

Fall 2015

BHCC

Bunker Hill Community College Magazine



STARRING STUDENTS

Jared Standish graduated with a 4.0 GPA, won a national award, runs an online business, operates a recording studio—and is just one of BHCC's Starring Students.

ALSO IN THIS ISSUE:

U.S. Senator Elizabeth Warren Salutes Largest Graduating Class in BHCC History

President Eddinger Interviews Secretary of Education Jim Peyser



THE INTERVIEW

BHCC President
Pam Eddinger Interviews
Massachusetts Secretary
of Education Jim Peyser

Boston, September 22, 2015

Part of an occasional series of conversations with local and national leaders about issues and trends in community college education.

Dr. Eddinger and Secretary Peyser explore dual enrollment and early college, distance education as a solution to student debt, college affordability, regional/geographic planning for increased alignment with workforce needs, new pathways for K-12 through college, and more rational financing of higher education.

As Secretary of Education, Jim Peyser is Governor Charlie Baker's top advisor on education, and shapes the commonwealth's education reform agenda. Peyser directs the Executive Office of Education, which is responsible for early education, K-12, and higher education in Massachusetts.

Peyser has been involved in education transformation throughout his career. He led a nonprofit grant-making organization that fosters entrepreneurial education, chaired the Massachusetts Board of Education for seven years, and served as education advisor to three Massachusetts governors. He also headed the Pioneer Institute for Public Policy Research, where he launched a resource center to support the development of the state's first charter schools.

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Here are the questions:
 What does Massachusetts Secretary of Education Jim Peyser think about college affordability? How stratospheric are the accomplishments of BHCC's starring students? Can you go to college before you graduate from high school? Exactly how big is big data? Where was Commencement speaker Elizabeth Warren born and what were her thoughts on graduation? What is the name of the BHCC student who won a full scholarship to MIT? What kind of online business does super-student Jared Standish run? Did *BHCC Magazine* get another gold award this year?

Unsure of the answers?
 They're all right here in the latest issue of *BHCC Magazine*. Enjoy!

U.S. Senator Elizabeth Warren and BHCC President Pam Y. Eddinger on their way to Bunker Hill Community College's 41st Commencement Exercises.

Bunker Hill Community College Magazine | Fall 2015 | Vol. XI, No. 2

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Campus News

In recent news, the College's popular Learn and Earn internship program garners high honors from the American Association of Community Colleges, community engagement at BHCC makes it onto the President's Community Service Honor Roll and wins recognition from the Carnegie Foundation, long-time Student Activities Coordinator Paul Moda earns an award, the College's magazine brings home more gold, and a program promoting diversity in nursing celebrates an amazing 10 years.



National Recognition for Learn and Earn

Internship program with top Greater Boston companies scores excellence award

Bunker Hill Community College's Learn and Earn Internship Program, in partnership with its founding sponsor, Massachusetts Competitive Partnership (MACP), won a national Award of Excellence in the Outstanding College/Corporate Partnership category from the American Association of Community Colleges.

"Innovative programs like Learn and Earn put community

colleges at the forefront of providing students with valuable skills for successful careers—and of providing industry with a competitive 21st century workforce," said retired Chairman and CEO of Raytheon Bill Swanson, who chairs MACP. "We hope that this collaboration can serve as a model."

Launched in 2012 with five Greater Boston corporations that are founding members of MACP, the Learn and Earn program has expanded to include 15 of Greater Boston's most prestigious companies: Bank of America, Beth Israel Deaconess Medical Center,

BJ's Wholesale Club, The Boston Foundation, Dovetail Health, Eaton Vance, EMC, Fidelity Investments, Liberty Mutual, Raytheon, Staples, State Street, Suffolk Construction, UBS and Vertex Pharmaceuticals. The American Association of Community Colleges represents nearly 1,200 two-year associate degree-granting institutions and more than 13 million students.

BHCC Makes President's Honor Roll for Community Service



BHCC students contribute 5,000 hours to help others

Bunker Hill Community College was named for the fifth year to the President's Higher Education Community Service Honor Roll, the highest federal recognition colleges and universities can receive for community service, service-learning and civic engagement.

Through the College's Office of Community Engagement, BHCC students have contributed more than 5,000 hours of

service to the Greater Boston Community.

The Honor Roll is a program of the Corporation for National and Community Service, a federal agency that engages more than five million Americans in service through AmeriCorps, SeniorCorps, the Social Innovation Fund and the Volunteer Generation Fund.

An Honor for the Honor Society Advisor

International Honor Society recognizes BHCC's Paul Moda
 Coordinator of Student Activities
 Paul Moda received

the 2015 Continued Excellence Award for Advisors from the Phi Theta Kappa International Honor Society. Moda has served as advisor to Alpha Kappa Mu, BHCC's five-star chapter of Phi Theta Kappa, since 2002.

The award went to Moda for contributing to the growth of individual members of Alpha Kappa Mu, for serving as the chapter's advocate on campus, and for encouraging the chapter's involvement at the local, regional and international levels.

Phi Theta Kappa is the largest honor society in higher education, with 1,285 chapters on college campuses around the world.

More Honors for Community Engagement

BHCC is recognized by the Carnegie Foundation



The Carnegie Foundation for the Advancement of Teaching selected BHCC as one of the 240 colleges and universities in the United States to receive the Foundation's 2015 Community Engagement Classification.

"This recognition is a validation for us because community engagement ranks among the College's highest commitments,"

said BHCC President Pam Eddinger. "It plays a central role not only in our curriculum, but throughout our institutional culture."

The Carnegie Foundation defines community engagement as the collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.

Gold Again for BHCC Magazine

College publication wins top honors

BHCC Magazine received a gold award in the national communications competition sponsored by the National Council for Marketing and Public Relations (NCMPR). A second gold award went

to a digital illustration for the magazine's fall 2014 feature, "In a House of Books."

The awards honor outstanding achievement in communications. Launched eight years ago, BHCC's magazine has now earned its fifth gold award from NCMPR, having received golds in 2013, 2012, 2011, 2009 and 2007, along with two silver awards, in 2011 and 2014.



NCMPR, an affiliate of the American Association of Community Colleges, represents marketing and public relations

professionals at community and technical colleges throughout the United States.

Taking a 10-Year Stand

Program promotes diversity in nursing



STAND—Students Taking a Stand for Nursing Diversity—celebrated 10 years of guiding students into nursing careers at an event in the College's gym on May 21, 2015. Eva Gomez, Staff Development Specialist at Boston Children's Hospital, addressed the gathering, which brought together students, family, friends and supporters of the innovative program.

The event honored students graduating from the program and paid tribute to its community partners, including Boston Medical Center and Boston Children's Hospital. Also honored were STAND's partner schools: Somerville High School, the Jeremiah E. Burke High School, the Edward M. Kennedy Health Careers Academy, the Community Academy of Science and Health, the Urban Science Academy and Madison Park High School.

STAND reaches out to inner-city and other high school students interested in nursing careers and guides them through the necessary prerequisites. Graduates of this year's STAND program entered BHCC in fall 2015 to begin working their way toward degrees and certificates in nursing and allied health.

Go to bhcc.edu/magazine for more detail on these news clips.

THE INTERVIEW



President Eddinger Interviews Jim Peyser

Continued from inside front cover

President Pam Eddinger:

You've served as Secretary of Education for close to a year now. Does your experience so far match your expectations?

Secretary Jim Peyser:

Yes and no. I've been in and around state government in jobs similar to this one, so many of the issues are familiar. As a K-12 guy, I figured I'd be spending most of my time on K-12 issues. So far, that hasn't always been the case. I've probably spent more time familiarizing myself with higher education issues. The governance structure of higher education is more challenging

than K-12's from a policy point of view. The policy-making apparatus is much more about relationship-building and collaboration, which takes time.

PE: In these conversations with stakeholders, what surprises you? What inspires you?

JP: I was at an event in Holyoke recently and somebody said, "We are activity rich and system poor." There's some incredibly inspiring work that's happening every day in all levels of education. But the whole doesn't always add up to more than the sum of its parts. So my primary focus is to create a strategic context so the work going

on at campuses is producing a system of higher education to serve the whole commonwealth effectively. My other major priority is improving strategic connections between K-12 and higher education.

PE: The idea that educational segments should not be silos has dominated national discussions on education. K-12 should reach for K-14, and K-14 ought to be reimagined as K-16. Are you seeing these movements in Massachusetts?

JP: Yes, we are beginning to see movement within the state. I want to find the things that work and grow them. Overall, we're producing great results—for example,



BHCC students packing bags of food to be delivered to Community Servings clients.



MassEducation @MassEducation · Sep 22
Very interesting discussion betw President @PamEddinger & Sec. Peyser on #MAedu & innovative projects @BHCCBoston

our early college and dual enrollment programs. But, we have too few of these pathways for students. What's most exciting for me is finding opportunities for growth in places where we're already succeeding.

PE: In my third year as BHCC President, I am seeing rapid expansions of these conversations with the Boston Public Schools and the Chelsea Schools. Do you think it's because the conversations about career pathways and urban coalitions are converging?

JP: I hope so. The dual enrollment program we have right now has largely been seen as a student-driven choice program. That's great, but it's not maximizing the value of those resources. We should be investing more in structured early college programs that work with cohorts of students—especially in STEM fields.

PE: It sounds as though you really want to see more intentional support.

JP: Absolutely, especially for high-need, low-income, first-time college students. We need to help these students stay on track to college and provide the support and infrastructure to help them finish.

PE: I am in absolute agreement! Let's talk about the education and business/industry connection. We have been responding to business and industry in a number of ways. For example, working with the Massachusetts Competitive Partnership on the Learn and Earn paid internships, or conducting incumbent worker training for career advancement with Beth Israel Deaconess Medical Center.

