STEM Disciplines

Institutions and organizations work to improve retention in STEM fields

Read about recipients of the 2018 Inspiring Programs in STEM Award beginning on page 43

ALSO IN THIS ISSUE:
Ohio’s voter purge law targets college students, marginalized groups
A celebration of Hispanic Heritage Month
Cal Poly Pomona College of Engineering is proud to be the recipient of the 2018 Inspiring Programs in STEM Award for our Women in Engineering program.

About Cal Poly Pomona's Women in Engineering (CPP WE)
CPP WE promotes a close community for female engineering students through proactive retention activities and seeks to create an environment in which women can thrive in the classroom and beyond in their careers. Over 6,000 students have been served through this program and engineering first-time freshman female enrollment has grown to 21 percent, 8 percent higher than in fall 2007.

About Cal Poly Pomona College of Engineering
Consistently ranked among the top two state-supported, master’s-granting programs in the country, the College of Engineering has 11 ABET-accredited undergraduate programs and seven master’s programs. The college produces workforce-ready engineers by linking theory with practice, and boasts one of the largest undergraduate enrollments in California.

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Left to right: Shannen Sharma, computer engineering student; Dr. Kristina Rigden, director of outreach programs and Women in Engineering; Dr. Cordelia Ontiveros, chemical & materials engineering professor; Teresa Rodriguez, civil engineering student; Nicole Gutke, outreach programs liaison and Women in Engineering program coordinator.
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2018 Inspiring Programs in STEM Award

ON THE COVER: PEER/WISE Director Serita Acker with program staff, tutors, and mentors at Clemson University. Read about Clemson’s PEER/WISE program on page 46.
We are creating a special community at the University of Kentucky – a community of belonging.

By that we mean a community where everyone – regardless of who they are, where they are from, or what they believe – feels a sense of true belonging.

We are creating that community in a special way, too.

With a sense of dogged determination matched only by our compassion for others, we embrace diversity, without divisiveness. We encourage self-reliance that never devolves into selfishness.

Now, what those of us in the UK community know to be true is being realized by others around the country.

In 2018, the University of Kentucky received the Great Colleges to Work For distinction from the Chronicle of Higher Education, the pre-eminent publication in higher education.

It’s a national recognition of how special a community we are building, together, at UK.

We think it also reflects the community – Lexington – that surrounds our campus and that we call home.

After all, how many communities boast rankings such as #2 Best Midsized City for New Grads (OnlineDegrees.com), the #3 City with High Salaries and Low Cost of Living (GoBankingRates.com), and a top-10 Destination City (Lonely Planet and Trip Advisor)?

Not many.

We’re building something special here – something the best students, faculty and staff increasingly are wanting to work with and join.

Some call it a sense of momentum. Some call it a special community like no other.

We simply call it the University of Kentucky.

We are UK.
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The views expressed in the content of the articles and advertisements published in INSIGHT Into Diversity are those of the authors and are not to be considered the views expressed by Potomac Publishing, Inc.
WGU Offers Flexible, Affordable Cybersecurity Degrees to Aid Active-Duty Military and Veteran Students

According to a report by Cybersecurity Ventures, the world will face a shortage of 1.5 million cybersecurity professionals by the year 2019. This situation is problematic considering that cyberattacks cost the U.S. billions of dollars annually, threaten the security of bank accounts and the safety of power grids, contribute to identity theft, and more.

While many colleges and universities offer cybersecurity degree programs, most of them are expensive and take four years to complete.

To improve access to the six-figure jobs available in this field, Western Governors University of Washington (WGU Washington), a WGU satellite campus based out of Kent, Wash., developed an innovative online program that allows students to complete their degrees at a lower cost in approximately half the time. The price tag for most four-year cybersecurity programs is between $23,000 and $61,000, whereas WGU Washington’s costs approximately $13,000 and can be completed in as little as two years.

The remote program is part of a larger effort by WGU Washington to recruit more veterans and active-duty military to its student population by expanding its College of Information Technology. Partnering with local employers to design cutting-edge curricula, WGU Washington recently created several new bachelor’s and master’s degree programs.

In addition to cybersecurity, the university now offers degrees in fields such as data management and cloud and systems administration. Composed of competency-based courses, these programs allow students to test out of subjects they’ve previously mastered — an appealing feature, especially for student-veterans and active-duty military.

The offerings allow these individuals, many of whom possess a wide range of work and life experience, to progress through the curriculum at a faster pace than traditional programs.

Furthermore, because they are online, these degrees provide military students and their families the flexibility to achieve their educational goals while working full time or caring for children from anywhere in the world.

— Ginger O’Donnell

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Learn more at [www.unf.edu](http://www.unf.edu).
Cathy Sandeen, PhD, was named chancellor of the University of Alaska Anchorage. She previously served as chancellor of the University of Wisconsin Colleges and the University of Wisconsin-Extension in Madison.

Keith Aytch has been appointed president of Evergreen Valley College in San José. He was most recently interim president of the college.

Adela de la Torre, PhD, has been named president of San Diego State University. She previously served as vice chancellor of student affairs and campus diversity at the University of California, Davis.

Tsu-Jae King Liu, PhD, has been appointed the first female dean of the University of California, Berkeley College of Engineering. She previously served as vice provost for academic and space planning for the university.

Wilma Mishoe, EdD, has been named president of Delaware State University in Dover. She was most recently interim president of the university.

Pamela Whitten, PhD, has been appointed president of Kennesaw State University. She previously served as senior vice president for academic affairs and provost at the University of Georgia in Athens.

Nicole Hudson has been named assistant vice chancellor of the Diversity and Inclusion Academy at Washington University in St. Louis. She was most recently the deputy mayor for racial equity and priority initiatives for the city of St. Louis.

Sherree Wilson, PhD, has been appointed associate vice chancellor and associate dean for diversity and inclusion at Washington University School of Medicine in St. Louis. She previously served as associate dean for cultural affairs and diversity initiatives at the University of Iowa Carver College of Medicine in Iowa City.

Pelema I. Morrice, PhD, has been named president of Great Bay Community College in Portsmouth. He was most recently vice provost at the University of Missouri in Columbia.

LaTanya Afolayan, EdD, has been named vice chancellor for advancement at Winston-Salem State University. She was most recently senior director of planning and major giving at Norfolk State University in Virginia.

Nancy J. Cable, PhD, has been appointed chancellor of the University of North Carolina Asheville. She previously served as president of the Arthur Vining Davis Foundations in Jacksonville, Fla.

Jaime Hunt has been named vice chancellor for strategic communications and chief marketing officer for Winston-Salem State University. She previously served as the university’s chief communications and marketing officer.

Yolanda King has been appointed assistant dean for diversity at Ursuline College in Pepper Pike. She was most recently director of Residential Life and Learning at Tufts University in Medford, Mass.

Shanna Jackson, EdD, has been named president of Nashville State Community College. She previously served as associate vice president of Columbia State Community College’s Williamson campus in Franklin, Tenn.

Lisa McBride, PhD, has been appointed assistant dean of diversity and inclusion, chief diversity and inclusion officer, and a professor of medical education at Texas Christian University and the University of North Texas Health Science Center School of Medicine. She was most recently the vice president for diversity and inclusion at Salem State University in Massachusetts.

Has your campus recently hired a new administrator? INSIGHT Into Diversity would like to publish your news. Please email editor@insightintodiversity.com.
FSU is 1 of 4 universities to receive the 2017 Senator Paul Simon Award for Campus Internationalization, the top honor from NAFSA. FSU earned the national honor for its extensive offerings in global education.

Florida State University has more than 600 student organizations as well as 18 NCAA Division 1 sports teams.

FSU has a total of five Rhodes Scholars. In addition FSU has had Rhodes scholars finalists in 2009, 2011, 2012 and 2017.

One hundred and sixty-six years after its founding, Florida State University started the 2017-2018 academic year with a student population of over 41,000 and recognition as a major graduate research institution with an established international reputation.

Florida State University provides extraordinary opportunities for students to build a strong foundation in their chosen fields; study abroad at the University’s overseas campuses; engage in scores of service activities; benefit from world class library and technical facilities; participate in extensive intramural and recreational events; and interact with some of the finest students, faculty and staff in the nation in a diverse, welcoming and inclusive environment.
**COLLEGES OF SCIENCE DEANS**

In each issue, INSIGHT Into Diversity features diverse professionals in higher education.

**Mary Galvin, PhD,** is the William K. Warren Foundation Dean of the College of Science at the University of Notre Dame. Prior to this position, she held a variety of roles in government, industry, and academia, most recently serving as director for the Division of Materials Research at the National Science Foundation. The owner of five U.S. patents, Galvin has co-authored numerous publications on the scientific relationships that govern the behavior of organic materials in light-emitting diodes, photovoltaic cells, and thin film transistors. She is a fellow of the American Physical Society and serves on the board of directors of the Materials Research Society.

**Mos Kaveh, PhD,** is dean of the University of Minnesota (UMN) College of Science and Engineering. He joined UMN’s faculty in 1975 as a professor of electrical and computer engineering and has held a wide range of positions at the college for more than 40 years. Prior to his current position, he was associate dean for research and planning. As a researcher, Kaveh has extensively studied statistical signal processing and its applications in wireless communications and medical imaging. A fellow of the Institute for Electrical and Electronics Engineers, he previously served as president of the organization’s 20,000-member Signal Processing Society.

**Ata Sarajedini, PhD,** is dean of the Charles E. Schmidt College of Science at Florida Atlantic University (FAU). Prior to joining FAU, he served as associate dean for natural science and mathematics and associate dean for research in the College of Liberal Arts and Sciences at the University of Florida (UF). There, Sarajedini oversaw the growth of many research initiatives as he worked with other academic disciplines to coordinate interdisciplinary teams. Under his leadership, UF received almost $40 million in grant funding in 2016. His research focuses on resolved stellar populations in local group galaxies as well as galaxy formation, star clusters, dwarf galaxies, variable stars, and stellar evolution.

**Peggy Agouris, PhD,** is dean of the College of Science and director of the Center for Earth Observing and Space Research at George Mason University (GMU). She began teaching there in 2007, serving as chair of the Department of Geography and Geoinformation Science from 2008 to 2013. Prior to her tenure at GMU, Agouris taught at the University of Maine for 11 years. She has received over $28 million in external research funding, studying such topics as digital imagery and geospatial information systems.

**Joaquin Ruiz, PhD,** is vice president of innovation and dean of the College of Science at the University of Arizona (UA). He also serves as the Thomas R. Brown Chair and Director of Biosphere 2, a center for research and educational outreach that seeks to promote understanding of global scientific issues. Prior to being appointed dean, he served as head of the Department of Geosciences at UA. In 2010, the Mexican government named Ruiz a “National Researcher,” recognizing his efforts to enhance Mexico’s scientific and technological abilities through collaborations between UA and research institutions in that country.

**Radha Pyati, PhD,** is dean of the College of the Sciences and Mathematics at West Chester University. She previously taught chemistry at the University of North Florida (UNF), serving as chair of the chemistry department for five years. In addition, Pyati served as director of UNF’s Environmental Center, which supports community-based environmental programs in conjunction with faculty research from UNF’s six colleges. Her research has focused on the flow cytometry and electrochemistry of Florida’s St. Johns River.
ASPIRE TO BECOME MORE THAN YOU EVER THOUGHT POSSIBLE

Kent State University is one of the top universities in advancing women and underrepresented minorities in Science, Technology, Engineering, and Math (STEM) education and research by offering a wide breadth of STEM programs in an inclusive, welcoming environment. Our diverse faculty and administrators serve as role models focused on mentorship and the professional development of highly talented scholars. Our STEM students are further supported through scholarships, research opportunities and internships, as well as through peer-led student organizations like Scientista, STEM Scholars, and KSU Steam Team. Kent State’s top priority is to provide an inclusive and engaged living-learning environment where all students thrive and graduate as informed citizens committed to a life of impact.
Taking Hispanic Heritage Celebrations to a Higher Level

By Joseph Santana

President Lyndon Johnson first established Hispanic Heritage Week in 1968 as a time of commemoration. In 1988, President Ronald Reagan expanded it to a 30-day period, from September 15 through October 15.

The choice of this commencement period was a nod to the anniversary of the independence of five Latin American countries: Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua, which all declared independence during this time period in 1821. In addition, Mexico, Chile, and Belize celebrate their independence days on September 16, 18, and 21, respectively.

The term Hispanic is generally applied to countries or territories once under Spanish rule. These include all countries in Latin America, many Caribbean nations and territories, the Spanish Philippines, and the Spanish Sahara. In some of these places, Spanish may or may not be the predominant or official language; there are parts of Mexico where some people only speak their native languages, which predate Spanish rule. However, their cultures are heavily derived from Spain, in some cases with a strong local indigenous or other foreign influence.

The purpose of Hispanic Heritage Month, according to most recent records, is to recognize and celebrate the achievements and contributions of Hispanic and Latino Americans to U.S. communities. So how do many organizations recognize, celebrate, and commemorate this month?

Most of the events I’ve attended or heard about focus on the food, music, art, and history of these groups. For example, one company hosts a potluck lunch where Hispanic employees bring a dish from a particular country and explain its history. Another organization showcases an exhibit of paintings and photographs by Hispanic artists. Additionally, some invite entertainers who perform Hispanic music and dances.

All of this is good, but is that all there is to celebrate and recognize relative to Hispanic culture? Of course not. Here are just a few other things we can note:

- **Contributions to the U.S. economy** – Hispanics are, according to one recent report, helping “make America rich again.” In a December 2016 study conducted by National Economics Research Associates (NERA), titled Making America Rich Again: The Latino Effect on Economic Growth, NERA Managing Director Jeffrey A. Eisenach presents a comprehensive analysis based on data from a wide variety of government and private sources of the contributions Latino Americans have made to the U.S. economy.

  Here are a few highlights from the study: Hispanics currently wield over $1.3 trillion in buying power, and the number of affluent households is growing at a faster rate than that of the overall population. They are creating new businesses faster than other Americans, and hiring at these companies is up 22 percent. Hispanics were responsible for over 29 percent of real income growth in the U.S. between 2005 and 2015. Additionally, this population is nine years younger than the median age for the overall U.S. population, so these contributions are expected to continue to grow.

- **Contributions to U.S. innovation** – Take, for example, Victor Leaton Ochoa, a prolific inventor from the late 1800s to the early 1900s whose creations include the Ochoaplane, which introduced foldable wings that made it easier to store a plane; a reversible motor; and a number of different wrenches. Or there is Ellen Ochoa: An astronaut and the co-inventor of three optics-related U.S. patents, she has six schools named after her.

  Another is Mario Molina, who shared the Nobel Prize in Chemistry for his work in atmospheric chemistry and the formation and decomposition of ozone. There is also Manuel Villafana, who invented a heart valve and went on to found St. Jude Medical as well as ATS Medical. His work continues to focus on developing artificial blood vessels that are safer and less invasive than coronary artery bypass graft surgery.

- **Contributions to education** – One man that comes to mind here is Jaime Escalante. The immigrant son of two teachers, he taught himself English,
National Hispanic Heritage Month: U.S. Economic Impact

Nearly 1 in 6 people living in the U.S. are Hispanic.

Hispanic immigrant households had $322 billion in spending power in 2015.

Hispanic households paid nearly $215 billion in U.S. taxes in 2015. Those who are foreign-born accounted for $96.9 billion of that total.

After taxes, Hispanics had a total estimated income in 2015 of more than $687 billion, which accounts for nearly $1 out of every $10 of disposable income in the U.S. for that year.

In 2012, Hispanic entrepreneurs owned more than 20% of all transportation and warehouse businesses in the U.S., as well as one-eighth of the country’s construction firms.

Businesses that are majority Hispanic-owned provide approximately 2.7 million jobs to U.S. workers.

In 2015, Hispanics contributed $25.3 billion and $101.8 billion to Medicare and Social Security, respectively.

As of 2015, Hispanics made up more than 1 out of every 7 entrepreneurs, and half of all U.S. states were home to at least 10,000 of these business owners.

A projected 5.7 million Hispanics will become eligible to vote for the first time between 2015 and 2020 and could play a deciding role in the 2020 election.

Two-thirds of Hispanic youth in the U.S. — those ages 16 to 25 — were born here.

Source: New American Economy, Power of the Purse: How Hispanics Contribute to the U.S. Economy; Pew Research Center
The SWOSU College of Pharmacy congratulates the Southwest Alliance for Girls’ Enrichment in Science, Technology, Engineering, the Arts, and Mathematics (SAGE STEAM) Camp for being named a recipient of INSIGHT Into Diversity magazine’s 2018 Inspiring Programs in STEM Award.

Clemson University’s College of Science is pursuing excellence in scientific discovery, learning, and engagement that is both locally relevant and globally impactful. The college is improving workplace quality of life through a leadership culture based on integrity, curiosity, and respect that values diversity and challenges the status quo. Join us as we prepare the next generation of scientists.

There are many more categories and people I could add to this list, but I think these illustrate my point.

So what might you do to incorporate some of these notable accomplishments that go beyond food, music, and art into your celebration of Hispanic Heritage Month? How can you personalize the month at your organization? Here are five suggestions:

- Highlight some accomplishments that fit the level and stature of those listed above, especially those that are most germane to your organization and industry.
- Invite someone to come in and speak about Hispanic contributions to your industry.
- Invite someone to speak about Hispanic contributions to your organization.
- Invite someone to speak about Hispanic contributions to the community where your campus or office is located.
- In some organizations, you may be able to highlight Hispanics who are part of your client market or leadership team.

Hispanic Heritage Month is a time to broaden our views and appreciation for the contributions made by this component of our American identity. We should continue to commemorate how these groups have affected food, music, and art on a national level — but let’s not stop there. Let’s also embrace and celebrate their other contributions that have woven their threads through the entire tapestry of our American heritage.

Joseph Santana is chairman of the Institute for Corporate Productivity’s (i4cp) Chief Diversity Officer Board and president of Joseph Santana, LLC. He is also a member of the INSIGHT Into Diversity Editorial Board. For more information, visit joesantana.com.
A TRUE ‘UNION’

AT UNION COLLEGE, OUR STORY COMES FROM MANY PERSPECTIVES.

Union College in Schenectady, N.Y. is proud to have received the HEED award from INSIGHT into Diversity, the fifth consecutive year the magazine has honored the College’s commitment to diversity and inclusion.

ABOVE: STUDENTS AT UNION COLLEGE PARTICIPATE IN THE ANNUAL PRIDE WALK TO CELEBRATE THE LGBTQ COMMUNITY.
In a few decades, according to the Pew Research Center, there will no longer be a single racial or ethnic majority in the U.S. Therefore, many colleges and universities are devoting considerable resources to the recruitment of groups that are historically underrepresented in academia and industry.

The following universities have established programs aimed at recruiting diverse students and faculty and are finding corporate and government partners that see the value diversity brings to higher education and the workplace.

**Kansas State University**

Kansas State University (KSU) in Manhattan has developed a comprehensive program called Project IMPACT aimed at recruiting multicultural students and supporting them throughout their undergraduate careers.

