



EXECUTIVE REPORT 2017

TRANSFORMING
LIVES
THROUGH
EDUCATIONAL
OPPORTUNITY



UNIVERSITY of
ROCHESTER



Anniversary CELEBRATION

LETTER FROM DEANS:

Gloria Culver, *Dean of the School of Arts & Sciences*

Wendi Heinzelman, *Dean of the Hajim School of Engineering & Applied Sciences*

Jeffrey T. Runner, *Dean of the College*

Richard Waugh, *Dean of the Faculty of Arts, Sciences & Engineering (Interim)*

As the result of economic, racial, and other inequalities, our national educational system provides less than optimal outcomes for many low-income and underrepresented minority (URM) students from pre-K through graduate school. Although systemic issues of poverty, racism, economic marginalization, and others may at times seem to be larger than our ability to change them, in Arts, Sciences and Engineering, we believe that meaningful interventions can disrupt these obstacles.

The David T. Kearns Center for Leadership and Diversity in Arts, Sciences and Engineering is home to many of these interventions at Rochester and has demonstrated remarkable results. This has been a milestone year for several activities associated with and directed by the Kearns Center.

The overarching vision of the Kearns Center is that students at every level: elementary, high school, college, and graduate, should be empowered to pursue their educational and intellectual interests in an environment that is free of bias and obstacles. The center is focused on low-income, first-generation college, and underrepresented minority students, because at every point in the educational pipeline, students from these groups have worse educational outcomes than their majority and wealthier peers.

Up to and including the Class of 2017, the Kearns Center has mentored almost 800 undergraduate students through the McNair, Kearns Scholars, and Xerox Engineering Programs. Of those, more than 500 have gone on to graduate study and earned more than 350 graduate degrees, including more than 100 doctorates. Over ten years, 97 percent of Upward Bound and Upward Bound Math/Science students, who come from the Rochester City School District (RCSD), have graduated from high school. These are amazing statistics that have been brought about by the dedicated efforts of many Kearns Center staff over the years and particularly through the vision of the center's director, Beth Olivares. As we celebrate the many Kearns Center anniversaries this year, we look forward to continuing this work to ensure all students, from pre-K through graduate school, have every opportunity to succeed.



MESSAGE FROM BETH OLIVARES, DIRECTOR OF THE KEARNS CENTER

When I first began working with the McNair Program at the University of Rochester in 1994, little did I know that I was starting down a path of program development, student mentoring, friendship building, and professional fulfillment that would continue to challenge and provide me with profound joy for decades.

The image that I have as I write this is of a small acorn that sprouts and, over the years, becomes a mighty oak tree. This tree provides shade to those who need it, a sturdy foundation for new growth, a habitat for those who spend a season or a lifetime within its branches, and generations of progeny that scatter to the four winds. Such is the Kearns Center: the McNair Program was the original acorn, a seed that held within it the sustenance necessary for a much larger undertaking, one which would support not only those students who as sophomores in college already knew they wanted a doctoral degree, but one which also reached out to all the others and worked to help develop new generations of scholars.

We have developed programs and activities that start when students are in the seventh grade and span the academic pathway through graduate school and beyond. With the right conditions and resources, students who come from backgrounds traditionally underrepresented in higher education (those who are the first in their families to attend college; those from underrepresented minority backgrounds; and those from low-income families) succeed beyond even their own imaginations.

The University is rightly proud and supportive of these accomplishments, and the College's support is both deep and consistent. The attention of alumni and donors who also care about the center's mission has allowed our growth and development and will be central to our ability to move forward with the goals and ambitions of the next 15 years.

I hope that you take a moment to read through this report to see the ways in which we are making a positive difference. If you are so moved, a gift of any amount will help keep the acorns growing into additional mighty oaks.

HISTORY

The center encompasses more than a dozen funded programs and employs 19 FTEs, more than 75 undergraduates, about 20 graduate students, and more than a dozen summer instructors.



Over the past two and a half decades, the Kearns Center has developed a system of academic programs that encourage academic preparation and the pursuit of excellence for students from first-generation college, low-income, and underrepresented minority backgrounds.