Boston Public Schools Superintendent Tommy Chang recently asked a really thoughtful question: "With all of this work on partnerships, what are we promising our students at the end of the line?" One of my



colleagues, Keith Motley, Chancellor of UMass Boston said, "Certainly with all of the skills and competencies we are training them for, they will be job ready."

My question for you...do we want them to be job ready or do we actually want a job waiting for them?

JP: It's probably both. Community colleges especially need to be in the relevancy business, and that means preparing young people and adults for work. It also means trying to create those kinds of connections before they get out of college, as with the Learn and Earn at Bunker Hill. If the employers could lead, that would be even better. Typically it takes a community college to organize the resources and the employers.

PE: The more successful community college programs have invited the employers into the process not only as provider of jobs, but as co-facilitators of learning. The mentors in Learn and Earn

workplaces are really key to our success.

Case in point, we have a partnership with the Department of Revenue (DOR) that was created to address the critical shortage of workers in that department. It's a specialized certificate program that includes DOR internships and creates a pathway for a job either at the DOR or at an accounting or tax firm. I'd like to see more of that type of program in our commonwealth.

JP: That is easier to do in the context of a city or a region that has large employers who are able to make commitments to offer a number of positions year after year. We're not taking full advantage of that.

PE: Distance education—or asynchronous education as we sometimes call it—has been around in higher education for close to two decades now. There are a lot of folks who believe it is the solution to access and to the student debt dilemma. Do you?

JP: I think it is part of the solution. For students who have a higher level of academic preparation, having online options either as a part of or as an entire course of study can be tremendously successful. I don't think it is for everyone. I do think adding an online component to the typical college experience is not only a way to make it more affordable, but also to make it fit more easily into a person's complicated schedule. Obviously, it depends very much on the content and the quality of the platform, but there are students who can really take advantage of it.

PE: That is insightful because we are finding that on our campus. About a third of our students are taking online courses, usually one or two, in addition to the three or four they're taking on the ground. Taking a full load of five classes is a challenge for our students because many work full time or have other obstacles. Students can't finish in two years unless they're taking five classes a semester, so we're hoping that online offerings give them more options.

JP: So much of this is providing different pathways through the college experience. Especially in an open enrollment institution like our community colleges, there's no way you can say, "Here's the program. You're welcome to come and join, but this is it."

PE: What do you think about college affordability and how it might be implemented?

JP: College affordability has several components. First, we need to make sure that we're doing everything possible to maximize the value and impact of the assets we have. Among other things, that means working collaboratively across college campuses to share resources and find economies of scale. By doing so, we can help moderate tuition and fee increases. Second, we need to make sure we are getting students through their college experience as quickly and efficiently as possible. This includes ensuring incoming students are better prepared for college-level work and improving the efficacy of developmental

courses. It also means effective and proactive counseling to help students take the courses they need—and only the courses they need—to meet their academic and professional objectives. This also implies an ability to transfer credits from one college to the next throughout the public higher education system in all relevant majors. And finally, we need to develop lower-cost pathways for students, which allow them to get from point A to point B at below list price.

PE: When we sit down in a couple of years, what three big things would you like to see at our community colleges?

JP: First, I'd like to see detailed, regional plans among all the institutions of higher education in a particular geographic area that are well connected and aligned with the workforce system. We need to make sure we're maximizing the assets and resources we have at our disposal.

Second, I'd like to see the development of new pathways for students starting in K-12 and working through college. Community colleges may need to take the leadership role here. We need to ensure not only that more students, especially first-generation students, are getting to and through college, but also that they are preparing for careers that can sustain them and their families.

Third, we need to have a more rational and predictable means of financing higher education.

"We need to ensure not only that more students, especially first-generation students, are getting to and through college, but also that they are preparing for careers that can sustain them and their families."

—Secretary Peyser

PE: You're obviously an educator through and through. So on a really bad day, when your world is going every which way, what gets you up in the morning to do this work?

JP: There are some tremendous people working in the field of education in Massachusetts. We need to support them and make them successful. That's what I feel I'm here to do. ■



Fighting the Good Fight

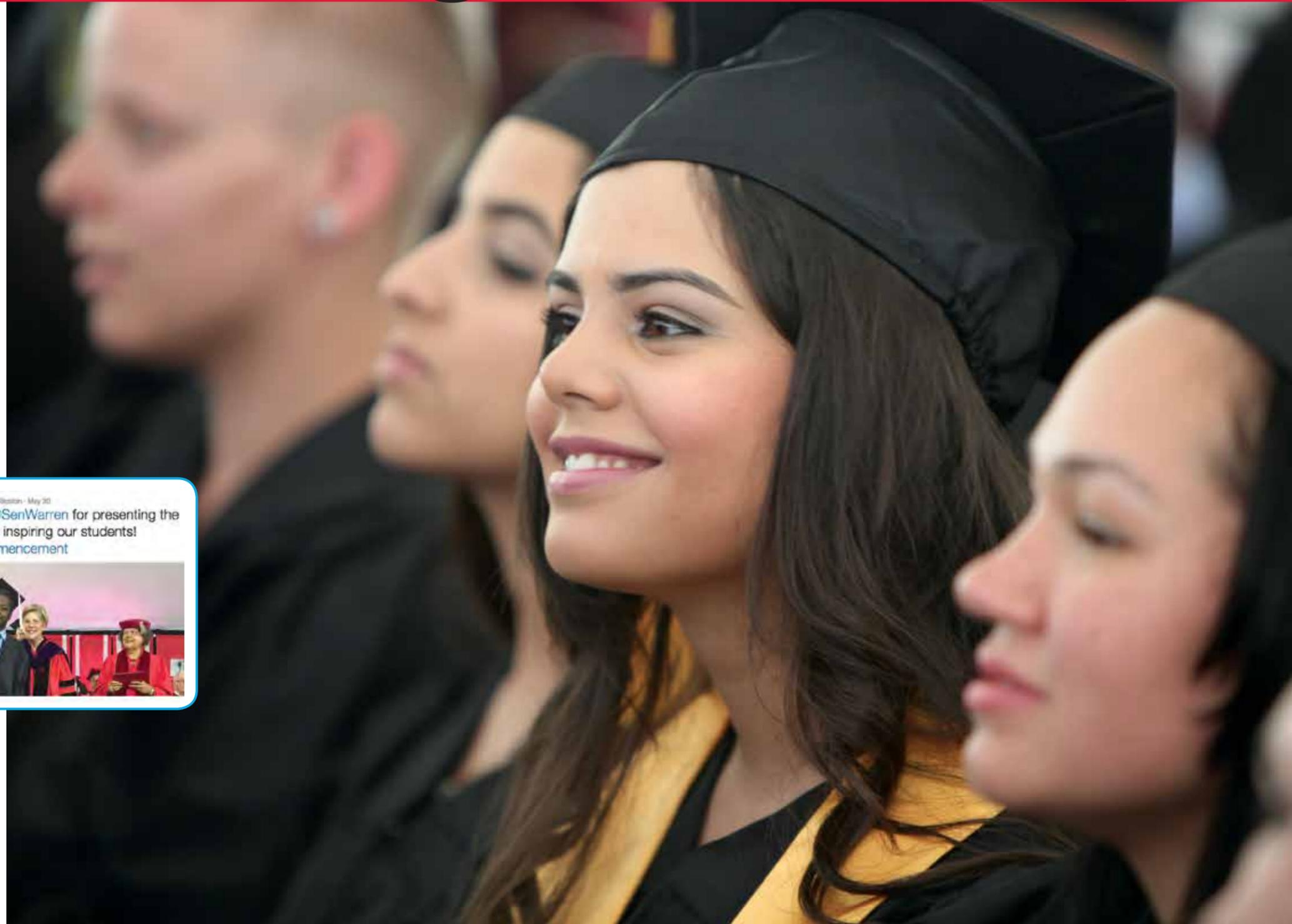


"You can't win what you don't fight for," keynote speaker Elizabeth Warren said to the cheers of an audience of more than 3,500 at Bunker Hill Community College's 41st Commencement exercises on May 30, 2015. The senior U.S. senator from Massachusetts cited her common ground with the students and identified with their struggles. Praising the "real grit" of the 1,408 graduates before her, the senator's exuberant speech drew frequent applause and laughter.

At the opening of the exercises under a big white tent on the grounds of the Charlestown Campus, President Eddinger greeted the gathering and recognized special guest Nate Mackinnon, Assistant Commissioner of the Massachusetts Department of Higher Education. She then invited the graduating students to join her in BHCC's traditional ritual of gratitude. President Eddinger instructed them to

stand and raise their right hands high and, after a moment's pause, to wave and call out their thanks to all the family members, friends, professors and advisors who helped them reach this day of accomplishment.

Amid the cheering, President Eddinger singled out for special praise the many BHCC graduates who were the first in their families to earn a degree. She urged the graduates to celebrate their success by passing on the strength, wisdom and gifts they had received. "Your journey is the hardest because you created a path where there was none," she said. "You are first so that others in your family and communities can walk in the path that you made, with less struggle and fewer tears. So they may go faster, they may go farther and dream beyond what even you can imagine. You are the older brother, the big sister. You are the guide. You are leading the way."



◀ Senator Elizabeth Warren, keynote speaker, addresses a capacity crowd at the College's 41st Commencement Exercises.



The President also called on the 64 members of the graduating class who had served in the armed forces to rise and be acknowledged. She told all of the graduates they now had the tools they needed to forge their own futures.