The project includes two free summer programs — funded by local corporations — that support high-achieving, racially diverse incoming freshmen interested in majoring in agriculture, business, or engineering. One of the initiatives, Multicultural Academic Program Success (MAPS), aims to ease students’ transition to college life and acclimate them to KSU’s campus through a six-week summer experience. Now in its 12th year, the program accepts 10 students annually from each of the three disciplines.

During MAPS, students take kinesiology, college algebra or chemistry, and a class called Roadmaps that gives them tips for succeeding at KSU — all for college credit.

During MAPS, students take kinesiology, college algebra or chemistry, and a class called Roadmaps that gives them tips for succeeding at KSU — all for college credit.

On Fridays, students participate in industry tours, during which they visit the plants of the program’s corporate sponsors — including Cargill Corporation, Phillips 66, Union Pacific, and Hormel Foods — and are able to network with executives. Brandon Clark, program coordinator for MAPS, says these experiences give students an opportunity “to hear and learn firsthand from executives who their company is, what their company does, [and] why their company values diversity” as well as learn about potential internship and career opportunities.

Throughout the program, MAPS participants also work collaboratively to design presentations on broad topics such as biofuels and sustainability, which they deliver to a group of KSU faculty at the end of the six weeks.

Offering support on another level, peer mentors live in residence halls with MAPS students for the duration of the program and assist them with transportation, homework, and navigating college life at KSU. Clark says this aspect of MAPS is designed to help improve retention rates. “Our students are getting all of this firsthand information that most freshmen do not get,” he says. “We’re

The annual INSIGHT Into Diversity Higher Education Excellence in Diversity (HEED) Award is the only application-based higher education award that recognizes colleges and universities that demonstrate an outstanding commitment to diversity and inclusion.
Once students complete either program, they are eligible for a scholarship. MAPS participants receive an annual renewable amount of $2,000, while those in Kompass receive $1,000 for their freshman year—funds they are able to apply toward tuition, books, and fees. Moving into the academic year, these students are referred to as IMPACT Scholars.

“The idea [behind Project IMPACT] is to target areas where the university felt it could bring students who were high performers, but who just needed an extra incentive in the form of a scholarship opportunity,” says Adrian Rodriguez, associate vice president for student life at KSU.

By improving access to advanced education, CSP ultimately seeks to diversify faculties at colleges across the state in order to ensure a statewide educator workforce that brings a broad range of experiences and perspectives—a goal in line with its mission as a land-grant university. Each year, WVU accepts up to 20 students for CSP. There are currently 19 scholars enrolled.

Lorena Ballester, a Chancellor’s Scholar and a single mother of three in her fourth year of studying higher education administration at WVU, hopes when she becomes a professor to contribute to the scholarly discussion regarding the issues international students face at American institutions. Jason Ottley, PhD, entered CSP in fall 2013 and recently
earned his degree in higher education with an emphasis in leadership and policy. He says he looks forward to sharing with students his lived experiences as an African American man.

Applicants to CSP identify their financial needs, and WVU partners with the West Virginia Higher Education Policy Commission — an organization that develops and oversees higher education public policy in the state — to help meet those needs. Some scholars only require assistance to cover the cost of books, whereas others may need help financing their entire education.

“We’re very intentional about making sure that when we do select someone, we can afford to push them all the way through,” says Meshea Poore, JD, vice president of CSP and vice president of diversity, equity, and inclusion at WVU.

Ballester says that the financial component of the program has been crucial to helping her achieve her career goals. “I am unmarried and I have three kids, so having the financial support helps me afford … school,” she says. “Instead of being in the workforce, I can further my studies to land my dream job in academia.”

Chancellor’s Scholars also benefit from networking events throughout the year and the sense of community they build with other members of their cohort. Ottley — who has mostly attended predominantly white institutions — says he appreciated the close-knit relationships he formed with other underrepresented students in CSP.

By assisting the university with undergraduate recruiting events, the scholars also help inspire other young people of color to pursue opportunities at WVU. “It is great for [these undergraduates] to see that there are minority students who are getting master’s degrees and PhDs,” says Ottley.

This aspect of CSP is becoming increasingly important as Poore seeks to recruit more people into the program from WVU’s undergraduate population. Her plans toward this end include offering help with GRE preparation and facilitating opportunities for these students to network with graduate school deans and professors. “We’re beginning to look within our own ranks, [thinking about] how we can court students who are maybe not even thinking about graduate school yet,” Poore says.

**North Carolina State University**

With a focus on building a more diverse faculty, North Carolina State University (NC State) in Raleigh developed the Recruiting Diverse Faculty Program (RDF). Born out of a 2015 National Science Foundation (NSF) ADVANCE grant aimed at recruiting more women to science and engineering, RDF has since expanded to target all groups underrepresented in academia by ensuring proper training for all NC State deans and department heads.

RDF faculty who had been involved with the NSF version of RDF began giving presentations to departments about developing search committees that value diversity, which led to the current iteration of the program. RDF faculty who had been involved with the NSF version of RDF began giving presentations to departments about developing search committees that value diversity, which led to the current iteration of the program.

A major component of RDF is workshops held every August for deans and department heads. These include panel discussions led by divisions that have successfully implemented policies and procedures aimed at recruiting more diverse faculty. They share best practices for how to create search committees...
dedicated to hiring underrepresented candidates as well as how to write inclusive job descriptions. Over the past several years, approximately 20 department heads and five deans have volunteered to participate each year, says Marcia Gumpertz, PhD, professor of statistics and former assistant vice provost for faculty diversity.

In addition to the summer workshops, a group of NC State faculty and administrators trained as RDF facilitators meet with committees twice during search processes to discuss how to attract candidates from a wide range of backgrounds. The RDF team gives presentations on why hiring diverse faculty is important, suggests strategies for marketing open positions to garner a wider pool of applicants, and engages committee members in a discussion around the impact of unconscious bias on decision-making.

“We talk to them about how [faculty] diversity affects the things that they’re trying to accomplish in their department and what kinds of benefits it would bring, [as well as] our university strategic plan and the elements that have to do with diversity,” says Gumpertz. For example, as a land-grant institution, NC State strives to serve the diverse population of North Carolina; thus, Gumpertz says, it is essential that both faculty and students are able to communicate with and relate to these groups.

Many departments involved with RDF have succeeded in increasing the number of faculty from underrepresented groups. Specifically, of the 68 individuals hired between the academic years 2015-2016 and 2017-2018 by participating departments, 46 percent are women and 18 percent are from underrepresented racial and ethnic groups, including eight African Americans, 10 Asians, and four Hispanics. These figures mark an improvement in diverse faculty hiring since RDF’s implementation.

“For people who haven’t been thinking about faculty diversity, RDF brings it to their awareness,” says Gumpertz. “And for people who have been thinking about it, RDF encourages them that this is something the university cares about.”

Ginger O’Donnell is a staff writer for INSIGHT Into Diversity. Kansas State University is a 2014-2017 HEED Award recipient. West Virginia University is a 2016-2017 HEED Award recipient. North Carolina State University is a 2014 and 2017 HEED Award recipient.
USE IT OR LOSE IT

Ohio’s Voter Purge Law Targets College Students, Marginalized Groups

By Mariah Bohanon

Members of the Andrew Goodman Foundation participate in the 11th annual Moral March, which protests discriminatory state laws, in Raleigh, N.C., in February 2017.
On June 11, 2018, the U.S. Supreme Court upheld the legality of Ohio's highly controversial "use it or lose it" voter purge law. The 5-4 ruling was split evenly along ideological lines, with conservative justices ruling in favor of the law. Liberal justices, however, argued that it violates federal policies meant to protect the rights of marginalized voters.

Under this statute, registered voters who fail to participate in an election are sent a postcard from the state to verify they still live at the address under which they are registered. Those who fail to return this notice and don't vote for another four years are automatically removed from Ohio's voter rolls.

Many legal experts and equal rights activists say this method violates federal laws dictating that individuals not be prohibited from voting simply because of their failure to participate in elections. Furthermore, they argue this tactic specifically targets people of color, those who are low-income, and — according to some — college students.

The people most likely to lose their voter status under this law are those who vote infrequently and relocate often, says Lonna Atkeson, PhD, a political science professor and head of the University of New Mexico’s Center for the Study of Voting, Elections, and Democracy. This means young people — especially college students — are particularly at risk because they have low voter registration and turnout rates. In addition, they tend to change residences frequently during their undergraduate years.

While every state has a process for removing inactive voters from its rolls, most only do so after many years or after receiving verification that a person has died or moved away, Atkeson explains. The process in most states for removing a voter believed to have relocated occurs only when the state receives notice — typically via the postal service or other federal database — that the individual's address has changed. In Ohio, however, if a person fails to vote in a single election, the state assumes that individual may have moved and thus sends the postcard to verify their address; should they not return the card and fail to vote in the next two elections, they will need to re-register.

“If a person has actually moved away from [their district], that’s a legitimate reason for being removed from the rolls,” Atkeson explains. “What we should worry about is the people who stay in the same area and don’t realize they need to update their information.”

Ohio’s methods for contacting inactive voters is also problematic as young people are far less likely to read their mail, even if they were to receive the postcard at the correct address. “It’s really a double whammy for college students who may move just a block away or are still in the same precinct but miss the [postcard] somehow,” says Atkeson.

Although Ohio’s law disproportionately affects populations that are already at risk of being disenfranchised, Atkeson believes it is unlikely that a large number of residents will actually be purged from the state’s rolls. While three election cycles is a far shorter period than that of other states, it still gives voters six years to check their registration status and re-register if necessary, she points out.

“I think a really small amount of people would get caught by this, but it’s definitely one of the most restrictive [state voter laws],” Atkeson says.
Voter rights advocates, however, worry the Supreme Court’s endorsement of Ohio’s law will lead other states to enact similar policies.

“If [this ruling] is anything like what happened in 2013 when the Supreme Court restricted parts of the Voting Rights Act, then you can assume other states will follow suit,” says Jessica Brown, media professional in residence at Loyola University Chicago’s School of Communication. In the 2013 case *Shelby County v. Holder*, conservative justices ruled to eliminate portions of the 1965 Voting Rights Act that required federal approval of voting laws in states and districts that have a history of suppressing black voters. The requirement had been a central tenet of the act, which was created to overcome legal barriers that prevented African Americans from exercising their right to vote.

In response, those districts and states formerly covered by the mandate have since instituted more restrictive voter laws. In North Carolina, the legislature passed such a measure less than two months after the *Shelby County v. Holder* decision. However, a lower court deemed the state’s law unconstitutional, claiming in the ruling that it acted with “almost surgical precision” to suppress African American voters. Lawmakers there have since introduced an amendment to the state constitution that would allow them to circumvent this ruling.

Brown says preventing suppressive laws such as these is why it is imperative that students are civically engaged and can exercise their right to vote. She recently wrote an article for *HuffPost* in which she details the impediments students face when it comes to registering and showing up at the ballot box on Election Day. Like Atkeson, Brown says college students’ transient lifestyles put them more at risk of losing their voter status under policies like the one in Ohio.

“If a student takes five or six years to complete a degree, if they’re transferring schools, moving out of state, living in a dorm, or traveling abroad, all of those things start to become a problem when you have a rule like the one in Ohio,” Brown explains. “Two or three years could easily go by where you’ve missed a couple of elections, changed addresses, and don’t even realize you’re about to lose your vote.”

Furthermore, students often have to contend with issues such as busy schedules, no mode of transportation, and complex rules about how to register and where to vote. This is particularly true for those who have moved away from home or to another state.

Under federal law, students in all states have the option to register either at their permanent address — typically their parents’ home — or in the district where they attend school, provided they meet all other residency requirements for that district. But registration and voting policies can vary widely from state to state as well as county to county, and Brown says obtaining proper documentation to register, such as a local utility bill verifying your current address, is not always possible. Ohio’s voter purge law only serves to compound all of these issues.

Some people have responded to Brown’s *HuffPost* article with criticism at the idea that strict voter purge laws are more likely to affect college students. “Some of the feedback from the [article] was basically saying that if a person is smart enough to go to college, then they should be smart enough to vote, and it’s on them to make sure they don’t get purged,” Brown says. “I understand that premise, … but college students have different lifestyles than other groups of people. It can be hard enough for a student to have to travel somewhere to vote when they have six classes and two part-time jobs — and then have to stand in line for two hours on [Election Day].”

Regardless of a person’s political stance, Brown says there is no denying that laws like Ohio’s discriminate against certain populations. “For me, it’s a data issue. If you have data saying these are the groups of people that match the criteria [for who will be purged] and those groups tend to be oppressed or disenfranchised, then of course it looks like you’re targeting those [people],” she says.

Maxim Thorne, JD, managing director of the Andrew Goodman Foundation (AGF), says his organization firmly believes that Ohio’s legislation is targeted at minority populations and college students. AGF, which is named for a young voting rights activist who was murdered by the Ku Klux Klan in 1964, is dedicated to increasing voter registration and civic participation among college students. Thorne says AGF members in Ohio have been “working around the clock” to ensure students are “educated on the [voter law] and know how to protect themselves from being purged” before the midterm elections in November.

The foundation’s four Ohio chapters — located at Bowling Green State University, Case Western Reserve University, Miami University, and the University of Dayton — are...
currently focused on informing students of the purge policy and helping them check their registration status. If a student has been removed from the rolls, AGF helps them understand the steps necessary to re-register — a burdensome process in itself, Thorne says.

“Ohio has some onerous residency requirements because they don’t, for example, consider dormitories as appropriate residences. If a student lives in a dorm and they want to register to vote, they have to bring either a utility bill or a [tuition statement] to prove they are a resident,” he says.

According to Thorne, several states have adopted similar regulations in recent years; however, AGF chapters have been successful in eradicating some of these. In Louisiana, for example, AGF members helped mobilize their campus communities to demand that the state accept student ID cards under its voter ID requirements. By organizing campus awareness events, rallies at the state senate, and other events, they were able to get the policy overturned.

Additionally, AGF students, along with the League of Women Voters, were recently part of a successful lawsuit against Florida’s secretary of state for declaring it illegal to allow early polling sites on college and university campuses. The judge in that case said the secretary’s action revealed a “stark pattern of discrimination” against young voters.

Thorne believes these cases demonstrate how imperative it is for students to be vigilant in order to protect and ensure their right to vote. “Our fear coming out of Ohio is that states controlled by people interested in denying others the right to vote will now be [enacting] regulations like [the voter purge law],” he says. “This tactic of deliberately denying people the right to vote — in particular, people of color and young people — is something we’ve seen an upswing in [recently] that we haven’t seen since the ’50s and ’60s.”

Thorne hopes colleges and universities, human rights groups, and dedicated student activists like those in AGF can work together to raise awareness about the growing threat to voter rights.

“Young people should know that in 1964 and throughout the civil rights movement, people were being killed for trying to secure the right to vote, and what we have seen in the last five years [since Shelby County v. Holder] is states re-enacting barriers similar to those in the past,” he says. “Young people need to mobilize to get their voices heard and to get out and vote.”

Mariah Bohanon is the associate editor of INSIGHT Into Diversity.
Changing the Culture for Women and Underrepresented Groups in STEM+M

By Lisa McBride, PhD

Although sponsoring and facilitating K-12 activities to increase the participation of young girls and students from underrepresented groups in STEM+M (science, technology, engineering, math, and medicine) is laudable, academia and industry should do more. “It is easy to look back a few steps in the pipeline and indicate that is where the problem lies but not try to change the culture to recruit and retain students and employees when they reach the later stages of the pipeline,” says Gail Gasparich, PhD, dean of the College of Arts and Sciences at Salem State University in Massachusetts. That will not lead to increased diversity; if you don’t change the environment, the result will always be the same.

According to Double Jeopardy? Gender Bias Against Women of Color in Science, a 2015 report published by research and advocacy organization WorkLife Law at the University of California, Hastings College of the Law, one in three female science professors surveyed reported experiencing sexual harassment. “There’s been a lot of talk about how to keep women in the STEM pipeline,” one of the study’s authors told The Atlantic, “but it fails to make a crucial connection: One reason the pipeline leaks is that women are harassed out of science. And sexual harassment is just the beginning.”

Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine, a comprehensive report published in June 2018 by the National Academies of Sciences, Engineering, and Medicine, revealed that nearly half of all women in science have experienced some form of sexual harassment.

According to the National Center for Science and Engineering Statistics, over one-third of African American, Latino, and Native American students enter college with an interest in studying STEM, yet only 16 percent actually go on to obtain a bachelor’s degree in those fields. When it comes to the engineering and computing workforce, which accounts for more than 80 percent of STEM jobs, women remain dramatically underrepresented, as documented in the American Association of University Women’s (AAUW) recent research report Solving the Equation: The Variables for Women’s Success in Engineering and Computing. This 2015 study found that women make up just 26 percent of the computing workforce and 12 percent of the engineering workforce; African American, Hispanic, and Native American women are especially underrepresented in these industries.

Careers in engineering and computing hold promising prospects: The work can be challenging and rewarding, and computer scientists and engineers are especially well-compensated.

In general, employment in STEM occupations has grown 79 percent since 1990, from 9.7 million to 17.3 million, according to a Pew Research Center analysis of U.S. Census Bureau data from 1990 to 2016. Annual trends demonstrate that STEM laborers earn 24 percent more than non-STEM workers. Catherine Hill, PhD, former vice president for research at AAUW and author of Solving the Equation, said, “These are opportunities that should be available to women and underrepresented groups. When women are not represented in these fields, we’re leaving half of our workforce out of innovation opportunities. We all lose.”

Higher education’s limited progress may be rooted in how we are viewing and approaching the problem. Thought leaders, policymakers, and practitioners have engaged in separate conversations about causality as they have tried to increase diversity in STEM.

In an article on the American Council on Education’s website, Kimberly Griffin, PhD, associate professor in the College of Education at the University of Florida, wrote, “Women are leaving STEM fields not because they lack knowledge and skills but because they don’t feel safe and welcome.”

Researchers have explored the idea of using role models to reduce the pipeline leaks. Monica Clayborne, executive director of the National Women in Engineering Project, told The Atlantic that female students “are more likely to persevere in a STEM field if they see people who look like them.”

While many groups are working to change the STEM culture, Gasparich says it is possible that we are making progress in the wrong places. “It’s possible we have not been addressing the real problem.”

The National Academies of Sciences, Engineering, and Medicine has just announced a $200 million investment in a nationwide initiative called the “National Science Monument,” which will focus on addressing the problem of women and underrepresented groups in STEM. Gasparich, who serves as a member of the academy’s Committee on the Advancement of Women in Science, Engineering, and Medicine, says “we have the tools to help women and underrepresented groups in STEM, it’s just a matter of putting them into practice.”
of Maryland, said there is a need to focus the conversation specifically on the culture and climate within STEM disciplines. She noted how “exclusionary norms and values translate to an unwelcoming environment.”

The STEM+M disciplinary culture has its own unique set of norms and values that predominate in various departments and programs. Griffin contends that individuals’ likelihood of success in science increases when they understand and adopt these norms and values.

So, how can we reduce the chilly climate women and underrepresented groups experience in the STEM+M fields in academia?

We must launch intentional efforts to change the campus climate. Specifically, we must work to change the attitudes, beliefs, behaviors, and perceptions of community members — including faculty, students, administrators, and staff — as they navigate issues of difference.