In the fall of 1992, the University was awarded a US Department of Education Ronald E. McNair Post-Baccalaureate Achievement Program—whose goal is to encourage low-income, first-generation college, and underrepresented minority students to pursue a doctoral degree. Professor Jesse Moore (history) served as the director, and a committee of individuals including then University dean of graduate studies David Beach (Eastman School of Music) oversaw its functioning for the first several years. Beth Olivares was hired in 1994 as the program coordinator and has been involved in the program's operation and oversight since.

Building on the educational model developed by Olivares in the McNair Program and on the high level of success of students in that program, in 2002 the University inaugurated the David T. Kearns Center for Leadership and Diversity in Science and Engineering, which ushered in its first class of scholarship recipients that fall. In its earliest iteration, the center was closely focused on small groups of students in the sciences and engineering. In 2009, the center's name was changed to include the word "Arts," becoming "the David T. Kearns Center for Leadership and Diversity in Arts, Sciences and Engineering," a seemingly minor linguistic change that enabled the center to focus on all students—those in social sciences and humanities as well as those in science and engineering. This change was made with the blessing of David T. Kearns, the center's namesake.

The center saw a period of tremendous growth in funding, service capacity, and staffing in its first decade. When the Kearns Center was established in 2002, the center employed two and a half FTEs (full-time-equivalent positions) and was home to just two programs, both focused on college students, serving approximately 30 undergraduates a year. Now the center encompasses more than a dozen funded programs and employs 19 FTEs, more than 75 undergraduates, about 20 graduate students, and more than a dozen summer instructors. All of this is in the service of more than 1,500 students a year, from middle school through the doctorate.

We are here to focus with ferocity of purpose on issues of social justice, equity, and inclusion. While we provide support and resources for individual students, we also work to dismantle systemic obstacles. Our student outcome statistics far outpace national averages and demonstrate that this approach works.

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RONALD E. McNAIR PROGRAM

October 1, 2017, marks the 25th anniversary of the Ronald E. McNair Post-Baccalaureate Achievement Program at the University of Rochester. This program, sponsored by Congress after the 1986 *Challenger* space shuttle explosion, is named in honor of the late *Challenger* astronaut and laser physicist and is dedicated to supporting first-generation college students with financial need and historically underrepresented minority students in the pursuit of a doctoral degree for a career in academics and research.

McNair is one of the University's premier communities for student success. Scholars outpace their peers, locally and nationally, in admittance to competitive graduate programs and the academic workforce. These feats are achieved through faculty mentoring, hosting and attending academic conferences, and sponsored research projects that can lead to publication in scholarly journals.

Our team of advisors meets individually and provide distinct workshops that continually foster the McNair community and provide guidance on the graduate admissions process, the GRE, social issues that impact the academic workforce, and ways to secure additional resources for their scholarly pursuits.

We are proud to have McNair Scholars as faculty members at institutions such as Temple University, Catholic University, Spelman College, Princeton University, Montgomery College and many others. We are equally proud of the medical doctors, lawyers, research scientists, teachers, and entrepreneurs—who are at work in places such as Kool Nerd Clothing, NASA Goddard Space Flight Center, Rochester City School District, Centers for Disease Control, University of Pittsburgh Medical Center, the *New York Times*, and many government agencies—who launched their careers through the McNair Program.





KEARNS SCHOLARS

The Kearns Scholars program has a rich history of being a community of scholars who utilize their personal strengths and the resources provided through the program to achieve success here and in their next endeavors. Scholars in our program have access to tuition-free summer courses; textbook lending; group tutoring; academic advising and coaching; mentorship; financial literacy initiatives; and specialized workshops, events, and programs. Kearns Scholars persist at the University and graduate, become successful in graduate school, and careers directly after graduation as a direct result of the support and opportunities provided.

All our advisors believe that a supportive educational environment and physical space create a culture that embraces and thrives on the success of its students, inclusive of their academic, personal, and career aspirations.