“The courage to persist, the wisdom to elevate, and the power to transform is already with you and is inside you,” she said, to rousing applause.

Chair of the College’s Board of Trustees Marita Rivero, a senior adviser at WGBH, brought the compliments of the College’s trustees. “We recognize your achievements in the classroom, your devotion to academic excellence, your commitment to community service—and we celebrate with you,” she said. Capturing the bittersweet nature of the day, Rivero reminded the graduates they would never entirely leave this time behind. “Please remember you are always a part of Bunker Hill Community College. Wherever you continue your life’s adventure, we will

always be your home.”

President Eddinger then presented the President’s Leadership Awards, an annual honor, to two students: Jody J. Roberts, a mother of four who returned to college after raising a family, and Misael Carrasquillo, a former U.S. Marine who played an active part in helping other student veterans. Both are among this year’s “starring students” in the story on page 12 of this issue of *BHCC Magazine*.

Janice M. Bonanno, Associate Vice President of Student Services and Dean of Students, retiring after 42 years, earned the Trustees’ Distinguished Service Award. Noting the College had celebrated its 40th anniversary last year, Board Chair Rivero praised Bonanno for playing a series of key roles in the College’s history since its beginning—and even before the beginning, when she helped shape the institution that became Bunker Hill Community College.

The President’s Distinguished Service Award went to John P. McDonough, Superintendent of the Boston Public School system. The President pointed out that the College works closely with the city’s schools in many programs to

support students as they make the challenging transition from high school to college. In honoring McDonough’s work as superintendent, President Eddinger told the audience that under his leadership the graduation rate of the Boston Public Schools reached an all-time high in the city’s history.

Echoing the College’s motto in introducing the keynote speaker, President Eddinger said, “In Elizabeth Warren, we can *Imagine the Possibilities!*” She pointed to Warren’s achievements as the first woman senator from Massachusetts, as an academician who had taught at Harvard Law School for 20 years, as a noted advocate for consumers and families, and as the first in her family to earn a college degree—a woman from modest beginnings who was now playing a role on the national stage.

To the enthusiastic roar of the crowd that greeted her at the podium, Warren responded, “Way to go, guys!” In a brief, lively and upbeat speech, Warren talked about her journey, and how surprised she has been at where it has taken her. “I sat

in the back row at my graduation, and it was hot. I did not sit there thinking, ‘Whoa girl, you’re on your way to the U.S. Senate!’ I never dreamed I would have a chance to climb a mountain, I never knew I would meet the president of the United States, and

I never knew I would be a blonde!”

Warren came from a family in which “college was not in the cards. My own path to a college diploma was pretty checkered,” she said. Motivated by the desire to become a teacher, Warren described the financial hardships and other obstacles she faced. She married young, took on debt and dropped out temporarily before finally getting her degree. Empowered by her success, Warren was to take on uphill battles throughout her career, including the effort she led to create the Consumer Financial Protection Bureau.

For Warren, whose family often faced financial difficulty, this battle, too, was personal. “I watched as big banks raked in billions of dollars by trapping people in debt. What really burned me was that there was plenty of laws to stop these banks, but the government agencies that were supposed to enforce these laws just looked the other way. I got an idea, what if we built an agency to enforce those laws? A cop on the beat for those families?”

It wasn’t easy, she recalled. “Everyone told me, ‘You will never get this consumer agency passed into law. You’re just a teacher. You’ve got nothing.’ But I believed it was right to have that fight. I kept slugging it out. We won, and that agency is now federal law.”

For Warren, still the teacher, this experience



offers a universal lesson. “I wanted to say something to you that you already know deep in your bones,” she said. “You want to change something. Well, nobody is going to give it to you, you’ve got to fight for it. And just one more part that goes with that: I believe in you. I sat where you sit. I know what people with real grit can do, I know what you did to get here, and I know what you can do when you fight for what you believe in.

“No matter the odds, no matter what you’re up against, if you fight, amazing things can happen,” she said, over the cheers of the crowd. After all, we are here to celebrate your amazing graduation, and all the amazing things that will come in the future. Thank you,” she concluded, “and keep fighting.”

As students then came to the stage to receive their degrees and certificates, Senator Warren joined President Eddinger to shake their hands and congratulate them. As graduates left the stage, a member of the College alumni association handed them a small gift, celebrating their new status as Bunker Hill Community College alumni. ■



BHCC Boston @BHCCBoston · May 30
“Go forth from this celebration of accomplishment today... Continue to find yourself” - John McDonough @BostonSchools

John P. McDonough, recipient of the President’s Distinguished Service Award, with BHCC President Pam Eddinger.



1408 GRADUATES

STARRING STUDENTS

Meet eight Bunker Hill Community College students who have redefined the word “multitalented.” They are parents, students and entrepreneurs, gifted doers as well as thinkers. While maintaining high grade point averages, they have managed businesses, volunteered in the community, earned state-wide recognition, won national awards, overcome personal hardships and created new programs at the College. And they represent just a few of the College’s many starring students.

VIET Q. PHAN

Helping Hand

Viet Phan, who is from Vietnam, came to BHCC in 2011 to learn English—and discovered that he “wanted to do something good for the College, the community and the world.” He volunteered with the Boston Rescue Mission and at Mass General. He worked as a service leader in the Office of Community Engagement, and as an ACE Mentor in the Office of Learning Communities. In 2013 his peers elected him Student Trustee on the College’s Board of Trustees. A biology major who taught himself how to sculpt, Phan also excelled in the classroom. He served as President of the College’s honor society, Alpha Kappa Mu, and was the student administrator for the Commonwealth Honors Program. Phan, who is 23, graduated in 2015 and was accepted to Columbia University’s School of General Studies, where he hopes to refine both his scientific and creative talents.

LATEIA JOHNSON

Leader and Entrepreneur

As a female student in the male-dominated STEM field—science, technology, engineering and math—Lateia Johnson, a first-generation Caribbean American, founded a BHCC chapter of the Minority Association of Engineers and Scientists to help others who are under-represented in the field. The chapter’s offerings included a symposium on the contributions of Muslims to the STEM professions. The Ace Mentor also interned at Raytheon’s Policy and Global Securities Division. Speaking as president of BHCC’s Student Government Association at Commencement 2015, Johnson urged her classmates “to see graduation as another step in the process of learning how to provide an informed and intellectual voice to the civil rights, human rights, economic and social justice issues of our time.” Johnson, who has two sons, received a degree in liberal arts that day. She owns and operates an international medical distribution company located in Barbados.

JODY ROBERTS

Lifelong Learner

Jody Roberts arrived at BHCC in 1978 but soon left to marry and raise three children. Thirty-five years later, she came back. “When we talk about life-long learning, this is it,” said President Pam Eddinger, as she handed Roberts the President’s Leadership Award for academic excellence and outstanding leadership at this year’s Commencement. Roberts, who is 56, pursued a degree in business management—while keeping her full-time job at Mass General, where she has worked for 37 years. An outstanding student at BHCC and a member of the Commonwealth Honors Program and the All-USA Community College Academic Team, Roberts received the Leaders of Promise Scholarship, the Stanley Z. Koplik Scholarship and the Commonwealth Honors Award. She is currently enrolled in the Healthcare Management bachelor’s program at Southern New Hampshire University.





MINWOO YOO
Math Champion

Ever since he was an elementary school student in Seoul, South Korea, Minwoo Yoo's favorite subject has been math. "I really love how I feel when I solve an equation," he said. Yoo earned a perfect 800 on his math SATs. Now age 20, Yoo beat 10,850 students from 180 colleges to place first in the American Mathematical Association of Two-Year Colleges Student Math League competition this year. He received a \$3,000 scholarship from Pearson Education and a certificate of merit in recognition of his outstanding achievement. "He'll have a brilliant career," said his mentor, Assistant Professor of Mathematics Elhoussine Ghardi. Yoo was accepted to Boston University for fall 2015 but decided to attend BHCC for a second year instead.

MISAEI CARRASQUILLO
Veterans' Veteran

Misael Carrasquillo earned a meritorious award while serving as a U.S. Marine in Afghanistan in 2011. When he arrived at BHCC in 2013, he used his leadership experience to help his fellow veterans. He worked in the Veterans Center, coaching, mentoring, helping vets with the paperwork needed to receive benefits, and aiding in the launch of an orientation program geared to student veterans. Carrasquillo recruited students for the Student Veterans Club and assisted with the club's fundraising events. In the classroom, he took the initiative to help other students with projects and assignments. "I enjoy helping anybody who wants to succeed as much as I do," he said. Carrasquillo's outstanding work with vets and other students earned him the President's Leadership Award at Commencement 2015. The first college graduate in his family, he received his Associate in Business Administration in May—along with the business department's Award for Academic Excellence. Carrasquillo, 24, now attends Northeastern University's College of Professional Studies. He plans to earn an MBA.



JARED STANDISH
Intern Par Excellence

Jared Standish graduated from BHCC in 2015 with a 4.0 grade point average. Through the College's Learn and Earn internship program, Standish worked at EMC, the global IT leader based in Hopkinton, Massachusetts. His achievements there earned him four quarterly recognition awards—usually reserved for full-time employees—plus the national Two-Year Program Student Achievement Award from the Cooperative Education and Internship Association. Standish, who is 22, continued working at EMC following his transfer this fall to the University of Massachusetts Boston, where he is studying marketing and entrepreneurship. He is also working with state and local government to build a skate park in Somerville through the DIY Skatepark Organization, which he co-founded; running the online skateboard company he launched in 2014; and recording local singer songwriters and rappers at his studio, Standish Street Recordings.