Considerable evidence-based data have shown that progress has been made in identifying experiences and outcomes in a university STEM+M classroom climate that is more supportive of minoritized students. The term “minoritized” acknowledges how social constructs like race, gender, ethnicity, religion, and sexual identity influence power dynamics and exposure to oppression.

Griffin, as well as Lenore Blum, PhD, distinguished career professor of computer science at Carnegie Mellon University — in her report “Transforming the Culture of Computing at Carnegie Mellon” — offer specific recommendations for faculty on how to achieve inclusive STEM+M classrooms. Some of their thoughts include the following:

- Creating a classroom environment that makes it easy to ask questions
- Using group projects that foster cooperative learning
- Showing how STEM knowledge is used in industry
- Communicating the use of STEM to life and social sciences
- Using inclusive language and examples
- Addressing instructors’ sexist beliefs, stereotypes, and microaggressions
- Creating opportunities for students to not only develop content knowledge but also have hands-on experiences and gain a sense of belonging and identity as scientists
- Allowing students from underrepresented backgrounds — and women of color specifically — to have opportunities to discuss and deeply engage
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In making the 21st century case for inclusive excellence in STEM+M, the Association of American Colleges and Universities in June 2014 provided funding for 14 institutions to participate in Teaching to Increase Diversity and Equity in STEM (TIDES), a program designed to increase the learning outcomes and retention of students historically underrepresented in computer and information sciences. Over the last three years, TIDES and its awardees have provided STEM faculty with opportunities to become proficient in incorporating culturally sensitive pedagogies into their courses. The initiative has also worked to engage faculty in course implementation that is grounded in evidence-based, culturally sensitive pedagogies.

According to Gasparich, this initiative is a great first step to addressing the often unconscious messages about what “scientists look like, value, and do that have permeated the culture and curriculum in … engineering, computer science, and medical education.”

Similar programs are in place to increase the number of female physicians in male-dominated fields such as orthopaedic surgery. The most recent Association of American Medical Colleges data indicate that orthopaedic surgery ranks lowest among all specialties when it comes to the percentage of practicing female physicians, with less than 7 percent. However, 48 percent of medical students are female, so to capture the brightest and most talented surgeons, we need to increase interest among women.

The Perry Initiative is committed to inspiring young women to be leaders in the exciting fields of orthopaedic surgery and engineering. Its mission is advanced primarily by running hands-on outreach programs across the
country for female high school, college, and medical school students.

As part of the initiative, Katherine Coyner, MD, an assistant professor and orthopaedic surgeon at the University of Connecticut Health Center, has participated in programming to increase opportunities for female medical students to be exposed to orthopaedic surgery as well as professional development programming. Coyner says she believes “it is important to create a climate that is inclusive for our profession as well as for the patients we treat.”

“The … one-day Perry program can [have] a lifelong effect as it offers female medical students potentially their only opportunity to network with female role models in the field of orthopaedics,” she says. “It is also likely the only time in their medical school career that they gain focused, individualized, hands-on exposure to orthopaedic surgical techniques.”

In addition to changes in pedagogy, there need to be visible signs of women and underrepresented groups at all levels of the university. Faculty and administrators should strive to be representative of the students they serve. Hiring practices must be open and subject to oversight that ensures the broadest pool of qualified applicants.

Having women and those from underrepresented groups chair search committees is one small step that can be taken. Increasing leadership opportunities for these groups is also critical for their advancement into administrative positions, as well as creating affinity groups to provide an internal support network for employees with similar interests and needs.

Another strategy to create an inclusive culture is to cultivate advocates and allies from majority groups who will be supportive of a diverse workforce.

Although it is important to encourage as many K-12 girls and students of color to pursue STEM, it is equally important to see that they find a supportive culture when they enter higher education and the workforce beyond.

Lisa McBride, PhD, is assistant dean of diversity and inclusion, chief diversity and inclusion officer, and a professor of medical education at Texas Christian University and the University of North Texas Health Science Center School of Medicine. She is also a member of the INSIGHT Into Diversity Editorial Board.
According to an analysis of 2016 data by New American Economy, STEM job postings in the United States outnumber unemployed STEM workers 13 to 1, indicating a critical deficit. But as the U.S. as a whole continues to struggle with this issue, some have embraced this challenge, choosing to use it to their advantage by addressing it at a regional level—much like the city of Harrisburg, Pa., has done.

Founded in 2001 and opened in 2005, Harrisburg University of Science and Technology (HU) was created by community members in direct response to industry need for a more robust STEM workforce in the city and across the rest of the commonwealth.

“In 2000, the Chamber of Commerce did a survey of businesses [to learn] what they would need in the next 100 years,” says HU President Eric Darr, PhD, who played a large role in the institution’s founding. “Out of that survey came the call for a university located in the city of Harrisburg [that would] focus on science and technology, because [the city was] struggling at that point to find technology workers.”

Darr credits much of HU’s founding to Harrisburg’s then mayor, Stephen Reed, who saw the importance of linking education to the business needs of the region. Recognizing the necessity to directly address industry demands by increasing educational opportunities in STEM, area government, business, and academic leaders worked together to assess gaps in the local STEM workforce.

“We were going to focus just on science and technology programs,” says Darr, “but more and more, the observation was that there are large portions of the population in the U.S. that aren’t ... represented in science and technology — specifically, women and [underrepresented groups].” With this information, HU tailored its mission to concentrate on increasing access to STEM careers for individuals historically underrepresented in those fields, making it the only STEM-focused higher education institution to have such a mission.

With an initial enrollment of 113, HU now has more
that to professional development resources and best practices. The university offers a one-credit course that Darr says is designed to provide them with "a set of professional development life skills" that are tailored to their needs at each level of their educational journey. "We get homeless students who come from Baltimore or Philadelphia, and they're faced with the idea and the fear of having to go to a professional interview," he says. "That's a daunting thing for some people. So, we provide students all kinds of help around putting together their résumé or going to their first professional interview."

All of these services coalesce to form what Bili S. Mattes, EdD, provost and chief academic officer, refers to as HU’s "community of support." "It's not just academic tutoring, for instance; it's the community that you create in support of the students," she says. "So, this includes mentoring from faculty and staff as well as fellow students. It includes making certain that basic needs are taken care of. It's making certain that students who do need to [improve] their skills have the opportunity to do so without wasting time or money in their academic pursuit."

A NETWORK FOR WOMEN

For nearly eight years, Mattes and other HU staff have sought to provide additional support for women in science and technology through the STEM-UP Network. The initiative facilitates connections between and among women working in STEM as well as helps them improve their confidence, self-advocacy, and leadership skills in order to advance in their careers. "Our purpose is to provide women in STEM with real-world strategies and relationships in support of their ability..."
NEW ESPORTS PROGRAM ALLOWS HU STUDENTS TO MAKE VIRTUAL CONNECTIONS

For a university whose program offerings center on STEM education, it makes sense that HU’s athletic programs would be limited to those that involve a monitor, keyboard, mouse, and headset.

This fall, HU launched its first and only varsity sport — an esports team — as a member of the National Association of Collegiate eSports (NACE). eSports are competitive, organized multiplayer video games.

Led by esports Program Director Chad Smeltz and Head Coach Geoff Wang, whom HU recruited earlier this year to develop the project from scratch, the program is one of many in a growing trend toward collegiate online sports. It’s projected that by 2020, the global esports market will be worth $1.65 billion; in 2017, it was valued at nearly $493 million.

“Right now, I think there are about 80 or 90 colleges involved in NACE,” says Smeltz. “When we got involved about six to seven months ago, there were only 50 to 55 schools, so it’s nearly doubled in over six months.”

During that time, Wang worked to recruit a team of top players — both domestic and international. The program held “tryouts” in which students had to submit their gaming statistics, among other items. “I [also] asked for video recordings of them playing, along with their own commentary on what they were thinking,” says Wang.

With 500 applicants and 15 full-ride scholarships on the line, he says he took the decision of whom to accept very seriously. “My goal as a coach,” he says, “is to understand what kind of player I’m getting before I end up giving them a scholarship.”

Wang looked for athletes with skills including spatial reasoning, fast decision-making, communication, and the ability to remain calm under pressure — all of which, he says, are key to competing at a high level in esports. “In terms of being a team player, a lot of those characteristics are things that you would expect for any kind of traditional sport or team activity,” he says.

Also similar to traditional sports, the athletes will be required to attend practices, which will take place in a 3,000-square-foot on-campus facility with room for more than 30 computers. To begin, HU will participate in three of the most popular esports games: Hearthstone, League of Legends, and Overwatch. Wang says teams of three, six, and seven will compete against similarly sized clubs at other schools.

“You meet online in the game and compete against each other in [what is] kind of an in-house scrimmage-style game — the same way that you would for a traditional sport against another college,” he explains.

HU plans to also host in-person events at the city of Harrisburg’s 700-seat Whitaker Center, allowing fans to watch live esports matches on a 40-foot screen. Additionally, Wang says the team will attend invitational tournaments across the country throughout the year.

In addition to the full scholarship from the university, HU athletes have the opportunity to win prizes in the form of scholarships through these competitions. “That may seem kind of redundant since we’re giving out full rides,” says Wang, “but we also have a reimbursement system. If students win additional scholarships, [we give them] a refund toward their student account so they can use that [money for] things like housing, books, and food.”

In an effort to draw younger segments of the community to esports, HU hosted its first-ever esports immersion boot camp this summer. This one-week event brought to campus high school juniors and seniors from across Pennsylvania as well as neighboring states to learn about the mindsets and skill sets required of online athletes. The university hopes to continue the summer camp going forward, Wang says, as well as expand esports at HU to include a junior varsity team.

Although the program is still in its infancy, Smeltz and Wang believe it is providing students significant benefit — specifically, the ability to socialize and meet others like themselves in an increasingly global and digital world.

“We’re giving [them] a touch point and an opportunity to immerse themselves in that culture and find people with similar interests,” Wang says. “I think the ability to connect people both domestically and internationally is a really great feature of esports.”

— Alexandra Vollman
to flourish, prosper, and advance,” explains Mattes. “For women in STEM, we create a network of professionals. We have a very active and successful mentoring program as well as a leadership development program, we build opportunities for peer collaboration, we look very closely at what challenges women face and how to overcome those, and we talk about communication and negotiation [skills].”

In a survey of STEM-UP Network participants, Mattes says 98 percent reported that it had a positive impact on their lives and careers. “Everything from the leadership development [to] the mentorship has given women the confidence to step up to leadership positions in their organizations,” she says.

**CAREER PREPARATION**

As an institution that links education with the business needs of the surrounding community, HU places great emphasis on experiential learning. Beyond gaining hands-on experience in the classroom, all students are required to complete at least two applied projects and an internship.

“Within classes, the way teaching is designed and delivered, they get their hands dirty early, whether it’s in the science lab or working with programming code,” Mattes says. “We want to make sure that the students are applying what they learn early and often. And then the opportunity they have through the applied projects and internships is to take everything they’ve learned and apply it to real-world circumstances.”

She believes that the combination of relevant degree programs that help build high-demand skills, the hands-on experience gained from experiential projects, and the connections made through internships — which she says are especially helpful for women and people from underrepresented groups — provide students with a smooth transition into STEM careers. According to Mattes, 92 percent of HU undergraduates are either employed or enrolled in graduate school within six months of graduation.

“That’s the whole point, to create that connection and that circle,” she explains. “All the companies are looking for more and more [graduates] with STEM skills. If you look at the statistics, by this year — 2018 — the research shows that over 70 percent of all jobs will [require some] STEM-related skills.”

Mattes notes, however, that HU also emphasizes soft skills. It has eight core competencies — integrated across the curriculum — that address skills such as critical thinking, teamwork, ethical decision-making, and civic engagement.

“STEM skills are foundational,” she says. “But employers are [also] looking for people who can communicate, who can make good decisions, and who can reason quantitatively as well as make their case verbally.”

**A REGIONAL SOLUTION**

HU’s mission is turning out to be the win-win that its founders hoped for and perhaps a microcosmic solution to both the nationwide STEM laborer shortage and the lack of diversity in the fields. “Not only are employers getting workers, they’re getting a diverse group of workers,” Darr explains.

The university’s plans for the future include launching additional degree programs, opening the Abu Dhabi campus, and moving into healthcare.

While Darr says HU’s specialized focus has at times limited its growth, he also believes it has helped make the university a pioneer in the effort to build a more robust STEM workforce — at least at the local level.

“We’re always going to lose students because we don’t have a criminal justice program or because we don’t have a journalism program, but we’re going to stay focused on why we were founded,” he says. “We can’t solve [the STEM worker shortage] nationally, … but in our dusty corner of the world, we’re trying to excite young people about science and technology.”

Alexandra Vollman is the editor-in-chief of *INSIGHT Into Diversity*. Read more about HU’s STEM-UP Network on page 48.
Advocating for Active Learning

Institutions and organizations advocate for active learning practices to create more inclusive classrooms and improve retention in STEM

By Mariah Bohanon

Students who earn a degree in STEM disciplines enjoy a wide range of benefits. These fields offer the opportunity to participate in innovative, exciting learning and research experiences as well as exceptional employment prospects and earnings potential. Diversity in STEM disciplines is especially important for improving the lives of underrepresented and disadvantaged students — and in helping meet growing workforce demands. Yet only 40 percent of students who enter college as STEM majors actually go on to earn a degree in those fields.

The majority of first-time, full-time students who enroll in STEM degree programs switch to a non-STEM major within their first two years of college, according to the National Academies of Sciences, Engineering, and Medicine (NASEM). The most common reason given for changing majors is negative experiences in introductory courses, such as freshman-level biology, calculus, and chemistry.

According to a 2016 NASEM report, these individuals tend to “abandon their goal of earning a STEM degree due to the way that STEM is taught and the difficulty in obtaining support.” Thus, the report contends, students are “dissuaded from studying STEM rather than being drawn into studying a different discipline.”

Researchers Marilyne Stains, PhD, an associate professor at the University of Nebraska-Lincoln, and Michelle Smith, PhD, an associate professor at Cornell University, recently conducted a study to assess the classroom environments of prerequisite STEM courses in an attempt to identify the
root causes of students’ dissatisfaction. With their team, they observed 2,000 class sessions at 11 colleges and universities, paying special attention to the instructional practices employed by the 500 professors who participated. They discovered that the vast majority of these classes were lecture-intensive, requiring little to no participation from students or personal interaction with instructors, classmates, or course content.

Stains and Smith argue that the result of such a course structure is that students become discouraged over their ability to learn the subject matter and shun the idea of continuing a major that requires classes that are so difficult and disengaging.

Organizations such as the National Science Foundation have invested considerably in improving college-level STEM education in order to increase retention. However, Stains believes that her and Smith’s study reveals that much more work is needed to help professors become more effective in the classroom. Stains and Smith are working to address this issue by raising awareness among faculty members of the struggles underclassmen face in STEM degree programs and introducing faculty to methods for easing new students’ transition to college-level math and science courses.

One significant way to accomplish this end is implementing active learning strategies, such as group discussions. These practices require students to participate in class and interact with the instructor and their classmates.

“There’s extensive literature demonstrating that lecturing is not the most effective [teaching] practice,” says Stains, who became interested in STEM retention after struggling to engage students in her own introductory chemistry courses. “There are all these other active learning strategies … that have been proven much more effective in helping students understand content and in changing attitudes toward the subjects being studied so that students actually become more interested in the discipline.”

According to Smith, students in STEM classes that employ these techniques often earn higher grades and give more positive course reviews. Underrepresented, female, and first-generation students have the most to gain from a more interactive class structure. “There have been various studies at Minority-Serving Institutions showing that these shifts lead to higher academic performance and higher retention rates among underrepresented students,” Smith says.

She adds that for groups historically
Initiating Improvements

The Association of American Universities (AAU) has been working to address STEM retention since 2011, when it launched the Undergraduate STEM Education Initiative. With a membership comprising 62 prominent research universities, AAU created the initiative to address the fact that many freshmen entered these institutions “with aspirations to study the STEM fields, but their pathways showed that they weren’t being retained in those disciplines,” says Emily Miller, PhD, associate vice president for policy at AAU.

The association also identified negative first- and second-year classroom experiences as a leading cause of attrition.

The goal of the AAU initiative is not only to help professors learn more effective and active teaching techniques, but to also address and change the broader culture in STEM departments, says Miller. These departments tend to place more value on research than on teaching, so there often aren’t incentives or support systems in place for STEM professors who wish to devote time and resources to improving instructional practices.

“[Our member campuses] are large, very productive, excellent research institutions where faculty members are highly rewarded for their contributions to science and scholarship,” Miller says. “So, we want to show the value [of] faculty members’ contributions around improving education, particularly for teaching undergraduates.”

The Undergraduate STEM Education Initiative began with eight project sites, which AAU worked with “to improve the quality and effectiveness of undergraduate teaching and learning in [STEM] fields,” according to the AAU website. Such improvements included developing and implementing best practices for department-wide efforts, such as curriculum redesign and faculty training workshops. The association then expanded the initiative to support STEM reform at 55 of its member institutions by facilitating cross-institutional collaboration, advocating for support from institutional leaders, and obtaining millions of dollars in grant funding to help departments revitalize their approach to teaching core classes in these disciplines.

The current phase of the initiative focuses on sharing best practices and obtaining funding to ensure that introductory STEM classes at large universities — which often take place in lecture halls with hundreds of students — are favorable to active learning. For example, AAU helps colleges hire and train undergraduate and graduate assistants to facilitate in-class exercises and small-group discussions for such courses.

Some AAU members have even redesigned classrooms to make them more conducive to group work.

“[Schools] can redesign learning spaces so that students are no longer sitting in large lectures but at round tables. They’re using out-of-class time to consume content, such as video clips, so that in class, they are working together on problem sets and learning how to actually apply knowledge with the guidance of faculty members and learning assistants,” Miller explains.

At AAU member campuses that have implemented some of these reforms, feedback from students as well as faculty has been overwhelmingly positive. Miller says STEM majors “are persisting and performing highly in subsequent courses” and that achievement gaps for underrepresented students have greatly decreased.

“We have seen learning gains for all students, but we also see that for those from diverse backgrounds, these gains are particularly great,” Miller says. “A lot of [these techniques], when done well, are creating inclusive classroom
environments. We have very strong examples on our campuses of how disparities can really be addressed by improving the effectiveness of instruction within the classroom.”

For researchers at the Charles A. Dana Center in the College of Natural Sciences at the University of Texas at Austin, efforts to improve STEM education and retention focus on the fundamental discipline of mathematics. Rather than changing introductory STEM courses across the board, the Dana Center’s Mathematics Pathways (DCMP) program offers training and support to help faculty create engaging classrooms and to ensure that first- and second-year students are enrolled in the appropriate math courses to help them reach graduation.

“Basically, all students have to take math, and many times it is … a student’s first math course that determines whether or not they leave a STEM field,” says Martha Ellis, PhD, director of higher education strategy, policies, and services for the center. Math courses, particularly those required of STEM majors, are very focused on rote memorization and basic assessments; students who don’t excel in this difficult learning format are essentially weeded out.

“You have to sit in your seat and listen to the instructor, … then take a midterm and a final, and if you don’t do well on those, then you’re out,” Ellis explains.