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PRE-COLLEGE EFFORTS

If asked ten years ago where we would see ourselves in 2017, who knows what the answer would have been? Today, we are proud to celebrate the pre-collegiate partnership between the center and the Rochester City School District (RCSD). Our work within the district started with a small program focused on entrepreneurship at Jefferson High School. In 2007, we received funding from the U.S. Department of Education for Upward Bound (UB) and Upward Bound Math/Science (UBMS) programs; we have grown to include two College Prep Centers and an Educational Talent Search Program. Our pre-college initiatives served well over a thousand students in the RCSD each year. UB and UBMS have supported well over 500 high school students, maintained a 95 percent high school graduation and college enrollment rates, and employed several hundred undergraduate and graduate students.

Science, Technology, Engineering, and Math Activities for Upward Bound

By partnering with faculty, graduate students, and undergraduate students majoring in STEM fields, the center provides students with fun and engaging opportunities in the fields of science, technology, engineering, and mathematics. These experiences help increase the number of first-generation, low-income students entering STEM fields.

STEMTERNS (Stem Internships)

UBMS students are provided internships in research labs with science and engineering

faculty. Since 2015, 13 students have completed six-week research projects alongside graduate student mentors in the biology, chemistry, and biomedical engineering departments. Interns present their work to the University community and compete for college scholarships by presenting their research at national conferences. Two interns are currently going through the process of having their work published in a peer-reviewed chemistry journal.

“I didn’t expect there to be so many females in the lab, at all. There were a lot, and I added to that community also. I feel like I gained a lot over the summer.”

—*Daiblia Beckford, East High School, Class of 2016, UBMS participant, and currently a second-year student at Rochester Institute of Technology*

“They were more professional, and I’m like, ‘wow.’ They talk about it like it’s a piece of cake. It’s like speaking a new, different language to other people. Especially like how science is for me, the chemistry. Sometimes when people ask me for help outside of that class, and I’ll say ‘You have to balance the equation for this’ or ‘it’s because it has a negative charge because it has to balance out’ people ask me, ‘what are you talking about?’”

—*Derek McNeil, Vanguard Collegiate High School, Class of 2017, UBMS participant, and currently a first-year student in the MCC/RIT 1+3 program*

Summer Science Courses

UB and UBMS students, as early as the summer before their ninth-grade year, are able to take up to four unique science mini courses every summer until they graduate from high school.

“Upward Bound has contributed to my character development and was the best way to get me started on my road to college and, later, my life. This program has a special spot in my soul.”

—*Giachino Barcelona, East High School, Class of 2017, UBMS participant, and currently a first-year student at Rochester Institute of Technology*

College Prep Centers

The College Prep Centers (CPC), which are located at East High School and Vanguard Collegiate High School, allow us to offer college prep services to a much larger group of students. Any student at either school is welcome to visit the CPCs and utilize the staff as a resource. Students enrolled in our Talent Search and/or Upward Bound Programs have full access to our services, some of which include but are not limited to advising, college application assistance, tutoring, financial aid application assistance, and college trips.

First-Generation INITIATIVES

In its first year as the academic home for all first-generation college students, the Kearns Center implemented a number of initiatives to better support this population on our campus. We piloted a first-generation student-focused seminar, which turned into CAS 145: Navigating the Academy, a one-credit course offered to all students interested in becoming Kearns Scholars beginning in the fall 2017 semester. The Kearns Center partnered with offices across the University to offer our first-generation workshop series, which featured topics like study skills, career exploration, graduate school, and a first-generation student panel composed of upperclass students.

Advising is the cornerstone of any Kearns Center program, and we offer comprehensive advising to all first-generation students; last year we connected with all incoming first-year students by October. We look to continue our efforts through expanding our course offerings, textbook lending program, and advising model.



FROM OUR STUDENTS

“Before going to the Kearns Center, I felt unprepared and overwhelmed with the challenges of college ahead. After being referred to the center by a friend, I am ready and excited to complete my undergraduate career and beyond. The advisors do an excellent job in making the Kearns Center a warm, welcoming community for both students in need of academic assistance and those who just want a nice place to unwind.”

—*Michaela Burrell, Class of 2020 and a first-generation college student*

“The Kearns Center has provided me with one-on-one guidance that has helped motivate me throughout my time here at the University of Rochester. I’ve developed a much clearer plan for my future than I could have on my own.”