YAMILETH LOPEZ
Woman of Business

When Yamileth Lopez was a college student in Venezuela, her father died and she moved to Hyde Park, Massachusetts, to run his business and raise her daughter. She enrolled at Bunker Hill Community College in 2011, and has excelled ever since. Lopez received scholarships from First Literacy, the Association of Latino Professionals in Finance and Accounting (ALPFA) and KPMG. She received an All-Star Award from JVS. Lopez was named a Coca-Cola Leader of Promise by Phi Theta Kappa, and was honored among Massachusetts public higher education graduates as one of "29 Who Shine" in 2015. The 41-year-old served as Student Trustee on the College's Board of Trustees and completed three internships through the Learn and Earn internship program, most recently at Liberty Mutual. She graduated in 2015 with a degree in accounting and now attends the University of Massachusetts Boston while working as a bookkeeper at Sociedad Latina.



QUAN NGUYEN
Winner Takes All

Quan Nguyen came to the United States from Vietnam in 2010. The first in his family to attend college, he majored in biomedical engineering at BHCC. In 2014 he became one of just 20 students in the country to win an Oberndorf Lifeline to Completion Scholarship. At a celebration at the Massachusetts State House he joined a group of extraordinary graduates of the state's 29 public colleges and universities named the "29 Who Shine" in 2014. He also won a BHCC Foundation Ruby Scholarship. That was last year. This year, the 24-year-old won a scholarship for academic excellence, service and leadership as part of the All-USA Community College Academic Team. He landed another scholarship as one of 50 students nationwide to be named a 2015 Coca-Cola New Century Scholar. And then to cap a meteoric career as a student, Nguyen gained admittance to MIT with a full scholarship. He is majoring in chemical-biological engineering and pursuing a minor in biomedical and materials science.



 For more information on BHCC's starring students, go to bhcc.edu/magazine.



BHCC launches Big Data course and students get ready for a big new future

One evening last July, ten students gathered in a windowless classroom with tables down the center and banks of computers against the walls. The sense of excitement, commitment and adventure was palpable. The students make up Bunker Hill Community College's inaugural Big Data class. They are a diverse group in ethnicity and age. One speaks with a Russian accent, two or three describe themselves as "ex-military," one says simply (to general laughter), "I'm a nerd." Another describes the course as an introduction to "one of the defining concepts of our age." All signed up because big data is big these days, and because they believe big data is the future.

"The sheer mass of data that has come online in the last few years, and that continues to grow exponentially, has forced development of tools to analyze data at a

new scale," says Assistant Professor Michael D. Harris, who teaches the course. "Those tools increase our capacity to understand the world. In this course, students learn how to analyze big data in ways that prepare them for a future in a rapidly growing field."

Big data means big opportunities for BHCC students. The global consulting firm A.T. Kearney forecasts that worldwide spending on big data hardware, software and services will grow at a compound annual growth rate of 30 percent through 2018, reaching a total market size of \$114 billion. More than 200,000 entry-level jobs and 1.5 million managerial jobs will be created in the field over the next few years.

The Big Data course is part of BHCC's newly minted Data Management Certificate, which will position students to enter the field as database and spreadsheet support

technicians who design and program reports and forms. The certificate program was developed by Harris, who has worked in the industry on projects such as the Atmospheric Imaging Assembly on the Solar Dynamic Observatory, a space telescope that studies the sun, and the SUGV (small urban ground vehicle) for iRobot. A full associate degree program is in the works.

The course opens with a critical examination of a report on the now-famous deflated footballs in a championship game between the New England Patriots and the Indianapolis Colts. Harris asked the students to read the report and come to class with comments. As he went around the room, one student after another pointed to weaknesses. A biased selection of variables. Improper testing methodology. Inconsistency in the examination of data. Insufficient data.

Cherry-picked data. A simple lack of common sense. Agreeing with their critiques, Harris nevertheless warned the students to beware of their own biases—and his. He wore a Patriots cap to class to indicate his own partiality.

"A student just starting to learn about data science and how to use it needs to know that data are constantly being manipulated to influence opinions," he says. "Without a healthy skepticism, we can fall victim to other people's biases—as well as our own. That's why the data sets chosen for the course have non-intuitive outcomes, which helps reinforce this critical skill."

The course is project-based, and focuses more on questions than answers. In one assignment, students take advantage of the new open data policies that make entire city budgets available for inspection by the public. Students live-link databases from the city payrolls of Boston and Cambridge to Excel, so when the data change, their Excel spreadsheets change. Students examine not only what individuals make, but where government contracts go, and which companies and departments pay the most as well as the least. They then draw conclusions about each city's priorities.

In examining Boston's 2015 budget, one student in the class asked why a particular pilot school received \$750,000 over five years for equipment, supplies and materials, while another school in the system received \$50,000—less than one-tenth of the pilot school's budget. Knowing that such information exists and how to mine it for significant disparities empowers students to dig into the data and the field. "Hopefully," says Harris, "it inspires them to go down the rabbit hole of knowledge."

Students also looked at which streets in Boston have the lowest crime rates and which streets in Cambridge issue the fewest parking tickets. Going further afield, the students researched meteors striking the earth, and the location, frequency and strength of earthquakes around the world; and plotted their results on an interactive dashboard. While the information students uncovered was interesting and revealing, the purpose of the exercises was less to find

BIGGER AND BIGGER

“When the Sloan Digital Sky Survey began in 2000, its telescope in New Mexico collected more data in its first few weeks than had been amassed in the entire history of astronomy. By 2010 the survey’s archive teemed with a whopping 140 terabytes of information. But a successor, the Large Synoptic Survey Telescope in Chile, due to come on stream in 2016, will acquire that quantity of data every five days.”

—From *Big Data* by Viktor Mayer-Schönberger and Kenneth Cukier

answers than to pose questions.

"There are no right answers to the assignments," Harris says. "They are about finding data, retrieving it, and then digging into it to come up with questions. The course is about looking at data in a new way and learning how to think critically about why things are the way they are."

Harris reminded the students that there are important differences between data analyses and traditional scientific studies. The traditional study employs a control group, which makes it possible to isolate causes. If a group of infected people all recover after taking a certain medicine that another group did not take, it is reasonable to conclude that the medicine cured the infection.

"But most data analyses do not use control groups," says Harris. "The data are what we call 'observational.' The resulting analysis produces correlations, not causes." And this, he explains is where the new reliance on big data—a reliance that the amount of data itself makes inevitable—presents a challenge to older ways of thinking.

"Big data analyses tell you 'what' but they don't tell you 'why,'" he says. Yet much of the history of science is a search for causes. "Traditionally, we feel we know something when we know what caused it. Big data analyses provide a different way of knowing, which is equally legitimate, as well as highly useful, but it does not delve into causation." If sales of Pop-Tarts rise during the cold and flu season, retailers who put a display of Pop-Tarts near the Robitussin are likely to sell more Pop-Tarts—and just what one has to do with the other can remain a mystery without interfering with profits.

Students who sign up for BHCC's new Big Data course—and the Data Management Certificate—are in for a whirlwind of new information and experiences as well as a new approach to knowledge that will challenge the way of thinking that has dominated scientific thought since Aristotle. Students know it and are eating it up. ■

For more information on BHCC's Data Management Certificate, go to bhcc.edu/magazine

This workforce solution was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability or ownership.

FAST TRACK TO COLLEGE

High school students discover an exciting route to the future

More than 550 high school students in Greater Boston take college courses in the evening through Bunker Hill Community College's dual enrollment program. Now, in a new development, BHCC is offering "early college high school," an outgrowth of dual enrollment that may be the education model for the future, when the boundaries of education expand from the traditional kindergarten-12th grade (K-12) to K-14, or even K-16.

BHCC has just completed an early college pilot program at Malden High School, one of more than 30 high schools in the area where BHCC offers dual enrollment to high school students.

College courses in high school? Here's what that looks like.

It's six o'clock on an autumn evening in Malden, a community north of Boston with a long history as a gateway city for immigrants. More than a third of today's Malden residents were born outside the United States.

In front of Malden High School, a few students wait for late rides home. With an enrollment topping 1,800, the school is a big place, occupying a full city block. At this hour, its long corridors are quiet and the classrooms are dim—with a few exceptions.

A string of classrooms on an upper floor are brightly lit. In one of them a lively discussion about major business news is under way. Russia's declining economy. Apple's latest iPhone. Currency manipulation in China. The recent leap in the price of an HIV drug from \$13.50 to \$750. Students present reports on these topics and their classmates offer wide-ranging opinions.

If this sounds more like a college class than a high school class, that's because it is. It is Introduction to Business, taught

Instructor Justice Kumahia is flanked by students in the dual enrollment program at Malden High School.

Malden is just four stops away from BHCC on the MBTA Orange Line.



Whether they come to BHCC or go elsewhere, students leave high school with a transcript of college credits.



Students in the BHCC Introduction to Business course at Malden High School.

by BHCC faculty member Justice Kumahia. The course is one of approximately 60 college courses ranging from psychology to algebra, inorganic chemistry, statistics and music technology taught by BHCC faculty members at Malden High School in evenings throughout the school year.

Who are the students in this classroom? Some are local residents taking a college course at a convenient location close to home. Malden High School serves as one of BHCC's satellite campuses (with others in East Boston and Boston's South End), which bring college courses to people where they live. But the majority of the students in Kumahia's class are Malden High School students. They are part of a program called "dual enrollment," which permits high school students to take college courses after regular school hours.

Though not a new concept, dual enrollment classes are increasingly popular as more and more jobs require at least some postsecondary education. Studies show that high school students who take such courses are more likely to go to college—and graduate—than other students.