Like AAU, DCMP emphasizes the use of active learning techniques and the development of inclusive classrooms. These improvements can be pivotal for first- and second-year STEM majors, almost all of whom are required to complete several lower-level calculus courses in order to advance in their degree programs. Ellis says many students struggle with these classes because professors fail to help them make connections between the course content and their own STEM interests and future careers.

“We do two things in particular to create content and pedagogy that help students [see the purpose behind] the math they are learning,” says Rebecca Hartzler, manager of advocacy and professional learning for higher education at the Dana Center. “The way we teach [calculus] now is that every single thing that students learn is connected to some sort of real-world application, [such as] … learning how to measure the strength of earthquakes.”

This approach helps students relate to the curriculum as well as improve their academic performance. “Not only are you an active member [of class], but you’re a contributor,” Hartzler says. This also builds confidence for students who may otherwise assume they are not smart enough to understand calculus and thus not capable of succeeding in upper-level STEM courses, she adds.

“We strive to undo a lot of the myth that you are either born a ‘math person’ or you’re not,” Hartzler says. “This helps students stay in STEM pathways because it makes them feel like they belong.”

Recognizing that a sense of belonging is necessary for retaining underrepresented STEM majors, the Dana Center recently developed a video series, called Mathematics Pathways Stories, that features STEM leaders and innovators from underrepresented groups. Through these videos, in which these professionals discuss their own struggles learning math and explain its application to their current occupations, STEM students are introduced to successful role models from backgrounds similar to their own.

While researchers, institutions, and organizations are making progress toward improving the retention of underrepresented groups in STEM, Ellis acknowledges that this work will continue to require further study and collaboration among institutions, individuals, and departments.

“We’re in this together, even if we don’t have all the answers yet,” says Ellis. “We want to work with people in the field so that we can address these issues as quickly as possible, so that students can be successful and more of them can [enter] these important … fields.”

Mariah Bohanon is the associate editor of INSIGHT Into Diversity.
Deaf and Hard of Hearing Virtual Academic Community Uses Tech to Help STEM Students Succeed

By Alice Pettway

When Chris Brucker started his graduate degree in architecture at Rochester Institute of Technology (RIT), none of his classmates were deaf or hard of hearing (D/HH). That was tough, he says, because he was used to an undergraduate environment where he had access to more robust support resources. That was until he discovered the Deaf and Hard of Hearing Virtual Academic Community (DHHVAC). Based out of RIT’s National Technical Institute for the Deaf (NTID) and funded by the National Science Foundation (NSF), DHHVAC is an online community that supports “the learning needs of students who are deaf and hard of hearing in … [STEM],” according to the project’s website.

Brucker’s experience isn’t unique. People who are D/HH account for only 1.2 percent of master’s degrees earned in the United States, according to a recent American Community Survey conducted by the U.S. Census Bureau. Additionally, more than 50 percent top out at a high school education or lower.

For Lisa Elliot, PhD, an RIT professor who works at NTID, one step on the path to improving those numbers is making sure STEM students who are D/HH have the resources they need to succeed in their classes. She is the principal investigator for DHHVAC, which provides accessible resources, tutoring, and mentoring as well as a community of support for D/HH STEM majors.

Elliot says that the idea for DHHVAC grew out of a 2008 summit examining how to create cyber communities to support these students. The concepts floated at the summit evolved during focus groups — funded by NSF — conducted between 2009 and 2011. Researchers learned that D/HH students who are interested in STEM fields sometimes show up for college underprepared and often have never known someone like them in their desired field. It also became clear through the focus groups that many of the free online resources available on STEM topics are not accessible to individuals with hearing disabilities, putting them at a disadvantage when it comes to self-study.

“So while there’s a huge amount of information available to the general public,” says Elliot, “people who are D/HH were not able to access that information, and if you can’t access it, it makes it more difficult to learn about it and to dream about it.” This issue, she adds, prevents many of these students from completing a STEM degree or from even pursuing those fields in the first place.

A partnership between RIT, Cornell University, and Camden County College, DHHVAC opened its virtual doors in 2012 with the long-term goal to increase the graduation rates of D/HH STEM students. The community uses a three-pronged approach to help them succeed. Organizers curate STEM resources that are accessible to these students, provide tutoring, and connect them with professional mentors in their respective fields. Students at the three partner institutions are able to access these services and support.

In the beginning, organizers
focused mainly on synchronous online tutoring — in which both student and tutor are live via video chat — and the development of a website where DHHVAC participants could access general STEM information as well as information tailored to the D/HH community, such as American Sign Language STEM terms.

Elliot says that these online opportunities are essential to DHHVAC’s effectiveness. While D/HH students at RIT have access to in-person tutoring, those at the other partner institutions do not. And even when available, face-to-face counseling presents challenges for students juggling work and study schedules across large campuses. To Elliot and her fellow researchers, moving these conversations online seemed to be the answer.

The key to facilitating such tutoring, Elliot says, was to find affordable, easy-to-use, remote communication technology that gave tutors the flexibility to use different pedagogical methods. “When you’re talking about STEM concepts, it’s often very visual,” she says. “So, you might need to look at a whiteboard ... and have a visual of the professor or the tutor and ... use text chat at the same time.” Google Hangouts turned out to be a good solution, although Elliot says they’ve also used other platforms intermittently over the years.

Another goal of the project was to ensure that the website complied with World Wide Web Consortium accessibility guidelines, which Elliot says took a lot of investigation. As part of that process, DHHVAC asked students to help with the development. “Because we were working with students who had the needs that we were trying to address,” she explains, “we had a better handle on creating [a website] that was usable.”

In addition to the resources provided by DHHVAC, students have access to private social media groups where members communicate about resources they encounter elsewhere.

Currently in its sixth year, the project has shifted some of its focus to mentorship, with a program now firmly established. Brucker says it’s the aspect of DHHVAC that has benefited him the most. He was paired with an established architect, Philip Rubin, who is deaf and has focused his career on creating architecture that is more accessible to those who are D/HH. “Having a mentor is really helpful [for] paving the path for me to [achieve] my goal,” says Brucker.

Elliot believes that the mentorship program benefits students by giving them professional insight and emotional support. It also gives D/HH professionals the chance to engage with the next generation. Rubin says he’s found the experience to be rewarding, particularly since he’s an NTID alum himself.

Elliot hopes that eventually, the mentorship program will result in an ongoing cycle of DHHVAC mentees graduating, entering successful careers, and then returning to become mentors. “We’ve had a number of success stories where a student has previously felt very frustrated in their chosen field, and they were able to work with a mentor who has given them guidance and [they] have become colleagues,” says Elliot.

In line with its goal to establish a model that will improve graduation rates for D/HH students studying STEM, Elliot says that anecdotally, DHHVAC is seeing success; students who have previously failed STEM classes multiple times have passed after using DHHVAC’s tutoring services. As for its becoming a model for other schools, Elliot says she doesn’t know of any other universities that are currently replicating the initiative in full. However, she believes the beauty of the project lies in its multifaceted approach to supporting D/HH STEM students on their path to graduation — which includes tutoring and resource curation — and the fact that institutions can adopt aspects of DHHVAC à la carte.

Alice Pettway is a contributing writer for INSIGHT Into Diversity. For more information, visit rit.edu/ntid/dhhvac.
Reconstructing the STEM Hierarchy
How the #MeToo movement has helped spark a fervent effort to transform the structure of scientific laboratories

By Alexandra Vollman

Sexual harassment has been a constant in Blair Schneider’s career since the very beginning. As a female scientist in a male-dominated field, she says she’s targeted on what seems like a daily basis.

“At my first-ever conference, while presenting a poster, some faculty member came up to me,” she says, “looked me up and down, and told me ‘You know no one is coming here to look at your poster, right?’”

While experiences like Schneider’s aren’t uncommon for women in STEM, they have become the object of increased scrutiny thanks in part to the #MeToo movement. Launched in 2006 as a way to help survivors of sexual violence know they’re not alone and popularized by the hashtag used in response to Hollywood sexual assault scandals last fall, the #MeToo movement has spurred self-reflection and action in the scientific community as well.

“As the #MeToo movement has spread, it has opened up several new doors that allow us to search for solutions to remove sexual harassment as a barrier for women in STEM,” says Schneider, who is a postdoctoral fellow and TRESTLE Program Manager at the University of Kansas Center for Teaching Excellence.

The need to eradicate such barriers has never been greater as the U.S. faces a shortage of approximately 1 million educated STEM workers, according to a 2016 White House report. But recently released data reveal the magnitude of sexual harassment’s impact on women in these fields and how much work there is to do to tackle this issue.

The National Academies of Sciences, Engineering, and Medicine released the findings of a report in June indicating that nearly half of all women in science and 58 percent of women in academia experience sexual harassment, including 43 percent of female STEM graduate students. This is coupled with the fact that, according to data published by the nonprofit organization Catalyst, women hold only a quarter of all U.S. STEM jobs. In academia, the National Science Foundation (NSF) reports that they account for just 30.9 percent of full-time science and engineering professors.

This is an issue that affects the U.S. on a global scale.

“If you have women who are experiencing sexual harassment who are already disproportionately represented in these fields [leave], … then that is going to have a huge impact on our economy and global competitiveness,” says Deborah Vagins, senior vice president of public policy and research for the American Association of University Women (AAUW), a nonprofit that advances equity for women and girls through advocacy, education, and research.

Indeed, research shows that women are less likely to enter and more likely to leave STEM careers than their male counterparts. While their low numbers are the result of a number of factors — from a lack of engagement in STEM at an early age to gender discrimination and bias once employed in the fields — sexual harassment is believed to play a significant role in many women’s decisions to divert their careers.

“What happens to all the women and the brilliant minds that we’re training is that they leave [the field], and they leave because every step of the way there is some form of harassment,” says Janet Bandows Koster, executive director and chief executive officer of the Association for Women in Science (AWIS), a leading advocate for women in STEM. “It’s like death by a thousand cuts — if … you don’t see people who are like you and you’re put in scenarios where you feel threatened physically, at some point it adds up and you leave.”

In addition to giving an overview of sexual harassment’s reach in the sciences, the National Academies report offered recommendations for tackling the issue. These focus on improving transparency in the reporting and investigating process, improving support for targeted individuals, and updating ethics policies to regard sexual misconduct the same as any other professional malfeasance.

AWIS advocates for many of these approaches. Koster notes, however, that
bringing about such changes in higher education won’t be easy as much of this issue is due to the inherent structure of the research environment, which often precipitates this type of misbehavior.

“I think it’s the very nature of how science in particular is done. It’s very hierarchical; you’re dependent on the principal investigator (PI) … for future reference. You rely on their expertise to provide you with the context that you need to get future funding, to get future collaboration, to publish. And publishing of course is all-important in science careers,” Koster explains. “So it’s an odd codependency that I think we don’t often see in other workplaces.”

And institutional policies, she adds, often have minimal effect on the intimate culture of labs in particular. “The lab is its own ecosystem,” says Koster, “and that ecosystem is not necessarily impacted by the best practices of the university or … the department, but very much by the PI or chair of that department.”

Aware of the impact these experiences can have on a woman’s career trajectory, AWIS advocates for increasing transparency, ensuring stronger leadership that is aware of issues, recruiting more allies, and improving diversity, especially among leadership. Toward these ends, the organization works with individual members, university and corporate partners, federal agencies, and Congress to provide resources, training, and best practices in order to change the structure and culture of STEM workplaces.

“We do everything from consulting to workshops on best practices in climate and culture,” Koster says, adding that a lot of AWIS’s work revolves around meetings and conferences. “A lot of sexual harassment happens at professional society meetings, and these are [events] where young professionals make their connections for future collaboration and funding.”

Recently, associations and institutions have caught flack for their erratic handling of sexual harassment cases. The House of Representatives Science, Space, and Technology Committee tasked with investigating how federal science agencies and universities handle such complaints announced in February that it found significant inconsistencies in how these entities mitigate sexual harassment, with many having unclear policies and procedures in place.

Chairwoman of the committee Rep. Barbara Comstock said this situation leaves victims unsure of how to proceed and creates cultures where “institutions are more interested in checking the boxes of compliance rather than doing the right thing.”

That much more work remains to improve the climate for women in STEM is a given, but as Koster notes, that doesn’t mean there aren’t currently exemplars. Take LeHigh University, a private research university in Bethlehem, Pa., for example. Discussions about sexual harassment in the STEM workplace — particularly in higher education — are commonplace at LeHigh, and a focus on recruiting male allies is encouraging the development of best practices and the creation of a more equitable environment there.

Another leader in addressing this issue is the American

**Recommendations to Bring About Change in Higher Education**

Following the conclusion of its investigation into sexual harassment at academic and other institutions, the National Academies of Sciences, Engineering, and Medicine offered several recommendations for how universities can address and prevent such misconduct.

- **Address the most common form of sexual harassment: gender harassment.** Institutional leaders should pay increased attention to and enact policies that cover gender harassment.

- **Move beyond legal compliance to address culture and climate.** Institutions should move beyond interventions or policies that represent basic legal compliance and that rely solely on formal reports. Sexual harassment should be addressed as a significant culture and climate issue.

- **Create diverse, inclusive, and respectful environments.** Institutions should work to create a diverse, inclusive, and respectful environment where these values are aligned with and embedded into the systems, structures, policies, and procedures of the institution. Their leaders should prioritize these actions.

- **Improve transparency and accountability.** Institutions should develop and readily share clear, accessible, and consistent policies on sexual harassment and standards of behavior. And they should strive for greater transparency in how they are handling reports of sexual harassment while balancing a need for confidentiality.

- **Diffuse the hierarchical and dependent relationship between trainees and faculty.** Institutions should identify and enact mechanisms to diffuse concentrated power and dependencies in relationships between trainees and faculty/advisers, such as using mentoring networks and committee-based advising as well as providing independent funding.

- **Provide support for the target.** Institutions should convey that reporting sexual harassment is an honorable and courageous act and provide access to support services regardless of whether a formal report is filed, alternative and less formal ways to record information about an incident, and approaches that prevent the target from experiencing or fearing retaliation.

- **Strive for strong and diverse leadership.** Strong and diverse leadership is essential to creating and maintaining a culture and climate that prevents harassment. It is crucial that all levels of leadership are held responsible for creating the needed changes.

Source: The National Academies of Sciences, Engineering, and Medicine, Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine Consensus Study Report Highlights
Geophysical Union (AGU), a 62,000-member organization of earth and space scientists that has worked with AWIS to develop resources and better policies. AGU now offers guidance to other organizations and institutions, holds workshops and bystander trainings, and will soon offer additional support via its new Ethics and Equity Resource Center.

Additionally, the Safe AGU program is focused specifically on ensuring that members feel safe and respected at national meetings. It’s designed to reinforce AGU’s support of victims and its zero tolerance for harassment.

“We train staff who are willing to be a contact, … and those people, including myself, wear a button that tells our attendees that if they feel unsafe or they’re being harassed, bullied, or discriminated against, they can find any one of us, and we will address the situation for them depending on the particular circumstances,” says Christine McEntee, AGU CEO and executive director.

According to McEntee, AGU already had in place many of the recommendations cited in the National Academies report prior to its publication — the most significant of which is a strong policy regarding sexual harassment and clear processes for reporting and adjudication.

In 2016, following the publicizing of several high-profile sexual harassment cases in higher education, AGU reviewed and updated its ethics policy with particular attention paid to this issue.

“What’s significant about that policy is that it identified harassment, bullying, and discrimination as scientific misconduct, and it lays out a process for our members and others to bring forward allegations against an AGU member if they’re in violation of that policy,” says McEntee. “I think it’s important because research and evidence show us it’s damaging to someone’s scientific career — just as damaging as [if someone] plagiarized.”

Labeling sexual harassment as scientific misconduct is important to female scientists as many take issue with the fact that the men who commit these acts continue to lead successful careers that include serving as peer reviewers, holding membership in professional societies, speaking at national conferences, and receiving research funding. Defining it as such helps ensure accountability and affects how an individual will be disciplined — which could include the revocation of grants. “If you are a PI and have significant grant funding from a federal agency, you should be held to a certain standard,” says Koster.

McEntee says an ethics task force charged with periodically reviewing and proposing updates to policies helps AGU stay on top of ethical issues as well as ensure that the organization is continuing to abide by its strong code of conduct.

“We’re for diversity, we’re for inclusion, we’re for intellectual freedom and scientific integrity,” she says. “Those are the basic values of our organization, and you can’t meet those values if you have 50 percent of scientists saying they’re operating in an environment that isn’t upholding [them].”

AGU is now seen as a leader in this area and often works with other organizations to help them institute similar policies and best practices. It also partners with others to improve the climate for women in STEM.

The ADVANCEGeo Partnership is a collaboration between the Earth Science Women’s Network, the Association for Women Geoscientists, and AGU created to address the problem of sexual harassment in the earth, space, and environmental sciences. Made possible with a four-year, $1.1 million grant (2017-2021) from the NSF ADVANCE program, it aims to improve workplace conditions via “bystander intervention workshops for department heads, chairs, faculty, and grad students to appropriately respond to and prevent sexual and other types of harassment on campus and in the field,” according to the project’s website.

Schneider is co-PI on the project, which is currently studying how harassment affects women in different settings in order to develop appropriate bystander intervention materials. “This includes fieldwork, lab work, attending conferences, even just the daily office setting,” says Schneider. “Our project team has spent the past year reviewing different types of trainings and literature to help us identify the strategies that we believe will be most effective for the earth science community.”

As of the beginning of August, the ADVANCEGeo team had led 10 workshops on campuses including Colorado State University, Boston University, the University of Wisconsin-Madison, and the University of South Carolina as well as for professional societies such as the Society for the Advancement of Chicanos and Native Americans.

“The goal of our workshop is to empower individuals to walk away with intervention strategies — I like to call it my intervention ‘tool box’ — that
they can use if they see someone being sexually harassed,” she says. “If someone is being sexually harassed, it’s hard to come up with an appropriate response in that moment — and even if you do, what is classified as ‘appropriate’? On an individual level, the appropriate response will be different for everyone.”

Some resources are also available via the project’s Online Community Resource Center. These include an overview of harassment, bullying, and discrimination; intervention strategies; recommendations and templates for creating an effective code of conduct; resources on how to report; and more.

At the institutional level, Schneider believes universities should implement comprehensive codes of conduct and host preventative trainings — “and not just the poorly put together 30-minute online tutorial that you can click through in five minutes,” Schneider says. She also emphasizes that these trainings need to be offered to all members of campus.

“Sexual harassment doesn’t just happen to one level of individuals, or at only one stage of your scientific career — it happens at every level,” explains Schneider. “It seems like every day there is a new story out about some faculty member or administrator accused or found guilty of sexual harassment. These same [people] have graduate students and are teaching them that this behavior is normal and OK, perpetuating the cycle over time.”

ADVANCEGeo advocates for the inclusion of this topic in university courses about ethical research conduct. “We have to recognize that an individual who sexually harasses other individuals is not an ethical scientist,” Schneider says, “so including these materials in courses that discuss ethical research conduct is a natural step forward.”

Policies, education, and trainings are meaningful steps on the road to both preventing the sexual harassment of and improving the climate for women in STEM. But having a network of peers and allies who are fighting the good fight with you has its own unique power.