—*John Cole, Class of 2019 and a Kearns Scholar*

“Being the first person in my family to go to college was an extremely hard transition, but with the Kearns Center as one of my biggest supporters, I learned to take things step by step and effectively tackle them one at a time.”

—*Baoxin Liang, Class of 2020 and a first-generation (international) student*

“The Kearns Center has not only provided me with a mass of resources (ranging from free printing to free textbooks) but has also provided me with some of the best college advice I could have asked for. Having advisors who understand that college is an alien process to me and my family is something which is priceless and really helped me excel during my freshman year at the University of Rochester.”

—*Bethany Tallis, Class of 2020 and a Kearns Scholar*



Undergraduate RESEARCH

XEROX ENGINEERING RESEARCH FELLOWS

Based on research, hands-on, faculty-led research experiences improve the academic outcomes of students who identify as underrepresented minority and women interested in STEM fields. Participants in the Xerox program are provided all resources and accommodations to start and complete research projects, beginning in the summer following the sophomore or junior year.

Now in its eighth year, the Xerox Fellows program is funded through the Xerox Foundation. Of the 184 students served by the Xerox Engineering Research Fellows Program since 2009, a total of 39 percent are female, and 24 percent are underrepresented minority (URM) students. Of those who have graduated, 61 percent have enrolled in graduate school.

In addition to hands-on research experiences, the program also offers seminars and training sessions—on taking the Graduate Records Examination, for example—to support fellows who want to go on to graduate school.

NATIONAL SCIENCE FOUNDATION SUPPORT

Beth Olivares, dean for diversity initiatives in Arts, Sciences & Engineering, and Wendi Heinzelman, dean of the Hajim School of Engineering & Applied Sciences, are co-principal investigators on “Redefining Potential: The Upstate NY Alliance for Diverse Student Populations,” an NSF-funded project exporting work begun at the Kearns Center to Cornell University, D’Youville College, and Monroe Community College.

The project targets low-income and underrepresented minority high school students served by college access programs, connecting STEM faculty and graduate students directly with opportunities for both mentoring and teaching focused on pre-college students. This integration has had a profoundly positive impact on the high school students as well as on the professional development of graduate student and faculty participants.

This framework was piloted during the summer of 2017; 36 faculty, 36 undergraduate and graduate students, and more than 200 Upward Bound students participated.

RESEARCH EXPERIENCE FOR UNDERGRADUATES SITES

The Research Experiences for Undergraduates (REU) program supports research participation by undergraduate students in any area of research funded by the National Science Foundation. In partnership with the deans and faculty of the Hajim School, the Kearns Center administers three different REU sites.

The first is housed in the Kearns Center, an unusual structure for such projects, which are most frequently funded in a single academic department.

Human Health: Nano to Network

provides a summer academic experience through which students and faculty can utilize interdisciplinary, hypothesis-driven research to advance human health and will develop the necessary research, critical thinking, ethics, and communication skills. This REU program builds directly on the Xerox Fellows program and on other highly successful programs that provide University of Rochester students with similar research and professional experiences.

The other two newly funded sites:

Computational Methods for Understanding Music, Media, and Minds

is led by the Institute for Data Science and attempts to answer questions such as: How can a computer learn to read an ancient musical score? What can methods from signal processing and natural language analysis tell us about the history of popular music?

Nano, Bio, and Quantum Photonics

is led by the Institute of Optics and addresses the ways in which understanding and controlling the most elemental unit of light—the photon—is essential to developing light-based technology as well as evolving critical elements of our nation’s defense and security.