Dual enrollment programs help students adjust to an educational experience that feels unfamiliar to them. Former Malden

High School student Roberto de Oliveira, now a freshman at Harvard University, described his dual enrollment courses as "very different from my high school classes that met every day. Usually, the dual enrollment class would meet only once a week, for multiple hours," he said. "If you didn't pass your assignment in, it was completely on you. There was no one coming after you, no one calling home, none of that. This new-found independence was quite the experience."

Malden High School junior Karen Ng agreed. "There's more freedom," she said.

For high school students the experience can be intimidating, but also exhilarating. At a dual enrollment graduation celebration last spring at BHCC, one student summed it up with a high-five to his classmate, saying: "We survived a college course!"

Malden High School Principal Dana Brown, who is proud of his school's many traditions and innovations, from the high school's 100-year old literary magazine to healthcare on campus and a crew program with Tufts University, said, "Dual enrollment is one of the

the best things to happen to our students."

The program attracts high-achieving students. According to Gretchen Lahey, who directs dual enrollment at Malden High School for BHCC, six Boston Public Schools valedictorians this year were BHCC dual enrollment students. "But the program appeals to many students and serves many purposes. One student told me this year he was 'just done with high school.' And then he got interested in a dual enrollment course."

"BHCC's dual enrollment program focuses on first-generation college students, students of color, low-income students, students not planning to go to college," said Nuri Chandler-Smith, BHCC Dean of Academic Support and College Pathway Programs. And the purpose is not solely to get students to consider college. "It's really to give students options, to remove barriers to their future. Some may want to get a certificate; others want to become entrepreneurs. Some careers need training, not college." Nevertheless, she said, a key outcome is a realization by high school students that "college is not beyond them."

Many BHCC dual enrollment courses are

offered free of charge, while scholarships cover the cost of many others. Malden High School students take college courses free through a partnership between BHCC, Malden High School and the City of Malden. "Offering students free college courses while they are still in high school means a significant savings for students and parents at a time when the cost of college is becoming prohibitive," said James F. Canniff, BHCC Provost and Vice President of Academic and Student Affairs.

In addition to providing a taste of college life, dual enrollment allows students to get their college education under way. Ng has already taken psychology and Intro to Business, and is now taking sociology. Up next for her, she says, are "economics, statistics and college writing."

Many students accumulate 12 college credits in their junior and senior years of high school: They will be almost halfway through their first year in college before they set foot on-campus. Some students arrive with as many as 20 credits toward the roughly 60 needed for an associate degree.

Some high school students just want to branch out. "I took a dual enrollment course for a chance to learn more about areas of study that were not available to me through my high school," said De Oliveira. "How many students can say they were able to take abnormal psychology or principles of marketing in high school?"

"I wanted to expand my learning," said Ng. The courses were an opportunity "to learn more about things that interest me but that weren't offered at my school."

Dual enrollment offers other benefits as well. High school students often find themselves sharing classes with college students and other adults, since the courses are open to anyone interested in enrolling. "I was taking classes with people whose ages ranged from 16 to 60, all with very different perspectives and backgrounds," commented De Oliveira. "In my introductory sociology class, we would discuss the effects of stereotypes

with people who had struggled [personally] against prejudice."

In Kumahia's class, one student is a veteran who served in Poland. When the discussion turned to the Russian economy, he contributed his own experience of Russian military activity, and his view that Russia is aggressing against its neighbors for economic gain.

BHCC now operates one of the largest dual enrollment programs in eastern Massachusetts, with more high schools signing up every year to participate. The program began eight years ago with 35 students in two public schools and has grown to 30 locations and 550 students.

Everett High School began offering college courses this fall. Principal Erick Naumann stressed the effectiveness of dual enrollment in promoting student success in college. "Studies show that students who have taken dual enrollment courses are more prepared, persistent and practical. They achieve higher grade point averages in college, and need fewer developmental courses," he said.

BHCC's dual enrollment program is not only expanding but evolving. Students travel from all over Boston to the John D. O'Bryant High School to take college courses in the afternoon after regular school hours. A number of nonprofit organizations, including College Bound Dorchester and X-Cel, now offer dual enrollment courses as well, providing yet more pathways to higher education.

Perhaps the most dramatic development of dual enrollment in recent years is the early college high school, a movement taking hold nationwide. Last year, BHCC launched a pilot program at Malden High School with five students.

Two juniors and three seniors took only college courses—which simultaneously fulfill their

high school graduation requirements and provide college credits. They will wrap up high school with a diploma and enough college credits for an associate degree. With one foot in high school and one in college, they engage in career exploration through the College's LifeMap program while continuing to participate in Malden High School extracurricular activities. This fall the number of students enrolled in the program grew to 12 as the program began to take off.

"Our work with Malden High School demonstrates the power of a successful partnership not only to introduce students to college but to support innovations that may transform the future of higher education," said BHCC President Pam



"Dual enrollment is one of the best things to happen to our students."

— Dana Brown, Principal, Malden High School

Eddinger. "We are continuing to make new connections with institutions so everyone in our larger community has access to the education needed for work and life."

With dual enrollment courses and early college high school bringing students new and expanded opportunities at Malden High School, Principal Brown is now exploring yet further ties with BHCC. "We are discussing a collaboration centering on career readiness for our students with disabilities," he said. "We're going to roll something out this year with a small group of students to see how that plays out. Our BHCC friends have gone out of their way to create what we think is a pretty good program." ■



"Our faculty and the high school faculty talk about what they teach, what we require, where the two meet. This helps us align the high school curriculum with the college curriculum—so students arrive at college ready to do college work."

— James F. Canniff, Ed.D., Provost and Vice President of Student and Academic Affairs, BHCC

"I watched high school students turn into college students—they just transformed."

— English Instructor Mary Boehmer

Thinking About a New Career?

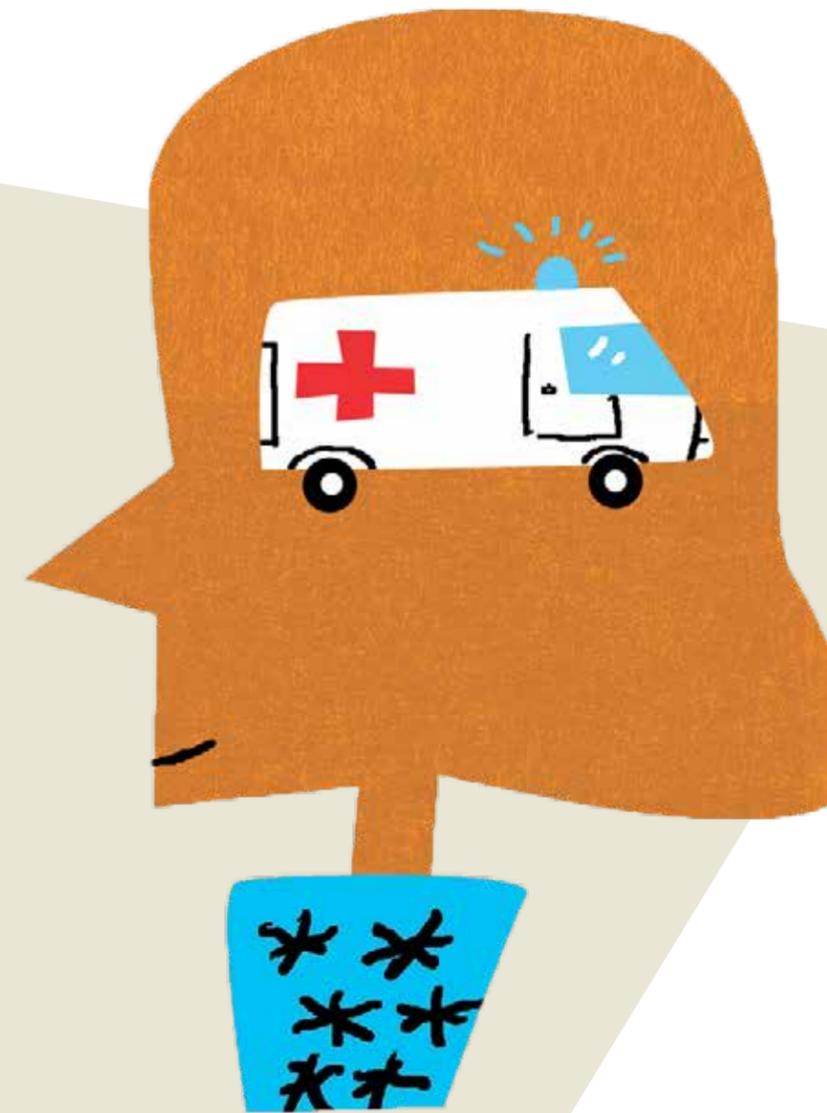
Check out BHCC's new offerings in mobile app development, gaming for artists or technicians, environmental studies, health information technology, sport management, paramedics and gas utility technology



Sport Management

Attention, Sports Fans

The worlds of work and play come together in BHCC's new Sport Management program that prepares students for positions in health and fitness, sports and leisure, parks and recreation, and professional sports. A new certificate introduces students to management, marketing, communications and operations in the sport and leisure industry. An associate degree in business administration with a sport management option is also available. This degree provides the foundation for students to continue their studies at four-year institutions.



Paramedics

The Next Step for EMTs

Paramedics are in demand across the United States today, and jobs are expected to grow by as much as 33 percent between 2010 and 2020—significantly faster than the average for all occupations. BHCC has provided EMT training for many years. Now the College offers a path for advancement for EMTs to become paramedics. A new 15-month certificate program as well as a full associate degree program are now available. The programs include lectures; lab activities; hospital-based, hands-on clinical experience; and a field internship. EMTs with a year's experience may apply.*



Environmental Science

Saving the Planet

Since Rachel Carson's 1962 book *Silent Spring* alerted society to the effect of pesticides on the environment, our global concern about the human impact on the natural world has grown into an entire field of study.