“One way of overcoming [this] has been support groups — in particular, close friends and counselors on campus. This project, working with this amazing group of leaders, feeling like we are doing something to help others, has all been incredibly healing in its own way,” says Schneider. “I have intervened on a friend’s behalf when someone wouldn’t leave them alone, and most importantly, I am feeling more empowered to be able to teach my own daughter how to protect herself in the future.”

Alexandra Vollman is the editor-in-chief of INSIGHT Into Diversity.
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It’s a fact that underrepresented professionals who work in STEM fields enjoy significant opportunities to engage in new discoveries and innovations on a global scale. INSIGHT Into Diversity created the Inspiring Programs in STEM Award to recognize colleges, universities, and organizations for programs that are improving access to STEM fields for students from underrepresented groups.

This award is being presented to institutions whose programs inspire a new generation of young people to consider STEM careers as well as support working professionals in these fields. These remarkable initiatives profiled in the following pages are making a significant difference by providing mentoring, academic and professional support, hands-on activities, research opportunities, and more.
Horace G. McDonell Science Research Fellowship Program
Adelphi University
College of Arts and Sciences
Established with funding from Adelphi alumnus Horace G. McDonell Jr. and awarded annually, these science research fellowships provide top female students in biology, chemistry, and physics the opportunity to spend 10 weeks in the summer conducting original research in Adelphi labs. The program focuses on recruiting and advancing the career prospects of women in STEM — typically junior undergraduates. Students receive a $4,000 stipend while working with a faculty mentor to gain hands-on lab experience.

Science and Technology Entry Program (STEP)
Albany Medical College
School of Medicine
STEP is a twice-weekly program for underrepresented seventh- through 12th-grade students. Wednesday sessions emphasize transactional skills, career exploration, and self-management in preparation for college and include hands-on activities such as clinical case study debates. Saturday sessions focus on academic instruction to prepare for the rigors of college STEM courses. Students take medical and engineering classes and participate in a mini medical-education curriculum. They also learn about self-care and how to prevent burnout and stress while in college.

STEM Summer Bridge Program
Auburn University
College of Sciences and Mathematics (COSAM)
COSAM’s STEM Summer Bridge Program offers academic, social, and financial support for disadvantaged first-year students. Participants take gateway STEM courses during the four-week program and attend workshops focused on communicating with faculty, career exploration, and understanding their identity as an underrepresented student. Students are awarded a scholarship provided they continue participating in academic enrichment activities with their cohort throughout the academic year; these activities include dedicated study hours as well as group and individual mentoring sessions.

Collegiate Science and Technology Entry Program (CSTEP)
Borough of Manhattan Community College (BMCC), City University of New York
CSTEP strives to increase the recruitment and retention of underrepresented and economically disadvantaged students in STEM and healthcare-related disciplines. The program recruits 200 students annually to participate in a summer research methods workshop as well as weekly seminars. Students then partner with faculty members conducting research in their area of interest and work with them to complete and present a project at BMCC’s Annual Research Symposium.

Bucknell STEM Scholars Program
Bucknell University (BU)
The Bucknell STEM Scholars Program consists of two consecutive summer research experiences on BU’s campus. Each year, 14 incoming STEM majors are selected for this competitive program, initially spending five weeks conducting research alongside BU faculty. Following the successful completion of their freshman year, they are invited to return for a 10-week summer project. BU actively recruits women, students of color, and those who are first-generation to apply for the program. Participants are provided on-campus housing and stipends.

Cal Poly Pomona Women in Engineering (CPP WE)
California State Polytechnic University, Pomona (Cal Poly Pomona)
College of Engineering
Created to address the shortage of women in engineering, CPP WE strives to engage K-12 girls; recruit, retain, and
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NOMINATIONS AND APPLICATIONS

The Search Committee invites letters of nomination, applications (letter of interest, full resume/CV and contact information of at least five references), or expressions of interest to be submitted to the search firm assisting UCF. Review of materials will begin immediately and continue until the appointment is made.

For additional information, please contact:
Jan Greenwood, Partner
Julie Holley, Principal
850-650-2277
jangreenwood@greenwoodssearch.com
julieholley@greenwoodssearch.com

The University of Central Florida, known as UCF, is a large, public research university located in Orlando, Florida. It is the largest university in the United States by enrollment, with more than 66,000 students. UCF is a founding member of the Association of American Universities and is classified among “Top Research Universities” by the Carnegie Classification of Institutions of Higher Education. It offers over 200 degree programs, including doctoral and professional programs in many fields. UCF is also home to the Rosen College of Hospitality Management, the College of Medicine, the College of Optometry, and the College of Pharmacy. The university has a strong emphasis on community engagement, research, and innovation, and is recognized for its commitment to diversity and inclusion. UCF's main campus is located in Orlando, with additional campuses in downtown Orlando, Lake Nona, and elsewhere in the state. The university's strategic plan, titled "Scale = Excellence = Impact," aims to further enhance academic excellence and student success. UCF's success is reflected in its ranking as one of the top universities in the United States and its recognition as a "top research university" by the Carnegie Classification of Institutions of Higher Education. UCF is committed to providing a high-quality education to all students, regardless of background, and is dedicated to preparing its graduates for success in their chosen fields. With a focus on research, innovation, and community engagement, UCF continues to make significant contributions to the fields of education, health, and technology, and to the local and global communities it serves.
graduate female students; and offer a supportive network. Events such as Introduce a Girl to Engineering Day and E-Girl provide hands-on activities, lab tours, and networking opportunities for K-12 youth. The program promotes a supportive community for Cal Poly Pomona students and faculty through activities such as WE Chats, which allow women to connect, discuss their career paths and challenges, and offer advice.

**Creative Coding**  
**California State University, Fullerton (CSUF)**  
**College of Engineering and Computer Science**  
The Association for Computing Machinery-Women in Computing student club at CSUF attracts young girls to STEM fields by partnering with the Girl Scouts of Orange County. Together, they host Creative Coding events where Girl Scouts in fourth through eighth grade complete fun, hands-on activities designed by student volunteers. This year, the girls created artwork, stories, and animations with code.

**STEM Expo**  
**California State University, Fullerton (CSUF)**  
**College of Engineering and Computer Science**  
The Stem Expo is a partnership between the Girl Scouts of Orange County and the Association for Computing Machinery-Women in Computing student group at CSUF. The event allows Girl Scouts in grades four through 12 to earn their “My STEM Life” badge by participating in hands-on activities involving 3D printing, physics, environmental engineering, nursing simulation, and more.

**Women in Computer Science and Engineering (WiCSE)**  
**California State University, Fullerton (CSUF)**  
**College of Engineering and Computer Science**  
The WiCSE program at CSUF gives female freshmen and transfer students in the College of Engineering and Computer Science the opportunity to attend panel discussions and industry tours. WiCSE also provides these students with support and professional development via career services.

Jessica Makori, a biology major at Carleton College, presents a poster about a summer research project at the Regional SACNAS Conference at the University of Chicago in 2018.

**FOCUS**  
**Carleton College**  
Carleton selects incoming STEM majors who are low-income, first-generation, or from groups traditionally underrepresented in STEM to participate in the FOCUS program, which provides community, academic, and support opportunities. Members work together in a first-year seminar as well as a two-year FOCUS Colloquium course. They conduct research projects, receive academic advising, and participate in peer mentoring and work-study programs. FOCUS has recently begun to emphasize “teaching as learning,” encouraging students to teach others and inspire them to persist in STEM through work in the local community and on campus.

**Programs for Educational Enrichment and Retention (PEER) and Women in Science and Engineering (WISE)**  
**Clemson University**  
**College of Engineering, Computing, and Applied Science**  
The mission of PEER and WISE is to recruit, educate, and retain underrepresented populations in STEM via support provided by Clemson. PEER emphasizes the recruitment of African Americans, while WISE focuses on women. Through mentoring, workshops, speakers, career planning and preparation, networking opportunities, counseling, research opportunities, and social, professional, and community development, both programs strive to increase diversity in science and engineering.

**Columbia Engineering Summer High School Academic Program for Engineers (SHAPE)**  
**Columbia University**  
**Fu Foundation School of Engineering and Applied Science**  
SHAPE is designed to develop New York high school students’ interest and skills in engineering — a subject that is not offered in the city’s public schools. The program takes place in three-week sessions, during which students
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The Lake Erie College of Osteopathic Medicine (LECOM) can help students interested in becoming a physician, pharmacist or dentist answer that calling. LECOM is the largest* and one of the most affordable medical schools in the nation. LECOM leads the nation in medical* school applicants and it is a top ten* ranked college for preparing primary care physicians.

For more information, visit LECOM.edu

* U.S. News and World Report Best Medical Colleges
Students and staff in Columbia Engineering’s SHAPE initiative participate in an introduction to robotics course.

complete college-level courses in robotics, entrepreneurship, and other fields. They also work with a group of Columbia undergraduate engineering students who offer guidance on how to prepare for college. Twenty percent of SHAPE participants are eligible for full-tuition scholarships.

Science Department Research Institute Concordia University, St. Paul College of Health and Science

The Science Department Research Institute allows faculty and students to collaborate on a long-term ongoing research question. It is built on three core programs involving neuronal tissue engineering, liver cancer, and staph aureus resistance and toxin production. As part of the research process, students work individually with a mentor to hone their problem-solving skills. Biology majors must participate, but any student can get involved regardless of academic standing. The institute focuses on recruiting women and people from underrepresented groups.

STEMInsight.org

Dallas County Community College District (DCCCD)

Developed with support from the Dallas/North Texas STEM Degree Accelerator Project, administered by Educate Texas, and led by DCCCD, STEMInsight.org is an online portal that compiles resources to help meet the region’s growing demand for a skilled STEM workforce. It helps students navigate the pathway from elementary school to STEM careers, with information including the average starting salary, required level of education, and projected job growth for specific fields. The site also provides resources for educators and professionals.

Bachelor of Science in Biology

East Georgia State College (EGSC) School of Mathematics and Natural Sciences

EGSC tripled the number of applicants to its bachelor of science in biology degree program between 2016 and 2018 due to recruitment efforts aimed at women and students of color. Starting in fall 2016, the biology department began hosting recruitment events at local underserved high schools. Now, half of new applicants to EGSC’s undergraduate biology program are women of color. Additionally, research and internship opportunities for these students have helped boost their success — 50 percent of the program’s graduates are women and nearly 30 percent are women of color.

AGORA Program

Fayetteville State University (FSU) Center for Defense and Homeland Security

Designed to motivate underrepresented high school students to study STEM, the AGORA Program helps them gain the technical skills necessary to enter higher education and cybersecurity careers. Participants train in state-of-the-art classrooms and labs at FSU — a historically black college — with sessions held once a month on Saturdays. They learn about math, coding, robotics, cybersecurity, and more and have the opportunity to participate in internships and competitions — with the opportunity to win scholarships — as well as conduct research.

Florida Science Training and Research (FSTAR) Fellowship

Florida International University (FIU) Herbert Wertheim College of Medicine (HWCOM)

The FSTAR fellowship provides four years of guidance and support for underrepresented students who aspire to healthcare careers. Twenty college sophomores are selected for the program annually, which includes an eight-week summer experience on HWCOM’s campus and continuous academic enrichment, advising, and mentoring services during their first year of medical or graduate school. FSTAR fellows are selected from FIU as well as other Minority-Serving Institutions in the Miami area.

STEM-UP Network

Harrisburg University of Science and Technology

The STEM-UP Network is a community that provides

Women earned 35.1% of all bachelor’s degrees, 32.7% of all master’s degrees, and 34.4% of all PhDs in STEM in the 2014-2015 academic year.
HAVE YOU EVER CONSIDERED WORKING OR STUDYING GLOBALLY?

ROCHESTER INSTITUTE OF TECHNOLOGY HAS 5 GLOBAL CAMPUSES

RIT CROATIA
ZAGREB

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PRISTINA

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DUBROVNIK

RIT DUBAI
UAE

RIT CHINA
WEIHAI

WWW.RIT.EDU
professional women in STEM with strategies and relationships to help them thrive and advance in their careers. In addition to access to leadership development, mentorship, networking events, and opportunities for collaboration, the initiative offers support around work-life balance, communication and negotiation skills, and self-advocacy. STEM-UP also works with organizations to provide analyses of policies and practices around gender equity and assist with and measure the impact of internal capacity-building initiatives.

Pathways into Dentistry Pipeline Program
Harvard University
School of Dental Medicine (HSDM)
Local middle and high school students visit HSDM’s campus for an introduction to the college experience and the field of dental medicine through the Pathways into Dentistry pipeline program, which specifically targets those who are low-income, first-generation, and underrepresented. It includes information sessions on the college admissions process and a panel discussion with members of HSDM’s diversity and inclusion fellowship program about what it takes to succeed in a highly selective STEM program. Attendees also perform hands-on laboratory work and learn about the mouth-to-body connection.

Pathways into Dentistry Pipeline Program
Harvard University
School of Dental Medicine (HSDM)

Providing Opportunities for Mathematics and Science Enrichment (PROMISE)
Illinois Mathematics and Science Academy (IMSA)
PROMISE is a STEM pipeline program aimed at gifted seventh through ninth graders from disadvantaged backgrounds. Its many offerings include summer camps on IMSA’s campus, test preparation and tutoring assistance, and a plethora of hands-on learning experiences meant to spark curiosity and passion for STEM education. IMSA students who have previously participated in PROMISE often serve as mentors, tutors, and role models for students currently in the program.

Science Bound
Iowa State University (ISU)
School of Education
Science Bound is designed to encourage young people to study STEM in college. Underrepresented students in eighth through 12th grade are recruited from area school districts. They commit to a five-year program of participation in STEM learning experiences and a mentoring partnership with both ISU and Science Bound educators and STEM professionals. Program leaders meet with participants on ISU’s campus three times a year to engage them in STEM activities and build their college aspirations.

Science Bound
Iowa State University (ISU)
School of Education

STEM-UP Academy
Hinds Community College – Utica Campus
(Hinds CC Utica)
Natural Science Division
The goal of the STEM-UP Academy is to encourage students majoring in STEM at Hinds CC Utica to pursue four-year degrees upon graduation. Recruitment for the program begins at the high school level; underserved 11th- and 12th-grade students who excel in STEM are invited to participate in two summer learning experiences. Those who take part in either program and go on to enroll and major in a STEM discipline at Hinds CC Utica receive assistance with securing internships, visiting four-year institutions, and learning about career opportunities.

STEM-UP Academy
Hinds Community College – Utica Campus
(Hinds CC Utica)
Natural Science Division

Kansas State Office for the Advancement of Women in Science and Engineering (KAWSE)
Kansas State University (KSU)
KAWSE facilitates 40-plus events designed to enrich the lives of women in STEM. Programming includes workshops, networking, and professional development and spans all age groups — from middle school girls to faculty members. Through the GROW and EXCITE programs, middle schoolers learn about STEM fields and careers, participate in activities, and tour KSU’s campus. Additionally, the SUCCEED program offers opportunities for undergraduate and graduate STEM students to mentor young girls, network with faculty and professionals, and more.

Kansas State Office for the Advancement of Women in Science and Engineering (KAWSE)
Kansas State University (KSU)
Diversified classrooms lead to richer learning experiences, more vibrant communities, and a stronger economy. The PhD Project helps accomplish this by supporting African Americans, Hispanic-Americans and Native Americans in the pursuit of higher education and in their journey to become business professors and mentors to the next generation of business students.

The number of minority business professors in the U.S. has more than quadrupled since our founding in 1994. Participating universities are illustrating a clear commitment to creating a diverse academic environment and have the distinct advantage of recruiting from our network of more than 1,500 minority faculty and doctoral students.

The PhD Project is also focusing on the need for diversity in administration, having found fewer than 40 African-American, Hispanic American and Native American Deans at non-HBCU business schools in the U.S. Our Project AHEAD, Achieving Higher Education Administration Diversity, encourages tenured minority faculty to explore positions in administration and provides resources, support and mentors to help members pursue this path.

The PhD Project member network has proven invaluable in supporting both minority and majority groups. And, in the end, we are all better off by working together to enhance the student collegiate experience.

Thank you to the 300+ PhD Project Participating Universities! To learn more about how your university can get involved, please contact Bernard J. Milano at 201-307-7662 or bmilano@kpmg.com.

Stay connected to see all we’re achieving:
- Follow us on facebook at: Facebook.com/thephdproject
- and on Twitter: Twitter.com/thephdproject
- Subscribe to us on YouTube: Youtube.com/thephdprojectvideos
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The PhD Project
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NASBA
Thrivent Financial
American Express Foundation
Fidelity Investments
Bentley University

*Founders

“The PhD Project creates a rich environment that fosters healthy mentor-mentee relationships at every stage of your academic career.”
- Dr. Randy Bradley, Assistant Professor at University of Tennessee (far right) pictured with his mentee, Dr. LaDonna Thornton at her 2013 PhD Project capping. Also pictured is Dr. Terry Esper, Associate Professor, The Ohio State University who served as LaDonna’s dissertation chair.
Clockwise from top left: Fayetteville State University Master Teacher Jeff Epps; Harrisburg University students; Charles Stewart Jr., who in 2000 became Science Bound’s first graduate to earn a bachelor of science degree at Iowa State University and is now an associate scientist at the university; participants in the Kansas State Office for the Advancement of Women in Science and Engineering’s KGROW and EXCITE programs; a cohort in the Global Women in STEM and Policy undergraduate research training program at Mount Saint Mary’s University, Los Angeles.
OSU Celebrates Diversity

Oklahoma State University is a nationally recognized leader with an unwavering commitment to achieving inclusive excellence across its University system.

OSU is a recipient of several nationally prestigious awards for its commitment to diversity and inclusion. As a 2017 Higher Education Excellence in Diversity awardee from INSIGHT Into Diversity magazine, OSU is one of fifteen schools in the nation, and the only institution in Oklahoma, to be recognized as a six-year recipient of this nationally renowned honor.

OSU also continues to be the most successful university system in the nation for American Indians earning a college degree.

At OSU, diversity is the expectation rather than the exception.

**OSU is focused on bright minds, building brighter futures and the brightest world for all.**
Security Agency. All attendees are automatically eligible to receive up to $8,000 per year in tuition assistance should they enroll at Limestone.

Office of Strategic Initiatives
Louisiana State University (LSU)
The LSU Office of Strategic Initiatives’ student support services include a nationally recognized Upward Bound program, which won the prestigious Teaching Through Technology award from the National Science Foundation for introducing technologies, including 3D printers and drones, to disadvantaged high school students. The office also offers unique programs for women and students of color, such as “success courses” that address issues including imposter syndrome and financial literacy. Ninety percent of women and 84 percent of African Americans who have participated in its programs have graduated within six years.

Engineers in the Lead (E-Lead)
Marquette University
Opus College of Engineering
E-Lead is a three-year program that seeks to develop student leaders who have the ability to motivate people and organizations as well as possess technical expertise in engineering. Open to all sophomores, the program takes students through a curriculum rooted in Jesuit tradition that focuses on leading oneself, leading with others, and leading technology and innovation. E-Lead provides students the opportunity to interact with industry leaders and participate in an engineering internship or research project. Upon completion of the program, students earn a concentration in engineering leadership.
The Girls STEM Institute provides a meaningful introduction to science, technology, engineering, and math.