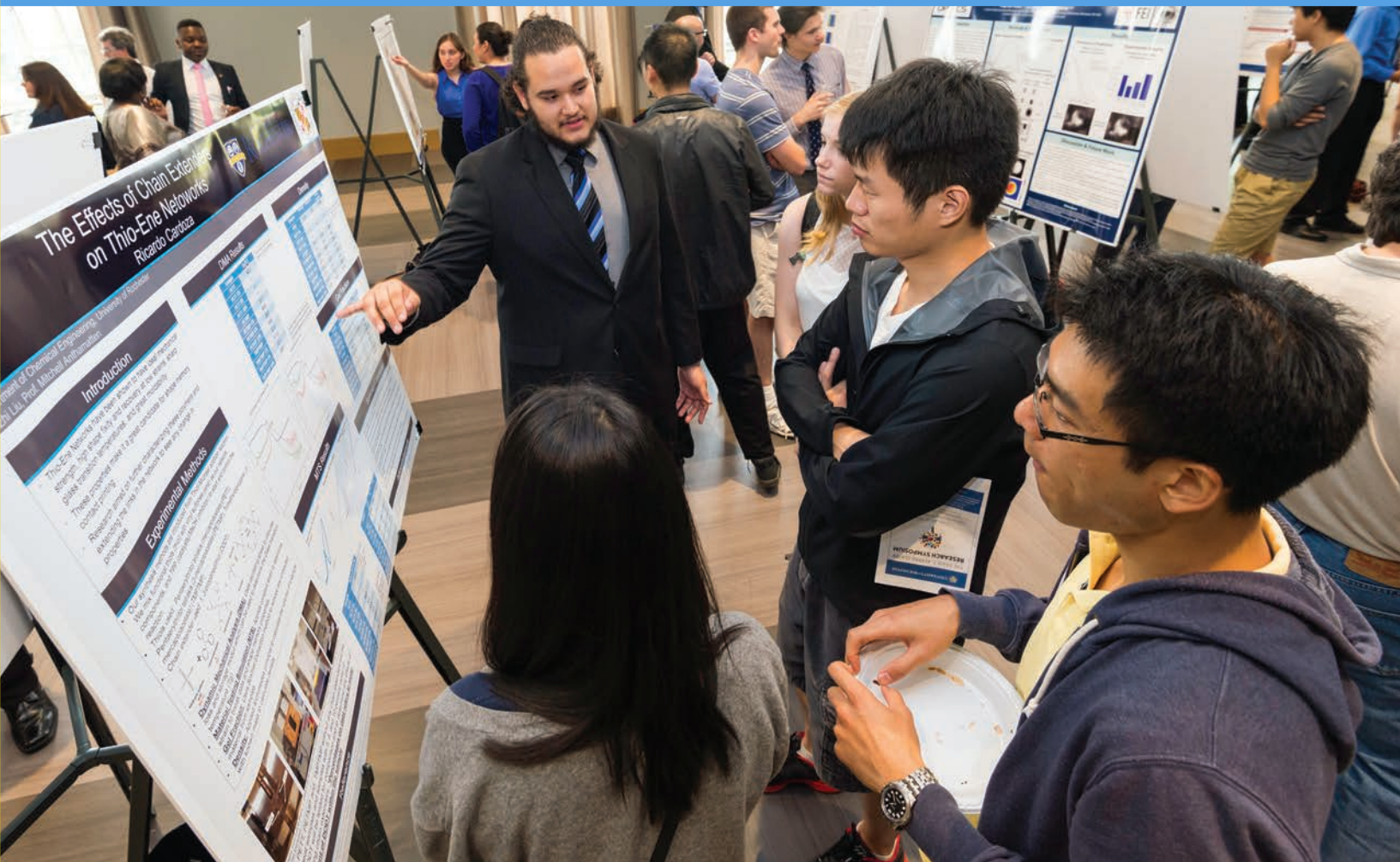
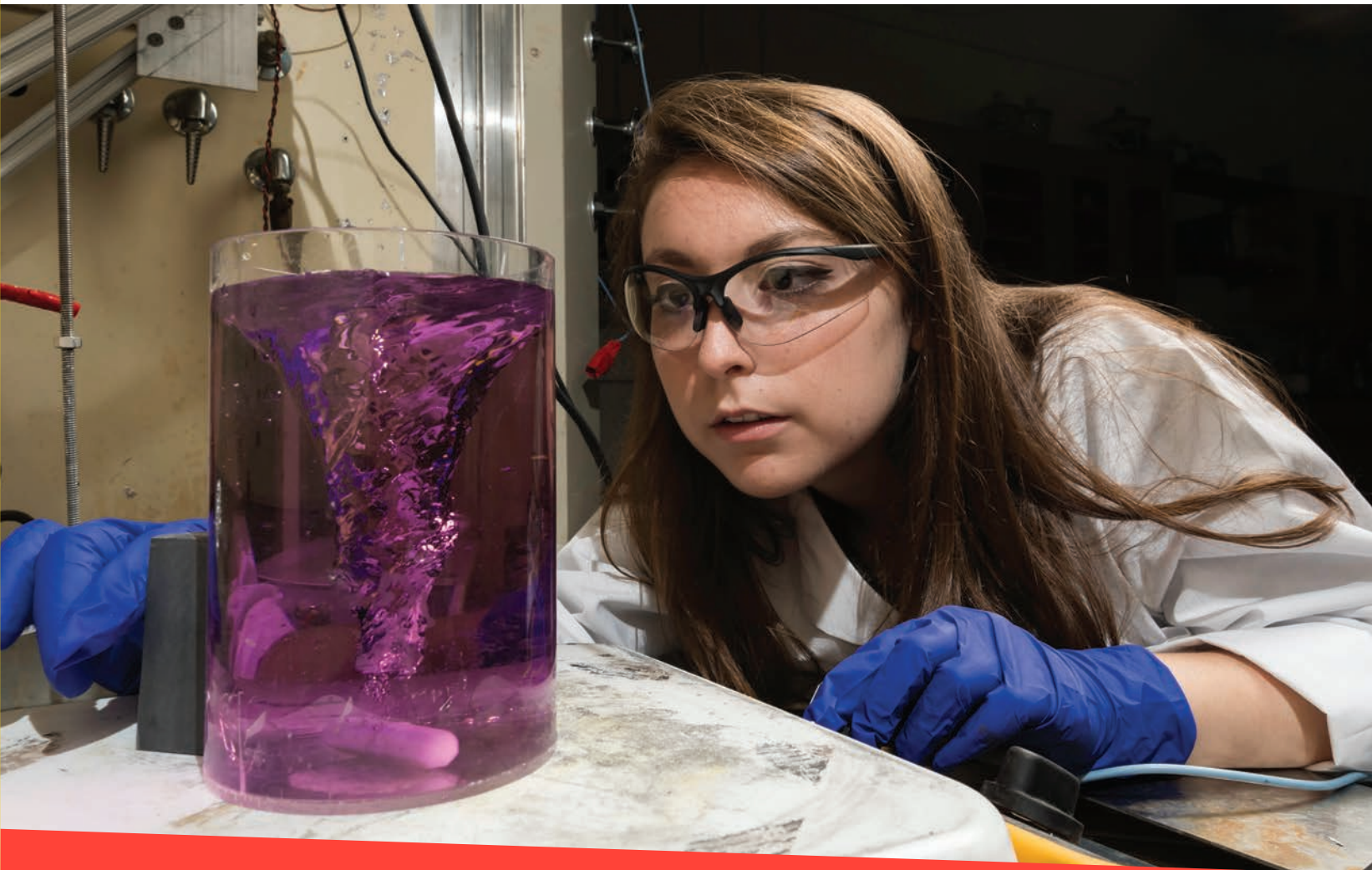
Participants in each of these programs are recruited from across the country, with a goal of substantial participation from women and underrepresented minority engineers; thus the projects also serve as a great recruitment vehicle for graduate student recruitment.