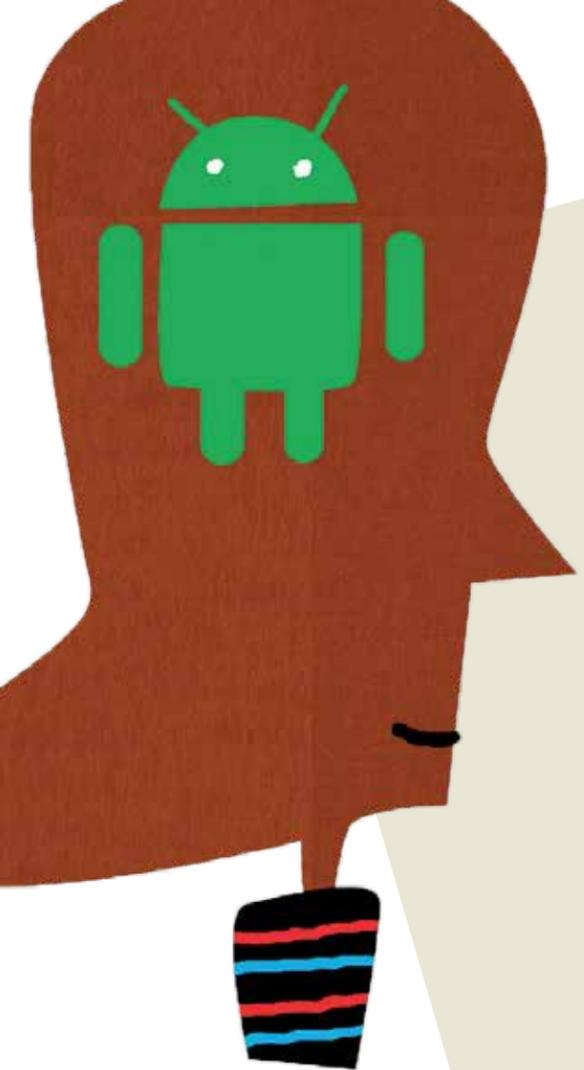
BHCC is now expanding its offerings in environmental science. While continuing to provide courses in renewable energy, sustainable resource conservation and environmental sciences, the College has added relevant courses in oceanography, earth science and geographical information systems to address the urgent issues in this growing field.*



Gas Utility Technology

Fuel Your Career

Just as demand is expected to rise significantly in the Northeast's natural gas infrastructure construction sector, nearly 40 percent of the gas utility workforce is approaching retirement. As part of the College's mission to meet workforce needs, BHCC has partnered with industry leader Feeney Brothers Excavation to prepare workers to fill upcoming jobs. The new Gas Utility Technology program option includes a winter intersession work experience and an eight-week summer internship—both paid—with several courses at Feeney Brothers' state-of-the-art training facility in Dorchester. Successful completion means an opportunity to work at Feeney Brothers and begin a career with the chance of rapid advancement.**



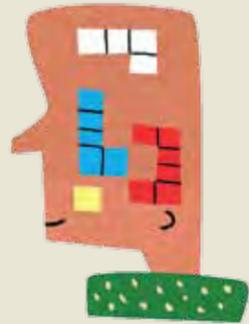
Android Mobile App

“There’s an app for that!”

Apps began appearing in 2008. In 2010 the ubiquitous “app” was Word of the Year. By 2014 approximately 1.3 million apps were created for Android and 40 billion apps were downloaded from Google Play, spurring explosive job growth in the field. In response to student and industry demand, BHCC began offering a 16-credit Android Mobile App certificate this fall. The program, developed with the support of the Northeast Resiliency Consortium, teaches students to create basic mobile apps on Android and other mobile devices. On completing the program, students are ready for entry-level jobs in the app development field.*

*This workforce solution was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability or ownership.

**This program is partially funded by a \$20,000,000 grant awarded by the U.S. Department of Labor, Grant #ITC-26450-14-60-A-25. This product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor.



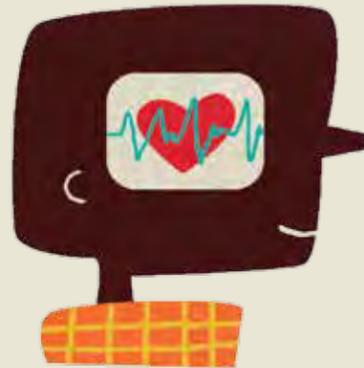
Gaming

It’s How You Play the Game

This fall BHCC’s Computer Media Technology Department split its popular gaming program into two tracks: one is graphic design oriented and the other targets scripting and programming. By either route, students in gaming are bound for opportunity: The global market for video games is slated to grow by a hefty \$15 billion between 2012 and 2017.

The program’s technical path focuses on the control and construction of gaming components through scripting and programming languages. The design path centers on scene lighting and customized 3D texture maps, plus customized shaders, sky boxes and bump maps.

Designers or geeks, BHCC students will be well on their way to jobs or further study in the gaming world.



Health Information Technology

Healthy Connections

Health information technology (HIT) is one of today’s most promising tools for improving health outcomes while saving money—as much as \$81 billion annually, according to one study. Promoted over the last decade by the Bush and Obama administrations as well as by the Massachusetts Department of Higher Education, HIT promises better coordination among the many players in today’s complex healthcare industry. BHCC now offers a Health Information Technology Certificate, which is appropriate for students who want to enter the field and for healthcare workers seeking a valuable new competency.**

For more information on these programs, go to bhcc.edu/magazine

HUMAN HEARTS, JEWEL WASPS, ROBOTIC BEES AND THE FRONTIERS OF SCIENCE

One Bunker Hill Community College student fabricated biocompatible sensors that quantify cell contractility. Another measured the effect of air turbulence on insect flight to improve the performance of robotic bees. Another wrote a computer program to analyze antibiotic resistance in bacteria. And another tested the hypothesis that a certain type of wasp is attracted to odors emitted by microbes breaking down its food supply.

Over the past six years more than 40 BHCC students have participated in the Research Experience for Undergraduates (REU) summer program at the Harvard School of Engineering and Applied Sciences, and for the past two summers, BHCC students have taken part in the REU program at the Center for Materials Science and Engineering at MIT.

“The Bunker Hill students have been great,” said Kathryn Hollar, Director of the Harvard program. “Because they have all done well, I don’t have any trouble placing new students in our labs each summer.”

“I knew our engineering students would do an excellent job at Harvard,” said Professor JoDe M. Lavine of BHCC’s Science and



The jewel wasp is the subject of research by BHCC student Matt Piontkowski at Harvard’s Rowland Institute.

Engineering Department. "It is an ideal opportunity for them to show what they are capable of accomplishing."

The REU program requirements include submitting a mid-term report, attending weekly evening faculty seminars, participating in an ethics seminar, and taking part in writing and presenting a final paper at the level of academic rigor expected of Harvard and MIT doctoral students.

The Harvard labs are especially welcoming to BHCC students who are military veterans. Professor of Bioengineering and Applied Physics Kevin Kit Parker directs the Disease Biophysics Group. He is a Lieutenant Colonel in the U.S. Army reserve who has done two combat tours of duty and two special missions in Afghanistan. Aware of the difficulties veterans face when they return to civilian life, he opens doors for vets and helps create opportunities for them to succeed.

"The BHCC veterans do fantastic work in my laboratory," he said. "They bring a

"I'm working with a highly specialized team of bright people. I'm exposed to cutting-edge research that I would otherwise

only read about a few years down the line. And I'm learning lab skills I can use for the rest of my life."

- BHCC student John Doyle

level of professionalism, life experience and technical savvy that makes them a natural for the laboratory environment. Putting veterans in charge of maintaining expensive equipment like confocal microscopes and atomic force microscopes exposes them to users across the many projects in my lab. This allows them to identify mentors and projects that they can focus on. They get technical experience and we get a very professional workforce."

BHCC student John Doyle, who served as a combat engineer in the U.S. Army in Afghanistan in 2009 and 2010, is part of a team working on a major research project called the "heart-on-a-chip," which involves engineering microchips that mimic the microarchitecture and functions of living organs. Each organ-on-a-chip is a device about the size of a computer memory stick that contains microfluidic channels lined by living human cells. Because the devices are transparent, they provide a window into the inner workings of human organs. The research has the potential to make animal testing obsolete.

"Wick Sloane emailed me about signing up for the program," Doyle said. An adjunct professor in the English Department, Sloane has served as informal mentor to

BHCC's vets for several years. He alerts students to opportunities such as those at Harvard and MIT and urges them to apply. "He introduced me to Dr. Hollar at Harvard, who personally accepted me into the program," Doyle said.

Doyle started at Harvard's Disease Biophysics Group last June. "The skills I picked up plus my work ethic were enough for the group to invite me to stay year-round as a part-time employee," he said. "My role is to manufacture the heart-on-a-chip from raw materials."

Doyle is excited about the opportunity. "I'm working with a highly specialized team of bright people," he said. "I'm exposed to cutting-edge research that I would otherwise only read about a few years down the line. And I'm learning lab skills I can use for the rest of my life."

Doyle has been planning to be a physician's assistant, but the lab experience has him thinking. "I'm more interested in research than I was before," he said. An important extra about the lab work for Doyle: It pays more than his previous job, which was working full-time as an EMT.

Doyle tells other BHCC students not to hang back. "The lab experience has given me confidence in my ability to work with people I consider much brighter than myself," he said. "Even though I don't know everything, my mentors have been really patient. Without them I would not have been successful."