In 2013, a report on the results of the 2011 American Community Survey found that women made up only 26 percent of the workforce in science, technology, engineering, and mathematics (STEM) occupations. Men and women of Color were consistently underrepresented, with Africans making up 6 percent and Hispanics making up 7 percent of the STEM workforce. One possible explanation? According to the report, women, African Americans, and Hispanics are less likely to have scientific or engineering backgrounds. Associate Professor of Mathematics Education Crystal Morton is doing her part to improve these statistics. She leads IUPUI’s Girls STEM Institute (GSI), designed to get young women of Color interested in STEM areas.

Open to girls ages 9 to 18, GSI begins with a four-week summer enrichment program that provides a meaningful, culturally grounded context for STEM concepts. Follow-up programming each month throughout the year reinforces the concepts taught in the summer workshop. The vision of the program is to transform communities by empowering girls of Color to become leaders, innovators, and educators who use STEM as a tool for personal and social change.

“It’s amazing what can happen when you create the right environment.”

-Crystal Morton, associate professor of mathematics education
Global Women in STEM and Policy
Mount Saint Mary’s University, Los Angeles (MSMU) Department of Biological Sciences

The Global Women in STEM and Policy undergraduate research training program is designed to increase the success of underrepresented women in STEM fields at MSMU. The program aims to train participants in research methodologies, to facilitate opportunities for them to gain global fieldwork experience and analyze and present their results, and to develop leadership and teamwork skills. Participants engage in interdisciplinary coursework and develop skills in laboratory research and survey methodology as well as learn about healthcare access in the U.S. and Peru.

Verizon Innovative Learning (VIL) Minority Male Program
North Carolina Central University (NCCU) College of Arts and Sciences

The VIL Minority Male Program at NCCU annually works to help 100 underrepresented male students in sixth through eighth grade develop STEM and entrepreneurial skills. During a three-week summer camp at NCCU and after-school sessions during the academic year, participants learn about the role science and technology play in supporting a sustainable planet. Lessons include hands-on...
AT OHIO STATE, A DIVERSE COMMUNITY OF PEOPLE AND IDEAS INSPIRES DISCOVERY

Our commitment to an environment that inspires innovative alliances across a breadth of disciplines and expertise, plus the ingenuity of our students and the global reach of our partners, support Ohio State faculty as they ask the questions that haven’t been asked and address the problems that need to be solved.
enrollment in a dual-credit science or math course the summer before their senior year of high school. In addition to completing college-level coursework, participants attend a variety of workshops that explore stress-relief techniques, study skills, STEM majors, and more. Field trips to healthcare companies and other STEM-oriented organizations allow students to meet diverse professionals and investigate a variety of career options.

PCOM Science and Math Summer Academy
Philadelphia College of Osteopathic Medicine (PCOM)

Held on both PCOM’s Philadelphia and Georgia campuses, the Science and Math Summer Academy works to address health disparities by increasing the diversity of the healthcare workforce. Through a rigorous curriculum, African American and Latino students from area high schools improve their skills in STEM and medicine, learn about the college and medical school admissions process, explore career possibilities, and participate in clinical simulations, anatomy labs, and field trips. They continue to meet and work on research projects throughout the academic year.

Tech Savvy OHIO
Ohio University
College of Arts and Sciences

Tech Savvy OHIO is an annual, daylong STEM outreach program for middle school girls and their parents and teachers. Through the program, the girls learn about and develop science and programming abilities as well as the soft skills necessary to succeed in science fields. They participate in five hands-on workshops while their parents and teachers attend separate sessions about topics such as college admissions, financial aid, and teenage brain development. The day ends with a keynote presentation by a leading female scientist.

Minority College Experience/Women in Science and Engineering (MCE/WISE)
Penn State Behrend

High-achieving girls and students of color interested in STEM attend the six-week MCE/WISE program, which includes experiments and field trips — often led by male employees from underrepresented groups — to companies that are representative of Durham’s large STEM workforce.

Aspiring DOctors Precollege Program
Ohio University
Heritage College of Osteopathic Medicine

The Aspiring DOctors Precollege Program at Ohio University is designed to foster an interest in medical and healthcare careers among underrepresented high school students. In this year-round program, participants are exposed to a range of healthcare professionals, including nurses, physicians, and physician assistants. They also engage in hands-on activities that teach critical thinking, collaboration, creativity, and 21st-century skills. Furthermore, participants receive mentorship from medical students, who also offer guidance with the college application and admissions processes.

This Is How We “Role”: Inspiring Future Veterinarians
Purdue University
College of Veterinary Medicine (PVM)

This Is How We “Role” aspires to increase diversity in the veterinary profession by introducing students in underserved elementary schools to animal science. PVM faculty and students lead interactive lesson plans — often focusing on the connection between animal and human health — for kindergarten through fourth grade classrooms. Sponsored in part by the National Institutes of Health, the program’s curriculum has been shared with 13 veterinary colleges nationwide, and many of its resources are available for free at werole likethis.org.

Shifra Narasimhan and Abigail Tadlock learn to build a simple circuit during a Tech Savvy OHIO workshop at Ohio University in 2014. (photo by Ohio University/Jonathan Adams)

A PVM student works with an elementary schooler in the This Is How We “Role”: Inspiring Future Veterinarians program.

High-achieving girls and students of color pursue a degree in STEM.
Engineers are problem solvers by nature. In Marquette University’s Opus College of Engineering, we know they can also be great leaders who guide change while serving others. That’s why we offer Engineers in the Lead, or E-Lead, a three-year curricular program concentrated on developing people-focused leaders with the technical skills required to drive innovation. And we do it all in the context of Marquette’s Jesuit tradition. Because when you take the lead, you’re better prepared to Be The Difference.

marquette.edu/engineering/e-lead
**Rice Emerging Scholars Program (RESP)**

Rice University

RESP was launched to increase persistence in STEM fields for students from underserved backgrounds. With a goal to shatter the perception that low-income and first-generation students cannot succeed in technically demanding majors at selective institutions, RESP includes a summer bridge program, research experiences, and comprehensive advisement. Students are also required to meet with advisers for a minimum of 30 minutes each week to help address and overcome any hurdles they face, whether academic or personal.

**Engineers of Color Creating Opportunities (ECCO)**

Rochester Institute of Technology (RIT) Kate Gleason College of Engineering

ECCO offers initiatives focused on increasing the number of African American, Latino, and Native American engineering students at RIT and preparing them for leadership roles in the field. K-12 outreach is another priority of the program. Through College & Career Days, inner-city middle and high school students participate in engineering activities. ECCO also hosts an event during National Engineer’s Week in which sixth- through 10th-grade students engage in activities and tour the RIT College of Engineering’s labs.

**Q-STEP**

Rutgers University-Camden

Camden College of Arts and Sciences

The Q-STEP program is designed to enhance the retention and graduation of science and math majors, particularly women and students of color. Incoming students are selected regardless of previous academic performance. They participate in weekly group-mentoring sessions on STEM topics and are offered advice in navigating academic careers. Participants also attend a Wednesday luncheon workshop to improve their quantitative skills and have the opportunity to work in research labs or on computational projects with faculty during the summer.

**Pathways to Health and Science Education Program**

Saint Luke’s College of Health Sciences

The goal is to instill in them an appreciation for and a desire to pursue careers in science and research. In addition to mentoring, the program has four key components: the Future Health Sciences Student Academy, a College-Parent Education Series, a Student Research Initiative, and a Science Fest. Students who complete Pathways receive three college credits from St. Luke’s.

**Genomic Opportunities for Girls In Research Labs (GO GIRL)**

Shenandoah University

School of Pharmacy

GO GIRL is an educational outreach program aimed at demystifying genomics among high school girls and empowering them to consider a career in the biomedical sciences. Participants receive mentorship, learn the principles behind the techniques used in forensic and research laboratories, and gain experience with state-of-the-art equipment. Cohorts are intentionally small to foster an intimate setting that encourages students to ask questions and promotes quality conversations. With no eligibility...
A fountain of youth

To find the next generation of health-sciences workforce, UNMC goes straight to the source. The **UNMC High School Alliance** is a partnership between Nebraska’s leading academic medical center and surrounding Omaha-area public school districts – establishing a rich, diverse pipeline of young people who literally can’t wait to start educations in STEM. These kids take college-level classes on UNMC’s main campus, and gain incomparable hands-on experiences in research and clinical skills. These students are inspired by their time in the UNMC High School Alliance – and so are we.

unmc.edu/alliance
opportunities to engage in those fields due to financial or cultural barriers or living in rural areas. At this weeklong camp, incoming eighth graders are exposed to mentors and role models, learn about subjects ranging from forensics to cybersecurity, and work to develop oral, written, and e-communication skills.

**AAUW Tech Trek Camp**  
**Stockton University**  
The American Association of University Women (AAUW) and Stockton partner to offer middle school girls the opportunity to participate in a weeklong summer STEM experience, called Tech Trek Camp. The focus is on recruiting a demographically diverse group of young people from across New Jersey. Stockton faculty, staff, students, and alums lead classes on STEM topics, while additional staff volunteers facilitate hands-on experiences, including access to Stockton’s 2,000-plus acres of Pinelands Preserve, science and computer laboratories, and more.

**Women In Science and Engineering (WISE) Program**  
**Stony Brook University**  
College of Engineering and Applied Sciences  
WISE aims to establish a mentoring and leadership pipeline to attract and retain women in STEM studies. Twenty faculty and upper-level students serve as mentors for 100 first-year WISE students, meeting with them weekly for small group discussions and monthly for professional development events. WISE also pairs sophomore, junior, and senior female students with graduate mentors for one-on-one advisement. In addition, the program recently added an annual leadership workshop series for women at the master’s and doctoral levels.

**Southwest Alliance for Girls Enrichment (SAGE) STEAM Camp**  
**Southwestern Oklahoma State University (SWOSU)**  
College of Pharmacy  
The SAGE STEAM (science, technology, engineering, art, and math) summer camp at SWOSU serves girls who live in Oklahoma and are interested in STEAM but have limited requirements, GO GIRL seeks to attract an economically and culturally diverse group of students.

**Conclave Leadership Academy**  
**Society of STEM Women of Color**  
**Fielding Graduate University**  
A collaborative project designed to broaden participation for women of color in STEM, the Conclave Leadership Academy offers leadership development opportunities. Specifically, the academy works to increase STEM educators’ cultural competence in order to improve the academic and career outcomes of the underrepresented students they teach. It includes presentations, group discussions, case studies, and other activities that often center on a theme. Last year reflected on “the ties that bind” STEM women of color in leadership across diverse ethnicities, races, disciplines, institutions, and spiritualities.

**STEM Fest and STEM DAZE**  
**South Georgia State College (SGSC)**  
**School of Sciences**  
In 2017, SGSC hosted its first annual STEM Fest, an event designed to attract underrepresented students to the fields by facilitating positive experiences for them at a young age. It brings hundreds of area fourth graders to campus for a day of interactive space-themed activities. Last year, attendees learned about moon phases and the elliptical orbit of planets and experienced a 3D trip through the solar system in a traveling planetarium. An extension of STEM Fest, STEM DAZE conducts additional outreach to K-12 schools, which has included events and kits that allow students to do hands-on projects.

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College of Pharmacy  
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**Technical Pipeline Program (TPP)**  
**SUNY Corning Community College (CCC)**  
**STEM Division**  
A collaboration between SUNY CCC and Corning Incorporated, TPP educates and encourages women
Fielding's Leadership Academy is proud to be recognized with the Society for STEM Women of Color, Inc. for its leadership development program designed especially for women of color in academic STEM fields from HBCUs and other colleges and universities throughout the United States. The Academy, held annually since 2016, is designed to empower participants to assume leadership roles and positions in higher education to address the national imperative to broaden participation in STEM.

This initiative is supported by a grant from the Historically Black Colleges and Universities Undergraduate Program (HBCU-UP) of the National Science Foundation.
and African Americans to pursue careers in chemical, mechanical, and electrical technology. Incoming SUNY CCC students admitted to the program receive a free education, a laptop, books, transportation, and a salary of nearly $25,000 per year. They are also assigned an adviser and mentor. Over TTP’s 10-year existence, 100 percent of participants — 40 technicians — have graduated from the program and been hired by Corning Incorporated.

**Exploring Health Careers (EHC) Program**
**SUNY Downstate Medical Center**
**College of Medicine, Office of Diversity Education and Research**

EHC is a six-week exploratory program that exposes underrepresented and financially disadvantaged students from State University of New York (SUNY) colleges to a wide range of health professions. Participants shadow professionals in SUNY’s affiliate hospitals and clinics and work with peer mentors who are current health professions students. They also participate in reading clubs in which they practice how to process and interpret scientific articles and take introductory seminars in kinesiology, biostatistics, epidemiology, and anatomy.

**Department of Chemical Engineering**
**Tennessee Technological University (TTU)**
**College of Engineering**

The Department of Chemical Engineering at TTU is dedicated to advancing gender equality in chemical engineering — a commitment that is demonstrated by its equal number of male and female faculty members. To improve the representation of women, the department actively recruits female middle and high school students via summer camps, campus visit weekends, and parent workshops. Faculty members also support these undergraduates through a mentoring program that has been recognized by the American Society for Engineering Education and American Institute of Chemical Engineering.

**DustyTRON NASA Robotics – STEM and Robotics Day**
**Texas A&M International University (TAMIU)**

The DustyTRON, DustySWARM NASA Robotics, and TAMIU Society of Hispanic Professional Engineers host a variety of events to engage the community in STEM. During STEM Alliance week, TAMIU robotics teams worked with elementary and middle school students to construct LEGO robots, encouraging them to think creatively and offering advice, as well as introduced them to NASA-related projects at the university. The event also sought to show young girls that STEM is not just for boys, but for anyone who wants to make a difference.

**Aggie STEM**
**Texas A&M University (TAMU)**

The mission of Aggie STEM is to facilitate meaningful, engaging STEM experiences for students. The program offers several summer camps that provide low-income students and those underrepresented in STEM with opportunities to develop their interest and abilities in these fields. One such event is the All Girls Summer Camp in which female STEM faculty from TAMU teach high school girls from Houston, Dallas, Austin, and San Antonio about plant biology and coding, among other topics.

**Junior Medical School**
**Texas Christian University (TCU) and the University of North Texas Health Science Center (UNTHSC)**
**School of Medicine**

Junior Medical School inspires K-12 students to discover medicine. A partnership between TCU/UNTHSC and Fort Worth Independent School District, it features programming for underserved middle and high school students. Offers include a camp where seventh graders learn about specialties in medicine, visit a healthcare facility, and complete a group project. The initiative also hosts a camp that helps eighth and ninth graders increase their self-awareness, develop healthy personal and academic habits, and build confidence.

**LSAMP STEM Bridge Program**
**The Ohio State University (OSU)**

Part of the Louis Stokes Alliances for Minority Participation (LSAMP), OSU’s LSAMP STEM Bridge Program introduces incoming underrepresented students to STEM through four courses focused on college-level math, research, STEM study skills, and technical communications. It also facilitates experiences in which they learn to work in faculty labs, discover academic and professional resources, and explore their identities. Field trips to Stone Laboratory and Cedar Point amusement park allow students to learn about freshwater biology and the engineering of roller coasters.

**Information Systems Doctoral Student Association (DSA)**
**The PhD Project**

The PhD Project is a nonprofit organization dedicated to increasing the number of minority business professors nationwide with the ultimate goal of inspiring
WORLD-CHANGING STEM EDUCATION. FOR EVERYONE.

The College of Engineering at North Carolina State University is a global leader in engineering and computer science teaching, research and extension and is dedicated to increasing participation in the field to members of underrepresented groups. Our faculty members and students are addressing the grand challenges that face our state, nation and world in the 21st century.

Our dedication to enhancing access to engineering and computer science education for women and members of traditionally underrepresented groups is getting attention:

- **3rd in B.S. degrees** awarded to African Americans among non HBCUs**
- **4th in percentage of B.S. degrees** awarded to women among top public colleges of engineering***
- **6th in Ph.D.s awarded** to African Americans among non HBCUs*
- **17th in Ph.D.s awarded** to women*
- **9th in number of Tenure / Tenure Track** African American faculty among non HBCUs*
- **9th in number of Tenure / Tenure Track** women faculty*


www.engr.ncsu.edu/wmep
underrepresented students to pursue business degrees and careers. It assists members in applying to PhD programs and provides ongoing support through its five DSAs, which are based on academic specialty. The Information Systems DSA provides a support network and annual conference for members specializing in corporate technology, thus preparing them to teach one of the most in-demand skill sets in business today.

**Equal Opportunity in Engineering (EOE) Program**
**The University of Texas at Austin Cockrell School of Engineering**
EOE strives to attract and retain diverse students by offering multiple academic enrichment and community-building opportunities. These include a one-week residential summer camp for underrepresented high school seniors interested in pursuing engineering degrees and EOE’s First-Year Interest Groups for diverse freshmen. In these groups, students are divided into small cohorts, and together they take gateway STEM courses and attend EOE’s weekly professional development seminars. EOE also offers tutoring, community socials, and unique study abroad opportunities for diverse undergraduates.

**Alaska Native Science and Engineering Program (ANSEP)**
**University of Alaska Anchorage (UAA)**
ANSEP offers a variety of activities and events to encourage Alaska Native students — from sixth graders through PhD candidates — to pursue STEM careers. Those in fifth through eighth grade can participate in ANSEP’s summer camp, where activities include everything from building personal computers to dissecting squids. Other ANSEP activities provide intensive math and science training, summer learning experiences, and college preparation assistance for Native American high school students. ANSEP also offers scholarships, mentoring, and research support for Alaska Native students who major in STEM at UAA.

**Inspiring Girls**
**University of Alaska Fairbanks College of Natural Science and Mathematics**
Through Inspiring Girls, teams of teenage girls and instructors participate in a free 12-day wilderness expedition. In the past, such experiences have included exploring glaciers, an alpine forest, and a fjord, as well as conducting scientific field studies with professional glaciologists, ecologists, and mountain guides. Inspiring Girls runs several expeditions each summer; to date, more than 200 students have participated. Its goal is to provide young girls with an environment that fosters the critical thinking necessary to engage in scientific inquiry.

**Tulane Center for K-12 STEM Education**
**Tulane University School of Science and Engineering**
Tulane Center for K-12 STEM Education hosts two middle school programs to expose underserved students to STEM: Girls in STEM at Tulane and Boys at Tulane in STEM. Both programs introduce students to science and engineering labs as well as faculty on Tulane’s campus to conduct hands-on experiments. The all-day programs cost only $10 per participant in order to make them as accessible as possible. The center also hosts a variety of other STEM-related programs for underrepresented and disadvantaged youth.

**STEM for Girls**
**University of California, Davis (UC Davis)**
The STEM for Girls program invites 10- to 12-year-old girls and those with gender-expansive identities to campus for a full-day STEM experience. They learn about math, food science, chemistry, and more in workshops led by UC Davis student groups and do hands-on activities such as building electrical circuits. Through these experiences, STEM for Girls aims to increase interest and build a sense of belonging in STEM as well as connect underrepresented students with role models in the fields.