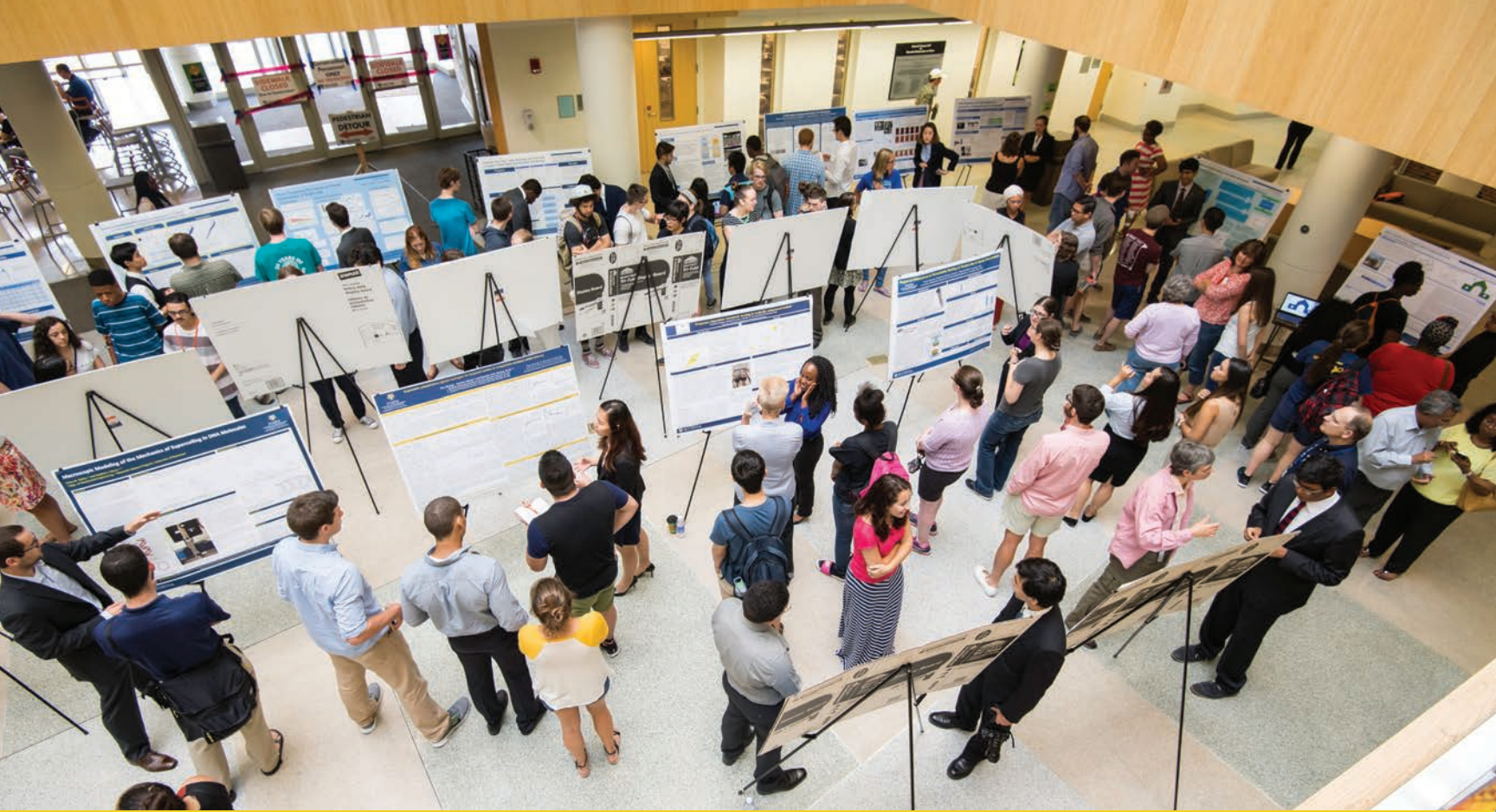
“Being a member of the Kearns Center has meant I was part of something larger. I felt that we shared a passion for research and forward thinking. I liked how we could connect with other students, faculty, and staff. Also, there was a large support group to help us achieve our goals, so I am extra thankful for that!”