Like Doyle, BHCC student Ian Perkins jumped at the possibility of a summer in the labs. Perkins had arrived at BHCC after dropping out of high school, earning a GED, and serving four years in the U.S. Army, including deployments to Balad, Baghdad and Diyala Province in Iraq.

"My first goal was to earn a fire science degree at BHCC and become a firefighter in Boston," said Perkins. "I realized quickly that I could still be a firefighter with a mechanical engineering degree, but it wouldn't work the other way around."

After a summer of research in Harvard's REU, Perkins grabbed the opportunity to work in Harvard's Disease Biophysics Group and is now fabricating biocompatible



BHCC student John Doyle at the Wyss Institute for Biologically Inspired Engineering at Harvard University.

sensors. Perkins has transferred from BHCC to Northeastern University, where he is majoring in mechanical engineering.

Another BHCC vet, Lucas McNeilly, enrolled at Northeastern this fall after a stint at the Harvard labs. "Going into the REU I thought I would have very little to offer with my lack of research experience," McNeilly said. "I quickly realized that the real-life experiences of growing up on a farm and being in the Marine Corps were very valuable."

McNeilly's background helped him resolve a problem with turbulence measurement at the lab. "From my time in the Marine Corps I knew of a part that helicopters use called a slip ring," McNeilly explained. "This allows constant electrical contact on a rotating part such as the rotor-blade assembly. I found a company that made small scale slip rings that could be adapted to our application. It was the breakthrough we needed to complete the build of our project."

McNeilly contributed to three peer-reviewed papers and a presentation on spatial and temporal scales of insect flight at a national conference with Harvard post-doctoral students. "I ended up at Northeastern, which I would have not considered applying to prior to the REU," he said.

Again and again, BHCC students found they could fit in and do the work at high-powered labs. "I was pleasantly surprised that I was able to make valuable contributions to the project almost right away," said BHCC student Hank Wike, who spent last summer at Harvard's Rowland Institute writing computer programs to analyze antibiotic resistance in bacteria. "I found myself wishing I could work full days without interruptions for writing workshops, faculty lectures and the like, even though these things are without a doubt valuable."

Matt Piontkowski also worked at the Rowland Institute. "My mentor at the lab, Robert Brucker, is an evolutionary biologist whose primary focus is the effects of herbicides and pesticides on insects," said Piontkowski. "His research subject is principally the genus of tiny parasitoid wasps called *Nasonia*." Because *Nasonia*'s host is often the blow fly or flesh fly, the wasp is regarded as a useful tool for the biocontrol of these pests.

Also called a "jewel wasp" for the emerald sheen of its surface, *Nasonia* is significant because the insect's entire genome has been decoded, explained Piontkowski. "This makes it a superstar candidate for all sorts of experimentation, including my own," he said. "I am testing the hypothesis that the wasp is attracted to odor emitted from microbes that are breaking down its host's food supply as well as the host's site for egg laying."

Working in the labs has propelled students to transfer to Northeastern University, the University of Texas Austin, Vassar College, the University of Rochester and elsewhere. Student Quan Nguyen participated in BHCC's first research experience for undergraduates at MIT. With a discovery he made at the lab as the centerpiece of his application, Nguyen won acceptance to MIT last spring—with a full scholarship.

BHCC assistant professor Rafael Cabanas, who worked with the students at Harvard last summer, says the lab program provides "the real-life, hands-on experiences" not replicable in the classroom environment. And then there's the advantage of working with students who are the best and brightest in their fields. "The possibility of being surrounded by brilliant minds is very important," he said. Equally valuable, he added, "is the sense students acquire in the laboratory of being on the frontier of science, exploring territory no one has seen before." ■

 For more about organ-on-a-chip research go to bhcc.edu/magazine.



Face to Face

An explorer, a graphic novelist, an Nobel Peace Prize laureate, a rapper, a museum director, an artist and an Under Secretary of Education were among campus visitors who shared their views, and asked about ours.



BHCC student Jared Standish chats with Ted Mitchell at a reception in the Mary L. Fifeild Art Gallery. Mitchell is the Under Secretary of the U.S. Department of Education. Read more about Standish in "Starring Students" on page 12.

Under Secretary of Education Solicits Student Views

Praises students for insights and advice on key issues

"We want to know what works so we don't harm it and what doesn't so we can fix it," Ted Mitchell told a small group of students in the College art gallery on April 7, 2015. The Under Secretary of the U.S. Department of Education was visiting Bunker Hill Community College as part of a listening tour to hear what students had to say. He was joined by Chris Gabrieli, the newly sworn-in Chair of the Massachusetts Board of Higher Education.

The students were typical of BHCC in their diversity: one born in Colombia, another in Boston, another in Cape Verde. One had grown up in Venezuela and another in Syria. Several were traditional college-age students but one had graduated from high school 12 years ago and another was a grandmother back in school after two decades. One was attending full-time while running

an online business selling skateboards.

Several students around the table described the discouragement of needing to complete a year and a half of pre-college-level work when they arrive at college. Mitchell responded that better assessment tests could improve student placement. He mentioned that BHCC President Pam Eddinger was part of a White House working group tackling the issue.

Students praised certain opportunities colleges now offer. A student with little travel experience was enthusiastic about heading to Costa Rica on a study abroad tour the coming summer. Six or seven students had worked in prestigious corporations through the College's Learn and Earn internship program, created with the Massachusetts Competitive Partnership group. "I had no experience of working in

a place like that," said one student, "but we got help with writing our résumés, what to do in an interview, how to dress and so on."

The discussion touched on cultural issues in the SAT tests and the need for more minority students in STEM areas. Students also commented on the importance of teaching financial basics to high school students, the changes needed to FAFSA for students who were young but financially independent, and the meaning of student debt for community college students.

"Damn, you guys are good!" Mitchell said, thanking the students for their views. He told them they represented "the new normal" — the nontraditional students who now constitute the tradition. "The new normal student comes with life attached," he said. "That's why colleges are building new kinds of support systems." ■

COMPELLING CONVERSATIONS

Tawakkol Karman

Women's Rights Activist, Nobel Peace Prize Laureate



Pam Eddinger @PamEddinger · Apr 9
@TawakkolKarman @BHCCBoston Compelling Conversations: a generation of Yemen youths and women want dignity + freedom.

Tawakkol Karman, the final Compelling Conversations speaker in the 2014-15 series, brought the troubled world of Yemen, her home country, to the BHCC audience on April 9, 2015. The first Yemeni and the first Arab woman to win the Nobel Peace Prize, Karman was a leader of the "Arab Spring" in Yemen, the mass uprising that forced President Ali Abdullah Saleh to resign in 2011.

As a senior member of the Al-Islah political party, Karman continues to work for democracy in Yemen, amidst her country's deteriorating security and political landscape.

"I expect a lot from all of you," Karman said to the students, pointing out that "it is the Facebook and Twitter generation, the



Tawakkol Karman, left, chats with BHCC students.



Actor and rapper Ice-T addresses students in a Learning Community Seminar.

new generation," that drives change in Yemen. Karman encouraged BHCC students to "work for freedom and equality, America's founding values."

Ice-T

TV and Movie Actor

Rapper, actor, author and NAACP award-winner Ice-T spoke to a packed audience at BHCC on February 26, 2015, as part of Bunker Hill Community College's widely popular Compelling Conversations speaker series. His colorful tales about starting out as a gang member, becoming a gangster rapper, and winding up with "a 17-year stint as a cop" on TV's *Law & Order: Special Victims Unit* drew laughter and applause. At the end of the lively talk, an audience member asked to rap his own piece, and earned enthusiastic applause from Ice-T and the audience. Ice-T, who now mentors at-risk youth, urged students to choose their own path, stay focused and believe in themselves.

BLACK HISTORY MONTH

The Charlestown and Chelsea Campuses celebrated Black History Month with a lecture, an art exhibit and a performance.

Beverly Morgan-Welch

Executive Director, Museum of African American History

Little-known authors emerged from obscurity in Beverly Morgan-Welch's lecture on February 12, 2015, about pioneering works of 18th and 19th century black literature in Boston. Showing slides from the African American History Museum's exhibit,



Beverly Morgan-Welch presents works by 18th and 19th century African American authors.

"Freedom Rising: Reading, Writing and Publishing Black Books," Morgan-Welch introduced the audience to writers such as Phillis Wheatley, an enslaved woman who published a widely acclaimed book of poems in 1773, and David Walker, author of the stirring 1829 *Appeal to the Colored Citizens of the World*, a book paired in the Museum's exhibit with works by Malcolm X for its similar style of expression. Walker's *Appeal* would become a major influence on the movement to abolish slavery in America. Several books in the Museum's collection were on display at BHCC for the month of February.



Gallery visitors view the work of L'Merchie Frazier.

L'Merchie Frazier

Artist

"In Sight: ETERNALLY HERE, Landscapes of Freedom," an exhibit of fiber and mixed-media works by award-winning visual and performance artist L'Merchie Frazier, ran in the Mary L. Fifield Art Gallery at BHCC February 17 through March 27, 2015. In the course of the exhibit, the gallery hosted an evening of poetry and a collage workshop led by Frazier, who is a member of the Museum of African American History administration and also lectures at BHCC as part of the course Freedom Rising. Her art has been included in the permanent collections of the Smithsonian Institution,

The White House and the American Museum of Art and Design.



Oscar Micheaux Family Theater Program

On February 19, 2015, actors from the Oscar Micheaux Family Theater Program performed *Our History Is No Mystery* at the College's Chelsea Campus. In song, dance and performance, they revisited figures and moments from African American history and portrayed Harlem Renaissance poet Langston Hughes reading his poem "Mother to Son."