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Between 2000 and 2015, the share of science and engineering bachelor’s degrees awarded to Hispanic students increased from 7% to 13%.
Clockwise from top left: Students in Ohio University’s Aspiring DOctors Precollege Program; GO GIRLS participants and mentors work side by side in labs at Shenandoah University; fifth graders from Satilla Elementary School build a tower from marshmallows and spaghetti noodles during South Georgia State University’s STEM Fest; students in Southwestern Oklahoma State University’s SAGE STEAM camp visit the Stafford Air and Space Museum in Weatherford, Okla.; Kim Drumgo and Bernard Milano of the PhD Project (photo by The PhD Project/Peter Pawinski)
PATHways to STEM through Enhanced Access and Mentorship (PATHS) Program
University of California, San Diego (UCSD)
Division of Biological Sciences
The PATHS Program aims to empower students from underserved communities to become leaders as STEM undergraduates at UCSD. It provides support for academic preparation, multi-tiered mentorship, personalized student support, early career identification, and more. Participants receive assistance addressing financial, cultural, and academic barriers to earning their degree, including scholarships, on-campus living accommodations, and paid summer internships. Additionally, the PATHS Stratified Mentorship Program connects students with peer, faculty, and alums who offer guidance during their undergraduate study.

Interprofessional Health Post-Baccalaureate Certificate Program
University of California, San Francisco (UCSF)
School of Pharmacy
Designed to diversify UCSF’s Doctor of Pharmacy program, the yearlong Interprofessional Health Post-Baccalaureate Certificate Program is for individuals who have a bachelor’s degree but need help to become more competitive pharmacy school applicants. The focus is on students from disadvantaged backgrounds, underserved communities, and groups underrepresented in the pharmacy profession. Participants take two semesters of upper-level science courses to improve their academic and professional development, receive support in applying to pharmacy school, and meet regularly with faculty to monitor their progress.

Riverside Bridges to the Baccalaureate Program (Riverside B2B)
University of California, Riverside (UCR)
School of Medicine
Riverside B2B aims to increase the participation of underrepresented groups in research-oriented careers by preparing students from Riverside City College (RCC) — a community college — to complete a baccalaureate degree in STEM at UCR. While enrolled at RCC, students in the program have access to a variety of support services through UCR, including peer mentorship, tutoring, and access to two research seminar series. During their second year at RCC, they complete paid internships at UCR, followed by an intensive summer research program that extends into their first year there.

Program for Mastery in Engineering Studies (PROMES)
University of Houston
Cullen College of Engineering
Created in 1974, PROMES provides targeted academic support for cohorts of students who are underrepresented in engineering. The program focuses primarily on helping first-year engineering majors successfully transition into college by offering unique support services in the form of program advisers and academic skills workshops. PROMES students also take introductory STEM courses as a cohort, attend group study sessions, and participate in individual and group tutoring led by PROMES staff.

Urban Pipeline Program (UPP)
University of Illinois at Chicago (UIC)
College of Pharmacy
A partnership between UIC, Chicago Public Schools, and the South Suburban school districts, UPP is a selective and rigorous six-week program for underrepresented high school students. It focuses on academics, experiential activities, mentorship, and social development. Participants take courses in chemistry, math, and pharmaceutical calculations; shadow faculty; are paired with graduate and undergraduate mentors; and engage in hands-on research with faculty. They also work on science projects, which they present to students, faculty, and staff at UPP’s culmination.

Brown Forman Engineering Academy (BFEA)
University of Louisville (UofL)
J.B. Speed School of Engineering
BFEA is designed to assist underrepresented students with the transition to UofL’s school of engineering. Students live in the Engineering Living and Learning Community on campus for two weeks while engaging in academic preparation including calculus courses, a review of engineering disciplines and faculty research, and hands-on activities. Participants meet and have meals with faculty, academic advisers, engineering students, and alums and learn about study skills, class scheduling, time management, and more. Additionally, BFEA strives to build students’ support system through team-building activities, mentorship, and industry tours.

Office of Student Success
University of Louisville (UofL)
J.B. Speed School of Engineering
The Speed School of Engineering’s Office of Student Success focuses on maximizing retention and graduation rates within UofL’s engineering school. Initiatives for underrepresented students span K-12 education through college graduation. The Girls Rule STEM Summit is a day-long educational program for children and parents, and the INSPIRE program offers underrepresented high school students a two-week engineering enrichment opportunity. The office also offers a Women in Engineering Leadership Conference for high school seniors.
Texas’ newest Hispanic Serving Institution (HSI) proudly celebrates Hispanic Heritage month.

¡Adelante!

For more information on the Division of Diversity, Equity & Inclusion visit www.depts.ttu.edu/diversity.
Girls Experiencing Engineering (GEE)  
University of Memphis (UofM)  
Herff College of Engineering

GEE offers summer academic enrichment experiences focused on engineering and leadership training for middle and high school students. The program specifically recruits African American and Hispanic girls in high-poverty neighborhoods. It consists of two weeks of interactive lessons led by Herff faculty, visits to UofM STEM labs, and team-based design competitions. In addition, female engineers and STEM professionals deliver speeches and lead workshops that help dispel stereotypes about minorities and women to build participants’ confidence.

Science Training Enrichment Program (STEP)  
University of Mississippi Medical Center (UMMC)

Disadvantaged junior high students spend one Saturday a month immersed in the medical school experience at UMMC through STEP. Medical faculty lead STEP classes in the university's state-of-the-art labs, teaching students how to perform research and dissections. Participants also complete CPR certification and community service projects in order to acquire real-world medical skills and experience. The program accepts 80 students from diverse backgrounds each year and emphasizes the importance of understanding other cultures.

STEM Cubs  
University of Missouri, Columbia (MU)  
College of Engineering

Created to improve access to STEM education for marginalized groups, STEM Cubs recruits underrepresented and underserved elementary school students to address STEM engagement at an early age. This summer day camp hosted by MU includes fun, interactive activities to build participants’ interest and skills in science. They explore the world of civil engineering by building and testing the load-bearing capabilities of bridges, learn about buoyancy, and work with 3D printers.

Michigan Engineering Zone (MEZ)  
University of Michigan (UMich)  
College of Engineering

MEZ introduces underserved students to the fun and challenging world of robotics engineering. Based out of the UMich campus in Detroit, MEZ offers resources and guidance for local high school robotics teams to design and build their own creations. Engineering faculty and students serve as mentors as well as lead demonstrations and group projects for K-12 field trips. The ultimate goal of MEZ is to inspire in these students the confidence and passion necessary to pursue STEM higher education and to diversify the city’s STEM workforce.

Pipeline Into UMMC  
University of Mississippi Medical Center (UMMC)

The Pipeline Into UMMC helps high school, undergraduate, and first-year medical students prepare for success in medical education and professions. Free, extensive ACT and MCAT workshops give them an edge in admissions, and several pipeline programs allow undergraduate, graduate, and professional students to explore careers by shadowing UMMC and community healthcare professionals. Additionally, a summer bridge program for new medical school students provides academic and success skills training.

UNMC High School Alliance  
University of Nebraska Medical Center (UNMC)

The UNMC High School Alliance introduces highly motivated students — most of whom are low-income — to health professions to improve the diversity of Nebraska’s workforce. High school juniors and seniors earn college credit during the school year by attending classes at UNMC led by healthcare professionals and researchers. By participating, they gain an understanding of science and health topics, learn how to accomplish their career goals, and are better prepared to enter college.

Women in all racial and ethnic groups earned nearly half of all bachelor’s degrees in the natural sciences in 2015.
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For further information contact:
John A. Bellamy
The Center for Defense and Homeland Security
Office of the Chancellor
Fayetteville State University
jbellam5@uncfsu.edu or visit our website: http://www.uncfsu.edu/cdhs/
Clockwise from top left: Students on the Girls on Ice Switzerland team — part of the University of Alaska Fairbanks’ Inspiring Girls program — reach the summit of Torre do Castelfranco during a 2018 expedition; students make rice bags in the Makerspace at the University of North Carolina Wilmington as part of a Junior Seahawk Academy community service project; high school GEE participants pose in front of the University of Memphis tiger; high school students Asja Woodard and Audrey Bavari identify a specific strain of staphylococcus bacteria on a petri dish in the University of Nebraska Medical Center High School Alliance’s infectious disease lab; West Virginia State University American Chemical Society student chapter member Dylan Jayasuriya teaches high school students about the importance of using proper techniques during water quality testing (photo by West Virginia State University)
At Tulane, we aim to improve our world by finding solutions to some of the most complex problems facing communities today. Our researchers discovered restoring the flow of fresh water and sediment from the Mississippi River can help rebuild Louisiana’s protected wetlands. The crucial work we do at Tulane will have a lasting impact around the globe for generations.

tulane.edu/sse

CONGRATULATIONS
to Aggie STEM for being awarded the 2018 INSPIRING PROGRAMS IN STEM AWARD!

Aggie STEM’s co-directors, Dr. Luciana Barroso, Dr. Mary Margaret Capraro, and Dr. Robert M. Capraro continuously provide unique, high-intensity STEM experiences for students and teachers through the College of Education and Human Development and the College of Engineering at Texas A&M University. Under the leadership of the co-directors, Aggie STEM’s Summer Camp Director, Ms. Katherine Vela, and Extracurricular Activities Director, Ms. Danielle Bevan, have expanded the Aggie STEM Summer Camps to reach underrepresented students through partnerships with organizations such as State Farm, Caring Aggies Mentor Program (CAMP), Paragon Innovations, Camden Living, High Tech High Heels, and more. Aggie STEM Summer Camp 2017 hosted the first annual all-girls residential one-week STEM camp led by female STEM professionals, promoting young women’s interest in STEM professions. Other members of the Aggie STEM team include, Dr. Ali Bicer, Ms. Yujin Lee, and Ms. Cassidy Caldwell, who support program development and research. The research program has expanded what we know about informal STEM education, what motivates students to matriculate into post-secondary STEM programs, and how to support K-12 teachers in their implementation of STEM Project-Based Learning.

PHONE: 979.862.4665 EMAIL: aggiestem@tamu.edu WEBSITE: aggiestem.tamu.edu

insightintodiversity.com 73
Science, Technology, and Math Preparation Scholarships (STAMPS)
University of North Carolina at Greensboro (UNCG) College of Arts and Sciences
The STAMPS Program at UNCG offers scholarships of up to $4,000 per year to academically talented students in the sciences who demonstrate financial need. In addition to receiving monetary support, STAMPS Scholars explore career opportunities and learn about cutting-edge research. They also attend interdisciplinary lectures, network with professional scientists, and visit labs and research sites. For example, students learn about nanoscience during a trip to the Joint School of Nanoscience and Nanoengineering in Greensboro.

URISE
University of Richmond School of Arts and Science
URISE is a STEM summer bridge program that extends beyond the classroom and laboratory. While it includes a variety of academic, leadership, and personal development experiences, URISE also emphasizes peer bonding. Participants attend unique field trips ranging from whitewater rafting to visiting sites like the African American History Museum in Washington, D.C. The ongoing academic and personal support offered through the program has helped ensure participants’ academic success; 100 percent of URISE’s first cohort graduated in 2017.

Student Members of the American Chemical Society (ACS)
West Virginia State University (WVSU) College of Natural Sciences and Mathematics
ACS is a group of WVSU undergraduates that focuses on student professional development and community outreach. Members visit K-12 schools in low-income areas to teach classes and engage in hands-on activities in chemistry, physics, and robotics. They have also given back to the community by volunteering for the Department of Energy’s Science Bowl, the Putnam County Science Fair, and other events. In the last six of nine years, a woman has been elected ACS president.

Junior Seahawk Academy
University of North Carolina Wilmington (UNCW) Watson College of Education
The Junior Seahawk Academy provides a platform for middle school students from disadvantaged and underrepresented backgrounds to develop an interest in STEM, health, and education careers. Participants build their knowledge, technology and reading competence, and social skills as well as gain access to mentors and information about postsecondary education and opportunities at UNCW. They also learn how STEM affects their daily lives via hands-on activities and lab experiments and develop a final project, which they present to their peers and families.

Girls Empowered by Math and Science (GEMS)
Winston-Salem State University (WSSU) Department of Education
GEMS works to attract girls at an early age to the fields of math and science by offering academic enrichment for those in grades four through seven. Each year approximately 60 girls participate in the program, which includes Saturday morning sessions and a weeklong summer experience. Sessions consist of math reviews and STEM-based activities designed by WSSU faculty so that everyone can participate, regardless of math aptitude. The nonresidential summer experience includes field trips to local STEM-related sites.

Women in Science Program (WISP)
Winston-Salem State University Department of Biological Sciences
WISP provides a supportive learning environment to help women thrive in the sciences. Composed of 175 female undergraduates across various STEM majors, it builds community, raises awareness of STEM resources and opportunities, and creates a mentoring network between female faculty and students. WISP members have also launched many service projects, such as science fairs, clubs, and mentoring programs for local K-12 students.
In 2014 the J.B. Speed School of Engineering at the University of Louisville had a vision to support the high school to college transition of underrepresented engineering freshmen and increase retention among engineering students. In partnership with Brown-Forman Corporation, the Brown-Forman Engineering Academy (BFEA) began to develop and launch the first cohort. BFEA is a free, two-week residential program for underrepresented populations in engineering hosted by UofL and J.B. Speed School of Engineering. The framework is based on the combining of academic success and student success programming in an effort designed to break down the barriers that lead to student attrition and build a foundation for a strong support system.

For the past three years, 24 incoming freshmen apply and are selected to attend the BFEA bridge program. Students live together in a campus dorm and focus on relationship building with other BFEA freshmen, upper division engineering students, faculty, staff, and alumni. The students attend a daily calculus preparation course, spend time with engineering faculty and administrators, participate in hands-on activities and attend department presentations. The program also includes studying tips, walking tours of campus, and transitioning tools as well as time to relax and have fun! Each student meets with their academic counselor to begin building their relationship and discuss their pathway to graduation and an engineering career. BFEA program participants are put into the same first semester class schedule so they know familiar faces on day one of classes. BFEA students participate in programming throughout their freshman year to promote their successful engagement and support throughout their time as engineering students.

As we enter our third year of the BFEA program we have seen great results. BFEA cohort students have a higher average GPA than their peers, a higher overall retention rate and a more successful completion of the engineering calculus sequence than their peers. Brown-Forman Corporation is also starting to directly benefit as students co-op with the company and discuss their hopes of securing permanent employment with Brown-Forman upon graduation.

Learn more at louisville.edu/speed/engineeringAcademy
Assistant/Associate Professor in Science Education

The Stanford Graduate School of Education (GSE) seeks an Assistant/Associate Professor in pre-K -12 Science Education. We welcome applications from scholars in the field of science education, broadly conceived, including science curriculum, science teaching, learning and assessment and/or policy in formal or informal contexts. Experience of practice in teaching science, science teacher education, or science program, support, development, and evaluation are desirable.

Candidates should have an intellectually vibrant trajectory of scholarship. The successful candidate will teach graduate courses with a focus on science education and advise masters and doctoral-level students within the GSE. The candidate will also play a significant role in the science methods courses of Stanford’s Teacher Education Program (STEP) and contribute to the GSE and Stanford community.

The GSE faculty represents considerable diversity, including in its theoretical, methodological, and substantive expertise and interests. We seek a colleague who can work effectively within this multidisciplinary community.

Please submit applications by September 15, 2018.

Please apply at:
http://apply.interfolio.com/51840

Questions pertaining to this position may be directed initially to the chair of the search committee:

Professor Jonathan Osborne, Chair
osbornej@stanford.edu

Two Tenure-track Faculty Positions In Learning Differences And Special Education (Open-Rank)

Initiative for Learning Differences and Special Education

The Stanford Graduate School of Education is launching an ambitious cross-campus interdisciplinary initiative to address urgent challenges and opportunities at the nexus of inclusive education and learning differences. Faculty will be marshalled to harness insights from science, design, systems analysis, technologies, policy, pedagogical practices, education interventions, and ethics to advance the human potential of each and every learner, coupled with the tools and systems designed to support them.

We are establishing novel Ph.D., MA, and teacher credential programs that realize Stanford’s purposeful commitment to groundbreaking interdisciplinary approaches to real world challenges. There will be possibilities for joint appointments with the faculties of medicine, law, engineering, humanities and science. Over the next few years, we anticipate hiring faculty in the areas of learning practices, technologies, educational neuroscience, policy, and humanistic investigations of (dis)abilities. We are launching the initiative with searches in two areas – learning practices and technologies.

Faculty Search in Learning Differences and Special Education

Currently, we are seeking two outstanding scholars to support the launch of the initiative: one who works on learning practices and teacher preparation, and one who works on technological breakthroughs for learning and participation. Both areas are broadly conceived.

Senior candidates will bring an excellent record of scholarship, teaching, and leadership. Junior candidates will bring fresh perspectives and methodologies that can drive future discovery. The initiative is explicitly interdisciplinary: Candidates should want to work across methodologies, systems, and paradigms to help address the complex terrain inherent to learning diversities.

All application materials must be submitted online. Please submit your application on Interfolio by October 15, 2018:
http://apply.interfolio.com/52174.

Faculty Position in the Program for Learning Sciences, Technology, and Design

The Stanford Graduate School of Education plans a tenure track, assistant or associate professor appointment. We seek candidates from a variety of academic disciplines whose research embodies state-of-the-art approaches that use, design, create, and/or study advances in learning technologies. We also invite applications from candidates who conduct research employing diverse tools to investigate how technology may augment learning, in and out of school.

The successful candidate will contribute to teaching and advising doctoral and master’s students in the GSE.

This search is chaired by David Jacks Professor of Education and Learning Sciences Roy Pea.

All application materials must be submitted online. Please submit your application on Interfolio by September 30, 2018:
http://apply.interfolio.com/51767
Open Rank Faculty Position in Early Childhood

The Stanford Graduate School of Education is seeking applications for an open-rank tenure-track faculty position in the area of psychological approaches to early childhood development or education.

Successful candidates will demonstrate a creative and productive program of research, and a commitment to excellence in teaching and advising graduate and undergraduate students.

Responsibilities will include conducting an independent program of research, mentoring students, and teaching primarily graduate level courses.

Please submit applications by October 1, 2018.

All application materials are submitted online. Please submit your application on Interfolio: [http://apply.interfolio.com/51855](http://apply.interfolio.com/51855).

Tenure-track Faculty Position in Education Policy

The Stanford Graduate School of Education is seeking applications for a tenure-track faculty position at the Assistant or Associate rank in the area of education policy.

We seek candidates whose research combines rigorous quantitative methodologies and strong conceptual foundations with the aim of understanding and improving educational programs, practices, or policies. It is a broad search and we invite candidates who examine policy contexts at any age, from early childhood through adulthood, and whose policy interests focus on the federal, state, or local level. We request candidates to submit examples of their work in the form of research articles, chapters, and any other written work.

Responsibilities will include conducting an independent program of research, teaching courses for doctoral and master’s students, and providing mentorship to these students.

All application materials must be submitted online. Please submit your materials on Interfolio by September 1, 2018: [http://apply.interfolio.com/52078](http://apply.interfolio.com/52078)

Questions pertaining to this position may be directed to Tanya Chamberlain, Faculty Affairs Officer, tanyas@stanford.edu.

