of Chinese, Teochew, as well as Mandarin. "Even with the language differences, I realized in the first grade I was good at math," says Ngo. "I scored at the top of my grade for several years. In high school I was selected for the city-wide math and science competition, and our group won a problem-solving challenge."

With this auspicious start, it may come as a surprise that Ngo was not accepted at any of the universities in Malaysia to which she applied. The reason, she feels, had to do with her identity within a minority, in a country that once held ethnic quotas in its government-funded university system.

Despite this disappointment, Ngo excelled once she moved to New York and entered BMCC as a Mathematics major in 2014. She was awarded a BMCC Foundation Scholarship and under the mentorship of Mathematics

Professor Chris McCarthy, completed a MSEIP Summer Research Project and then a 2017 Fall Honors Project. She joined Phi Theta Kappa, mentored other students, and presented her research findings alongside fellow BMCC scholars Senayit Menasche and Abdulai Jalloh at an undergraduate poster session of the January 2018 Joint Mathematics Meeting of the Mathematical Association of America, in San Diego.

Her research project with Professor McCarthy, "The One-Dimensional Filter Equation, Recursive Solution," seeks to find an eco-friendly solution to the heavy-metal contamination of water by constructing filters out of organic materials, such as spent tea leaves. "It's important to me. People who ingest the metals through drinking water don't get sick right away, but the metals stay in their bodies a long time and cause serious health issues," Ngo says.

Eventually, she hopes to teach mathematics. "If I had stayed in Malaysia, today I would be working as a secretary and maybe as a math tutor on the side," she says, "but Professor McCarthy believes I could teach at the college level. I am beginning to believe it, too."



### Fighting Corruption, One Degree at a Time

Awareness of how budget corruption impacts low-income families drives a Forensic Accounting major.

BMCC alumnus Saurav Paul grew up in Bangladesh, a country he says is rife with financial corruption. "In poorer countries, there is very little oversight of the financial books in the public sector," he says. "People pay their taxes, but there's a lot of misspending, and it's the poor people who get hit hardest."

In 2014, Paul moved to New York, and began laying the groundwork for an eventual career rooting out financial corruption. His first step was to earn a High School Equivalency diploma at Brooklyn College, CUNY. Then in Fall 2015, he enrolled as a Forensic Accounting major at BMCC and began to thrive academically. He discovered a love of classical Western music in one class, and found he was fascinated with astronomy, in another. He also joined groups including the BMCC Academy of Leadership and Service, and in Spring 2016, traveled with other BMCC students to the National Student Leaders and Diversity Conference in Atlanta.

"Financial equity is part of the larger social justice picture," says Paul, who became an IRS-certified tax preparer in Spring 2017, helping low-income clients through the New York Food Bank and Voluntary Income

Tax Assistance program at BMCC. He was also an Out in Two Scholar, the founding treasurer of the BMCC Toastmasters Club, and received both the Louis Horowitz Departmental Honor Award and Josh Wolfson Accounting Scholarship.

Paul completed his Forensic Accounting degree at BMCC in Spring 2017, and with the help of the John Jay College Transfer Student Scholarship, entered that college's Fraud Examination and Financial Forensics Bachelor's degree program. Still determined to glean as much experience outside as inside class, his extracurricular projects include serving in the Association of Certified Fraud Examiners.

The commitment to weed out corruption that Paul developed in his early life is fast becoming a reality, as he moves toward a career in forensic accounting. Someday, Paul says, he wants to return to BMCC and share what he has learned through real-world experience. "I want to build my career as an investigator in the public sector," he says. "BMCC showed me that I can help bring those who abuse their positions before the law, and that in turns helps establish a more equal society."



### Swipe Right: Students Join the Club

A Gender and Women's Studies class activity inspires Kate Dorlan to expand the conversation on safe dating.

Looking at a display generated through a class activity—students wrote anonymously on adhesive notes about their experiences with gender violence—BMCC Liberal Arts major Kate Dorlan was struck by one thing: "I realized we need a safe place to talk about these things," she says. "It really brought home the issues of sexual harassment, misconduct, assault and sexism."

The activity, which Dorlan had initiated in her small assigned group, was part of Professor Brianne Waychoff's Introduction to Gender and Women's Studies class. "We were looking at the spectrum of gender violence," says Professor Waychoff. "Kate's activity gave her classmates a way to share their stories. It was a starting point for deeper discussions." "I want everyone, male and female, to know they're part of this community and this discussion of safe and healthy dating," she say adding that the club will be a place where members can come up with their own projects to look at issues such as consent and sexual

After the activity, Dorlan made a video to tie in the class project with the trending #MeToo movement, in which women have come forward to share their stories of sexual abuse and harassment. Using a tripod and camera, "I gave a testimonial of my own experience and panned over the wall of sticky notes from our class," she says.

With Dorlan's permission, Professor Waychoff shared that video via Blackboard with other students in the class, who were building a historical and social context in which to view it, she explains—and the BMCC student club, Swipe Right, was born. Professor Waychoff is the faculty advisor for the club, and Dorlan is inviting fellow students to join it, through email blasts, word of mouth and flyers.

"I want everyone, male and female, to know they're part of this community and this discussion of safe and healthy dating," she says, adding that the club will be a place where members can come up with their own projects to look at issues such as consent and sexual harassment. "With the right direction and tone, I think we can even scale it up; create action kits so other campuses can start their version of the club and create content online to broaden their message." In the end, she says, "The purpose of the club is to equip people with tools in case a situation arises on a date that they are not prepared to handle. It's just really practical."



### Switching to a Career in Nursing

Professor Anne Marie Sterk guides Arnaldo Cruz on a pathway to helping others.

"Nursing isn't an easy job. You use your head and heart at the same time—and the moment you stop caring, it's time to re-evaluate your career," says Anne Marie Sterk, a BMCC alumna who earned an Associate degree in Nursing in 2006, and went on to earn her master's in Nursing Education in 2014.

Today, she is the Unit-Based Educator for the Hematology/Oncology Pediatric Unit at Montefiore Medical Center in the Bronx, New York. She is also a clinical professor for BMCC, working with Nursing majors assigned to complete their pediatric clinical rotation at Metropolitan Hospital Center. "Each morning, after a short lecture, we move out onto the floor where the students are assigned individual patients to care for," she says. "I teach them how to approach and assess a patient; how to apply all their studies in a way that responds to that patient's clinical picture and needs."

Working with Professor Sterk, BMCC Nursing students engage in the problem-solving process that is integral to nursing. "If a child has a failure to thrive, I talk to the students about what might cause that to happen, and possible interventions," Professor Sterk says. "It's very hands-on."

BMCC Nursing major Arnaldo Cruz, now completing his practicum with Professor Sterk, had spent more than 15 years working in Information Technology when family health crises—his mother's cancer and sister's stroke—"opened my eyes to the role of good nurses," he says. "I changed careers because while I enjoyed working with computers, I wanted that human connection in my work. I knew I would feel comfortable with the technology that comes with nursing, but also, I genuinely care about people. A simple hello can lift their spirits."

After earning his Associate in Applied Science degree in Nursing in May 2018, Cruz plans to take his National Council Licensure Examination for Registered Nurses (NCLEX-RN), and enter the online Bachelor of Science in Nursing program at the University of Texas. After that, his goal is to earn a master's degree and specialize in anesthesiology.

"Arnaldo's ambition doesn't surprise me," says Professor Sterk. "He never questions the work or study load. If I assign him one patient, he still wants to understand what is going on with the others. Nurses never stop learning."



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