Named after the author, director, producer and the first major African American feature filmmaker Oscar Micheaux, the theater company offers programs with a diverse, inter-generational cast, using African American history as source material. In addition to its annual performances of *From Gospel to Hip-Hop* and *All in Between* and *The Harlem Renaissance Revisited with a Gospel Flavor*, the company performs historical vignettes to share African American history with audiences of all ages.

Oscar Micheaux Family Theater Program cast members perform at the Chelsea Campus.

WOMEN'S HISTORY MONTH

Elizabeth Lindsey

Cultural Anthropologist, Explorer, Environmentalist

Elizabeth Lindsey, who spoke at BHCC in honor of Women's History Month, is the National Geographic Society's first Polynesian explorer. Over lunch with students and in a lecture open to the public on March 26, 2015, she shared stories of circumnavigating the globe documenting cultures in danger of extinction. She described visiting an island in Micronesia "no bigger than an American shopping mall," where the inhabitants lived without mirrors.

Lindsey was born on a sugarcane plantation in Hawaii and raised by female tribal elders. In 2004 Hawaii named Lindsey Woman of the Year. In 2010 she received the Visionary Award from the United Nations for her contributions to intercultural engagement and understanding. She serves on the boards



Elizabeth Lindsey signs autographs for students after her lecture.

of the Tibet Fund for His Holiness the Dalai Lama and Islands First, a nongovernmental organization addressing climate change in island countries.

ONE BOOK PROGRAM

Josh Neufeld

Graphic Novelist

Josh Neufeld captivated the Bunker Hill Community College audience on April 23, 2015, with his story of creating the graphic novel *A.D.: New Orleans After the Deluge*. The work was a best seller and BHCC's One Book selection for the academic year 2014-2015. Neufeld spent three harrowing weeks as a Red Cross volunteer in Mississippi following Hurricane Katrina, the devastating 2005 storm that killed 1,800 people and caused \$100 billion in property damage. His book employs cartoon drawings and dialogue drawn from extensive interviews with survivors to describe a storm that was "less a natural disaster than a civic disaster."

The College's reading of *A.D.* was enriched by a poetry and graphic narrative contest, a multi-cultural fair with a Mardi Gras theme, a jazz fest, a screening of the film *Surviving Katrina* and numerous classroom activities.



Author Josh Neufeld tells a BHCC audience how he created his graphic novel *A.D.: New Orleans After the Deluge*.

For more on these stories, go to bhcc.edu/magazine.

Like Magic!

Generous donors fund scholarships that make obstacles disappear for students

On April 29, 2015, friends and supporters of Bunker Hill Community College gathered at The Hampshire House on Beacon Hill to celebrate an important anniversary. It was the 25th year that Hampshire House CEO Tom Kershaw had provided the beautiful Beacon Hill townhouse to BHCC for its annual fundraiser. The ground floor of the building is home to "Cheers," the pub made famous by the long-running TV program.

The theme of this year's event was Making Magic Happen for Students. Despite government grants and loans, the average unmet financial need of BHCC students is nearly \$5,000. For many students, nothing short of magic will produce that sum.

The gala boasted Boston Mayor Marty Walsh as honorary co-chair, celebrity host Billy Costa served as the evening's auctioneer and, thanks to a "strolling magician," guests witnessed magic happening right before their eyes.

After partaking of gourmet hors d'oeuvres prepared and served by students in the College's Culinary Arts and Hospitality programs, guests erupted with applause as students paraded through the audience in their chef's hats and whites. They were truly the shining stars of that magic moment.

In honor of the 40th anniversary of Bunker Hill Community College in 2014, the BHCC Foundation established the Ruby Anniversary Scholars Program, aimed at helping students meet their financial needs. This program allows scholars to take more courses than they otherwise would have been able to afford, accelerating their progress toward completing their degrees.

The Ruby Anniversary Scholars represent a diverse group of students. They come from the Boston area and from around the world. They are studying science, engineering, technology, education, business and art. Nearly three-quarters of them are the first in their families to attend college. Their greatest obstacles are financial, but their motivation to succeed is inspiring.

During the evening's program, participants learned that the funds they helped to raise at the previous year's gala were changing the lives of these scholars; among them, Melissa Desrosiers and Quan Nguyen, who were both in attendance.



Last year, Melissa Desrosiers' father passed away, reducing their family income by half and derailing her plans to attend any of the colleges to which she was accepted. Quan Nguyen was taking five classes, applying to four-year schools and studying for the USA Academic Team (which he made), when his mother suddenly lost her job.

year of college and are expected to graduate in 2016. One of these students is Kristina Stapelfeld, who struggled to pay for two classes per semester and is now a full-time student because of the Ruby Scholarships. She told us, "[The Scholarship] covers everything I need after financial aid—transportation, even textbooks, which I used to have to work two double shifts to pay for!"

In addition to financial support, the Ruby Scholarships gave recipients confidence in their ability to achieve something they never thought they could. Zhaoyan Yu, who came to the United States seven and a half years ago, said that she never expected she could earn a scholarship. "I was so surprised! It encouraged me. I hadn't planned on graduating this year, but the Ruby Scholarship enabled me to do so." Both Zhaoyan and her daughter graduated in May of this year, Zhaoyan from Bunker Hill Community College, and her daughter, from Harvard University.

The Ruby Scholars are grateful to the donors who made this program possible. Jean Paul Ewang said he was "...so grateful that there are people out there that are willing to help you get an education and give back to the community." And Alynn Karnes wanted donors to know that "they are...making dreams come true!"

With the \$215,000 raised at this year's gala, the BHCC Foundation established a "Silver Scholars" program, which will provide \$5,000 scholarships to help students complete their degrees. The students who benefit from the new scholarships, like the Ruby Scholars assisted over the last year, will be able to devote their time and energies to their studies. Through the generous support of donors to the Bunker Hill Community College Foundation, the seemingly insurmountable obstacles that face these hardworking students will disappear—as if by magic. ■

For more information on this event, go to bhcc.edu/magazine



Melissa Desrosiers and Quan Nguyen, Ruby Scholars.

Because of the Ruby Scholarship program, Melissa was able to afford to go to college—and decided on BHCC, where she is majoring in Radiography. Quan was able to reduce the number of hours he worked, giving him more time to study. These days Quan is busy studying—chemical and biomedical engineering—at Massachusetts Institute of Technology.

In addition to Quan, 19 other Ruby Scholars have graduated and moved on to further education or careers. The remaining awardees completed their first

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Outstanding Alumni

BHCC is proud to recognize six remarkable graduates. These successful alumni are from China, Mexico, Haiti, Brazil, Jamaica and the U.S. They have pursued bachelor's and master's degrees, worked in computer science, healthcare, criminal justice and fire protection, and have continued to follow their dreams. Their college salutes them.



Cynthia Massiah '00
Intern, High Point Treatment Center

A single mother with three children, Cynthia Massiah needed the freedom and flexibility offered by BHCC to support her family while attending classes. She co-founded the African American Cultural Society at BHCC and appreciated the College's wide diversity and warm community. Her professors offered encouragement and strategies to help her move forward. She went on to earn a bachelor's degree from Northeastern University in criminal justice and a master's degree in mental health counseling from Eastern Nazarene College.

St. Alusha McKetty '04
Registered Nurse, Massachusetts General Hospital

Through the Student Government Association at BHCC, McKetty learned to lead—and he hasn't stopped since he earned his associate degree. The native Jamaican went on to Eastern Nazarene College, where he earned his bachelor's degree in biology. In 2011 he attained both a bachelor's and a master's degree in nursing from the MGH Institute of Health Professions. He will take his nurse practitioner licensure examination in January 2016. Only one challenge remains for McKetty: swimming in the Atlantic Ocean. He first dipped his toe in during a BHCC leadership conference at Cape Cod and found he prefers the Caribbean.





Vanessa Matta '00

**Senior Software Developer,
The Conference Exchange**

The Student International Club eased Matta's entry into the U.S. from Brazil. She felt at home in the College's multicultural environment and went on to earn a bachelor's degree from Northeastern University in computer science. She says that BHCC exposes students to a wide variety of ways to learn and she took full advantage by immersing herself in activities and student groups. BHCC became a second home for Matta, a safe place to explore new ideas and develop talents.



Eli Bojorquez '10

Patrolman, MBTA Transit Police

Eli Bojorquez came to BHCC after serving seven years in the military. Working with faculty members who were deeply invested in him was instrumental in his success. "At BHCC you could tell the faculty and advisors care about the students, want the best for you, and will keep you on track to finish," he says. Bojorquez completed his bachelor's degree in criminal justice at the University of Massachusetts Boston in 2015 and plans to enter the civil service.



Josue Velney '13

Fire Lieutenant, City of Somerville

"The Veterans Center at BHCC helped me transition into a college setting," says Josue Velney, who served in the U.S. Marine Corps. "I felt very comfortable there." Born in Haiti, Velney says he found the variety of ages, countries of origin and ethnicities at BHCC both surprising and comforting. He received an associate degree in fire protection and safety from BHCC and is now in his final year at Waldorf College, where he is earning his bachelor's in fire science.



Dafang Duan '08

Care Manager, UnitedHealth Care

Before she could launch her career, Dafang Duan, a native of China, needed to build some critical skills. "Being a mentor and attending leadership retreats at BHCC gave me the experience in leadership and public speaking that increased my confidence," she said. Her new skills served her well as she went on to a career in healthcare after earning a bachelor's degree in nursing from Curry College.

 For more about BHCC alumni, go to bhcc.edu/magazine.

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