Tenure-track Faculty Position in the History of Education

The Stanford Graduate School of Education plans a tenure track, assistant, associate, or full professor appointment in the history of education, broadly defined.

Applications must be submitted by September 15, 2018.

All application materials must be submitted online. Please submit your application on Interfolio: [http://apply.interfolio.com/51930](http://apply.interfolio.com/51930).

About the GSE

The mission of Stanford Graduate School of Education is to produce groundbreaking research, model programs, and exceptional teachers to achieve accessible, equitable and effective education for all learners. Since the School’s founding in 1917, its faculty, students and alumni have worked to solve education’s greatest challenges and improve lives through learning, discovery and driving change in practice and policy. We maintain a fundamental commitment to daring, rigor, and relevance in scholarship and practice, and always support foundational excellence in our study of education.

Points of Distinction:
- Only education school in the world to have a Nobel Laureate on its faculty
- More members of the National Academy of Education than any of its peers
- Partnerships with more than 100 school districts, including five of the nation’s largest
- Notable alumni who are distinguished teachers and leaders in education and policy in the United States and around the world.

Learn more about the Stanford Graduate School of Education and these positions here: [https://ed.stanford.edu/faculty/jobs](https://ed.stanford.edu/faculty/jobs)

Stanford is an equal employment opportunity and a rmative action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other characteristic protected by law. Stanford also welcomes applications from others who would bring additional dimensions to the University’s research, teaching and clinical missions.
Academic-Affiliated Community Physician

The Department of Surgery, Division of Emergency Medicine at the University of Utah Health Sciences Center is recruiting for a FT Clinical Attending (Adjunct Track) to staff University-affiliated community hospital emergency department at Sweetwater Memorial Hospital in Rock Springs, WY. This hospital is located in a rural community that will also be used to train medical students, residents, and fellows. Direct access to the University of Utah Medical Center is available by EMR, telemedicine, and air medical transport. Opportunities for part-time work, off site-CME, and blended academic practices are also available.

The University of Utah is the primary medical teaching and research institution in the state. Candidates must be board certified/prepared and have an interest in education of residents and medical students. A competitive salary with an excellent benefits package is offered.

Interested applicants must apply at: http://utah.peopleadmin.com/postings/79191

For questions contact: Stefanie Grundy
stef.grundy@utah.edu

The University of Utah HSC values candidates who are committed to fostering and furthering the culture of compassion, collaboration, innovation, accountability, diversity, integrity, quality, and trust that is integral to the mission of the University of Utah Health Sciences Center.

The University of Utah is an Affirmative Action/Equal Opportunity employer and does not discriminate based upon race, national origin, color, religion, sex, age, sexual orientation, gender identity/expression, status as a person with a disability, genetic information, or Protected Veteran status. Individuals from historically underrepresented groups, such as minorities, women, qualified persons with disabilities and protected veterans are encouraged to apply. Veterans’ preference is extended to qualified applicants, upon request and consistent with University policy and Utah state law. Upon request, reasonable accommodations in the application process will be provided to individuals with disabilities. To inquire about the University’s nondiscrimination or affirmative action policies or to request disability accommodation, please contact: Director, Office of Equal Opportunity and Affirmative Action, 201 S. Presidents Circle, Rm 135, (801) 581-8365.

The University of Utah values candidates who have experience working in settings with students from diverse backgrounds, and possess a strong commitment to improving access to higher education for historically underrepresented students.

A. B. FREEMAN SCHOOL OF BUSINESS
TULANE UNIVERSITY

The A. B. Freeman School of Business at Tulane University and Dean Ira Solomon are seeking research-oriented faculty members to fill the following positions beginning fall 2019:

ACCOUNTING
Tenure System Faculty (Professor)
APPLY: http://apply.interfolio.com/51348

Tenure System Faculty (Associate Professor)
APPLY: http://apply.interfolio.com/51347

Non-Tenure System Faculty (Professor of Practice)
APPLY: http://apply.interfolio.com/51351

Non-Tenure System Faculty (Lecturer)
APPLY: http://apply.interfolio.com/51352

Visiting Faculty (Visiting Assistant Professor)
APPLY: http://apply.interfolio.com/51354

Finance

Tenure System Faculty (Professor)
APPLY: http://apply.interfolio.com/51361

Tenure System Faculty (Associate Professor)
APPLY: http://apply.interfolio.com/51360

Tenure System Faculty (Assistant Professor)
APPLY: http://apply.interfolio.com/51362

Tenure System Faculty (Assistant Professor)
APPLY: http://apply.interfolio.com/51363

MANAGEMENT

Tenure System Faculty (Professor)
APPLY: http://apply.interfolio.com/51376

Tenure System Faculty (Associate Professor)
APPLY: http://apply.interfolio.com/51377

Tenure System Faculty (Assistant Professor)
APPLY: http://apply.interfolio.com/51378

MANAGEMENT SCIENCE

Tenure System Faculty (Professor)
APPLY: http://apply.interfolio.com/51386

Tenure System Faculty (Associate Professor)
APPLY: http://apply.interfolio.com/51387

Tenure System Faculty (Assistant Professor)
APPLY: http://apply.interfolio.com/51388

MARKETING

Tenure System Faculty (Professor)
APPLY: http://apply.interfolio.com/51392

Tenure System Faculty (Associate Professor)
APPLY: http://apply.interfolio.com/51393

Tenure System Faculty (Assistant Professor)
APPLY: http://apply.interfolio.com/51394

Candidates must hold a PhD or have a definite plan for completion of dissertation prior to the date of employment. We seek candidates with strong research and teaching skills. Candidates for Professor and Associate Professor must qualify for tenure at the Freeman School. Women and minorities are encouraged to apply. Ultimate recruitment for these positions are subject to final budgetary approval by the University.

TULANE UNIVERSITY IS AN AFFIRMATIVE ACTION/ EQUAL OPPORTUNITY EMPLOYER

A. B. FREEMAN SCHOOL OF BUSINESS
TULANE UNIVERSITY

The A. B. Freeman School of Business and Dean Ira Solomon are seeking research-oriented faculty to fill the following positions beginning fall 2019:

ACCOUNTING

Non-Tenure System Faculty (Professor of Practice)
APPLY: http://apply.interfolio.com/51351

Non-Tenure System Faculty (Lecturer)
APPLY: http://apply.interfolio.com/51352

Visiting Faculty (Visiting Assistant Professor)
APPLY: http://apply.interfolio.com/51354

Visiting Faculty (Visiting Lecturer)
APPLY: http://apply.interfolio.com/51355

FINANCE

Non-Tenure System Faculty (Professor of Practice)
APPLY: http://apply.interfolio.com/51360

Non-Tenure System Faculty (Lecturer)
APPLY: http://apply.interfolio.com/51361

Visiting Faculty (Visiting Assistant Professor)
APPLY: http://apply.interfolio.com/51366

Visiting Faculty (Visiting Lecturer)
APPLY: http://apply.interfolio.com/51363

MANAGEMENT

Non-Tenure System Faculty (Professor of Practice)
APPLY: http://apply.interfolio.com/51381

Non-Tenure System Faculty (Lecturer)
APPLY: http://apply.interfolio.com/51382

Non-Tenure System Faculty (Professor of Practice)
APPLY: http://apply.interfolio.com/51383

Non-Tenure System Faculty (Lecturer)
APPLY: http://apply.interfolio.com/51384

Visiting Faculty (Visiting Assistant Professor)
APPLY: http://apply.interfolio.com/51385

Visiting Faculty (Visiting Lecturer)
APPLY: http://apply.interfolio.com/51386

FINANCE

Non-Tenure System Faculty (Professor of Practice)
APPLY: http://apply.interfolio.com/51387

Non-Tenure System Faculty (Lecturer)
APPLY: http://apply.interfolio.com/51388

Visiting Faculty (Visiting Assistant Professor)
APPLY: http://apply.interfolio.com/51389

Visiting Faculty (Visiting Lecturer)
APPLY: http://apply.interfolio.com/51390

MANAGEMENT

Non-Tenure System Faculty (Professor of Practice)
APPLY: http://apply.interfolio.com/51391

Non-Tenure System Faculty (Lecturer)
APPLY: http://apply.interfolio.com/51392

Visiting Faculty (Visiting Assistant Professor)
APPLY: http://apply.interfolio.com/51393

Visiting Faculty (Visiting Lecturer)
APPLY: http://apply.interfolio.com/51394

MARKETING

Non-Tenure System Faculty (Professor of Practice)
APPLY: http://apply.interfolio.com/51395

Non-Tenure System Faculty (Lecturer)
APPLY: http://apply.interfolio.com/51396

Visiting Faculty (Visiting Assistant Professor)
APPLY: http://apply.interfolio.com/51397

Visiting Faculty (Visiting Lecturer)
APPLY: http://apply.interfolio.com/51398

Candidates must hold a PhD or have a definite plan for completion of dissertation prior to the date of employment. Applicants must have credentials and experience commensurate with appointments at these ranks. Ultimate recruitment for these positions are subject to final budgetary approval by the University. Women and minorities are encouraged to apply.

TULANE UNIVERSITY IS AN AFFIRMATIVE ACTION/ EQUAL OPPORTUNITY EMPLOYER
Tenure-Track Faculty Positions for 2019-20

Personal. Professional. Achievable. Cal State East Bay is known for award-winning programs, expert instruction, diverse student body — and a choice of more than 100 career-focused fields of study. There are two scenic campuses — one in the Hayward Hills, overlooking San Francisco Bay, and the other in the Concord foothills of Mt. Diablo — plus a professional center in dynamic downtown Oakland and many online programs. (Home Department noted in parentheses.)

COLLEGE OF BUSINESS AND ECONOMICS
Sales (Marketing)
Operations Management and Analytics (Management) (2 positions)
Information Technology Management and Analytics (Management)
Entrepreneurship (Management)
Investment and Entrepreneurial Finance (Accounting & Finance)
Accounting (Accounting & Finance) (2 positions)

COLLEGE OF EDUCATION AND ALLIED STUDIES
Marriage and Family Therapy (Educational Psychology)

COLLEGE OF LETTERS, ARTS, AND SOCIAL SCIENCES
Quantitative Methods (Communication)
Speech Pathology and Audiology (Speech, Language & Hearing Sciences)
Sociology of Culture (Sociology)
Art History – World Art and Design (Art)
Latinx Literature or Asian-American/Asian/Pacific Islander Literature (English)

COLLEGE OF SCIENCE
Department Chair (Computer Science)
Health Sciences (Health Sciences)
Pediatrics / Maternity /Surgery (Nursing)
Integrative Biology (Biological Sciences)
Applied Behavioral Analysis (Psychology)
Computer Engineering (School of Engineering)

For more position information, please go to:
http://www.csueastbay.edu/oaa/jobs/csueb.html

CSU East Bay is an Equal Opportunity Employer. Women and minorities are strongly encouraged to apply. Criminal background check required at time of hire.

You can view and hear statements from some of our new faculty at CSUEB at:
http://www.youtube.com/embed/ghGBehC1Ls0

Neurotologist

The University of Utah, Department of Surgery, Division of Otolaryngology-Head and Neck Surgery seeks a Neurotologist. This is a full-time Assistant Professor level position, track DOQ. Candidates must be BC/BE. Position available July 2019.

Applicants must apply at:
http://utah.peopleadmin.com/postings/76815

For additional information, contact:
Susan Harrison
University of Utah School of Medicine
50 North Medical Drive SC120
Salt Lake City, Utah 84132
Phone: (801) 585-3186
Fax: (801) 585-5744
E-mail: susan.harrison@hsc.utah.edu

The University of Utah Health (U of U Health) is a patient focused center distinguished by collaboration, excellence, leadership, and respect. The U of U Health values candidates who are committed to fostering and furthering the culture of compassion, collaboration, innovation, accountability, diversity, integrity, quality, and trust that is integral to our mission.

The University of Utah is an Affirmative Action/Equal Opportunity employer and does not discriminate based upon race, national origin, color, religion, sex, age, sexual orientation, gender identity/expression, status as a person with a disability, genetic information, or Protected Veteran status. Individuals from historically underrepresented groups, such as minorities, women, qualified persons with disabilities and protected veterans are encouraged to apply. Veterans’ preference is extended to qualified applicants, upon request and consistent with University policy and Utah state law. Upon request, reasonable accommodations in the application process will be provided to individuals with disabilities. To inquire about the University’s nondiscrimination or affirmative action policies or to request disability accommodation, please contact: Director, Office of Equal Opportunity and Affirmative Action, 201 S. Presidents Circle, Rm 135, (801) 581-8365.

The University of Utah values candidates who have experience working in settings with students from diverse backgrounds, and possess a strong commitment to improving access to higher education for historically underrepresented students.

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South Orange County Community College District is seeking a proven leader to serve as Saddleback College President. The position reports to the chancellor in a large multi-college district.

**QUALIFICATIONS FOR THE SUCCESSFUL CANDIDATE:**

**EDUCATION:**
- An earned master’s degree from an accredited college or university in education, business, public administration, or related field. An earned doctorate from an accredited college or university is preferred.

**EXPERIENCE:**
- At least five years of demonstrated and responsible administrative experience, preferably in a higher education environment, with a broad variety of instructional and student services programs, and physical, fiscal and technology resources.
- At least three years of experience managing a multi-million dollar budget in higher education.
- Experience in a participatory governance environment in higher education.
- Experience in and/or demonstrated knowledge of the role of the community colleges in economic and workforce development.

**OUR COLLEGE, OUR COMMUNITY**
Saddleback College is located in Mission Viejo, California and was founded in 1968. The college serves more than 39,000 students per year offering over 300 associate degrees, certificates, and occupational awards in 190 program areas. Saddleback has a high number of career technical education degree programs to prepare students for the workforce.

**FOR INFORMATION AND TO APPLY**
[www.socccd.edu](http://www.socccd.edu) Please visit the district’s website for a full description of the position, qualifications, and search process. Applications will be accepted until the position is filled. Initial screening date is September 4, 2018. For more information, contact: Susan Kwan, Human Resources Specialist at 949.582.4577, skwan6@socccd.edu

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**OUR NEXT ISSUE**

**Business Schools**

In our October 2018 issue, we will examine efforts by business schools and organizations to recruit and engage students from underrepresented groups, as well as help them launch successful businesses. We’ll also recognize National Disability Employment Awareness Month.

The advertising deadline is September 10.
To reserve space, call (314) 200-9955 or email ads@insightintodiversity.com.
**Academic-Affiliated Community Physician**

The Division of Emergency Medicine at the University of Utah Health Sciences Center is recruiting for one additional physician to staff a new community-based “freestanding” emergency department in South Jordan, Utah, approximately 25 miles south of the main campus. The University of Utah is the primary medical teaching and research institution in the state and opened this new facility in January, 2012. The South Jordan Health Center includes comprehensive primary and specialty care, an outpatient surgical center, and our 16 bed ED. Candidates must be board certified/prepared and have an interest in education of residents and medical students. Competitive salary with an excellent benefits package offered.

Interested applicants must apply at:  
http://utah.peopleadmin.com/postings/79521

If you need additional information, please contact:  
Stephen C Hartsell, MD, FACEP  
Division Chief  
Division of Emergency Medicine  
Department of Surgery  
University of Utah School of Medicine  
(801) 587-5804  
stephen.hartsell@hsc.utah.edu

The University of Utah HSC values candidates who are committed to fostering and furthering the culture of compassion, collaboration, innovation, accountability, diversity, integrity, quality, and trust that is integral to the mission of the University of Utah Health Sciences Center.

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**Emergency Medicine Physician**

The Department of Surgery, Division of Emergency Medicine at the University of Utah is seeking a board-certified/board-eligible emergency physician who is interested in joining the faculty at the rank of assistant or associate professor. Candidates with academic faculty experience and a track record in research and education are strongly encouraged to apply. We are also seeking individuals willing to serve in a nocturnist role.

University Hospital is a Level 1 Trauma Center and the Intermountain West’s only academic health care system. The hospital serves Utah and five surrounding states, representing the largest referral area in the continental United States. University of Utah Health is consistently ranked #1 in quality nationwide, and the emergency department is expanding its faculty due to the rapid growth in patient volume.

The Division of Emergency Medicine maintains a highly competitive three-year academic residency program, a broad research portfolio with multiple extramural grants and fellowships in EMS, Global Health, Palliative Care, Research Sports Medicine, Ultrasound, and Wilderness Medicine.

We offer a competitive salary, comprehensive benefits package, and generous retirement plan. Academic appointment in the University of Utah School of Medicine and salary will be commensurate with experience.

Interested applicants must apply at:  
http://utah.peopleadmin.com/postings/78905

Interested applicants may submit their CV and cover letter to Ryan Dest at ryan.dest@hsc.utah.edu.

The University of Utah HSC values candidates who are committed to fostering and furthering the culture of compassion, collaboration, innovation, accountability, diversity, integrity, quality, and trust that is integral to the mission of the University of Utah Health Sciences Center.

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CLOSING INSIGHT

THE REFUGEE EXPERIENCE

Researchers at the University of California, Berkeley recently launched an online resource that gives users insight into the experiences of modern migrants and refugees. The Digital Refuge website gathers thousands of social media posts from refugee camps and migrant communities in Greece and other European countries to share these individuals’ common hopes and concerns. The information is presented via interactive graphs and maps that allow users to track data across time and locations and even compare refugee posts and sentiments with official reports and news sources.

Law professor Katerina Linos, JD, PhD, spearheaded the project. She believes that social media is a critical asset for many of the migrants who have fled to Europe in recent years due to conflicts in the Middle East. It lets them connect with distant loved ones and, by joining refugee social media groups and forums, share real-time information on migration policies, job opportunities, and more, Linos explains.

She says she hopes journalists, educators, and others will use the Digital Refuge website to understand the plight of those in the middle of the modern refugee crisis.

Future plans for the project include translating the website into Greek, Arabic, and Farsi so that migrants and host countries can better communicate with one another. For more information, visit digitalrefuge.berkeley.edu.
— Mariah Bohanon

Countries mentioned in Facebook Posts and MIPEX Scores

A map details the correlation between the Migration Integration Policy Index (MIPEX) score — which indicates how welcoming a country is to refugees — and how often it is mentioned in migrants’ Facebook posts. Turkey, which has the lowest MIPEX score, and Sweden, which has the highest, are the most discussed nations after Germany, which has an average score.

Camp Locations - Nightlights Map

A nighttime map of Greece allows users to see the proximity of refugee camps to urban clusters, which tend to have more wireless internet access.

Facebook Posts by General Sentiment

A chart reveals that the nature of refugee social media posts regarding asylum policies, family reunification, and other topics has become increasingly negative over time.
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• Co-op and Professional Development preparation
• Coaching and Advising support
• Engineering Scholarship support

Community Engagement
• M²SE (Minorities in Mathematics, Science & Engineering)
• Family Science Academy
• Robotics Competition
• Summer Enrichment Program
• Mathematics and Science Help Nights

FOR MORE INFORMATION CONTACT
Dr. Whitney Gaskins, Assistant Dean
Inclusive Excellence & Community Engagement
whitney.gaskins@uc.edu
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