—*Shira Johnston, Xerox Fellow, Class of 2017*
PhD Student, Thomas Jefferson University,
Department of Cell Biology and Regenerative
Medicine

“The David T. Kearns Family, as it would be more aptly named, has proven to be one of my biggest support systems as a student at Rochester. Time after time, members of the Kearns Center have helped me find my way through the maze of college, offering invaluable advice, guidance, and support through many of my academic and life endeavors. I am certain that I wouldn’t be in the position I am today without the help of the Kearns Center.”

—*Dylan Gaeta, McNair Scholar, Class of 2016*
PhD Student, University of Chicago, Department of
Geophysical Sciences





“The University of Rochester is making a concerted effort to diversify its graduate programs. I was very impressed by the faculty, students, administrators, and campus tour during my visit.”



Graduate PROGRAMS

GRADUATE VISITATION PROGRAM (GVP)

The Graduate Visitation Program provides an opportunity for undergraduate students who are low-income, first-generation college, or members of underrepresented minority groups and interested in a PhD program offered by Arts, Sciences & Engineering or the School of Medicine and Dentistry to visit campus. Participants meet with faculty members in their field of interest, network with graduate students, and learn about the University of Rochester.

Since the program began in 2009, we have hosted more than 100 students from across the country. Of those, more than 70 students submitted an application to the University, and many of those applicants were offered acceptance into their program of choice.

“My visit to the University of Rochester exposed me to the unique intellectual community on campus and informed me of the invaluable resources that only Rochester can provide my project. The faculty members I met impressed me with how well they were informed with regard to my research interests. It was clear they took the time to actually read my application. All these factors contributed to the University of Rochester moving into my top three programs for graduate school.”

FELLOWSHIP FOR GVP PARTICIPANTS WHO ENROLL IN AS&E PHD PROGRAMS

Beginning in 2018–19, we will offer an additional two-year fellowship for GVP participants who ultimately attend an AS&E doctoral program.

GRADUATE VISITATION PROGRAM FOR ADMINISTRATORS

The Graduate Visitation Program for Administrators (GVP-A) aims to foster relationships between graduate programs in Arts, Sciences & Engineering and administrators at institutions with large underrepresented minority student populations. Many of the schools represented have sent successful applicants to the past Graduate Visitation Programs for undergraduates as well as to AS&E graduate programs.

“I did not expect such a great deal of collaboration in research between departments; it was great to see this, as many programs boast of collaboration within and between departments, but, in reality, little of it actually exists. Rochester seems to really excel in interdisciplinary opportunities.”

“The trip far exceeded my expectations. It was informative, educational, and, most importantly, well planned and professionally executed. Everyone made us feel welcome and ensured that we were comfortable during our stay at the University.”

GRADUATE RECRUITMENT WORKS!

Annually, the Kearns Center attends 15 to 20 high-impact, national recruitment events, focusing on potential applicants from groups historically underrepresented in graduate school. Since 2010, applications from underrepresented minority students increased by several hundred percent for both PhD and master's programs.

In an effort to ensure that our underrepresented students remain at the University of Rochester until the completion of their degrees, the Kearns Center has placed a special emphasis on retention. As compared to undergraduate study, graduate school is marked by increased rigor and specialization. It can also be characterized by greater independence and even isolation. Due to a smaller student body that is not concentrated in residence halls, fewer student organizations, and arguably less time to connect outside their departments, graduate students face unique challenges. Graduate Students of Color (GSOC) offers an opportunity for students to meet and discuss the unique issues faced by underrepresented students, offer support to one another, and recharge intellectually and holistically.

“The University of Rochester is making a concerted effort to diversify its graduate programs. I was very impressed by the faculty, students, administrators, and campus tour during my visit.”

Paul J. Burgett INTERCULTURAL CENTER



The Paul J. Burgett Intercultural Center (BIC) is a joint venture of the Office of the Dean of Students and the David T. Kearns Center. It exists to promote cultural awareness and engagement; educate on issues of identity, culture, and diversity; and provide avenues for intersection and opportunities for collaboration.

The intercultural lounge and LGBTQ resource area in Douglass Commons is an ideal location for studying, engaging in discussions, and gathering as a community.





Upward BOUND

A poem by Telle Seaborn, Monroe High School, Class of 2017, UB Participant, and currently a first-year student, Oakwood University

I am bound for greatness
I am bound for success
I am bound for challenges
I've overcome; I'm blessed

There is natural espresso,
Golden brown and ivory,
We are all here together:
Upward Bound Family

We like to learn
Math and science;
On the go with college trips,
Fun at picnics
Awards at banquets
Rock, paper, scissors tournament;
Latin Dance, Grub club
Academic Showcase!
At the end of the day
A smile on my face

We are bound for greatness
We are bound for success
We are bound for challenges
We've overcome; we're blessed.

The David T. Kearns Center for
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The Kearns Center is both Annual Fund
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