

Then



Now





## **From The Director**



Virginia Booth Womack, Director BSIE, BA Psychology 18 Years Industrial and Manufacturing Experience

David Robert Lewis BSCE, 1894

#### Greetings!

After 18 years in engineering and manufacturing, I am happy to be back at Purdue University working on an engineering opportunity that I am passionate about. It's an opportunity of student access and success.

One hundred fifty two years ago, President Abraham Lincoln signed legislature that opened the door to establish land-grant universities across the United States. According to the Morrill Act of 1862, the mission of these institutions was to focus on the teaching of practical agriculture, science, military science, and engineering as a response to the industrial revolution and the changing social class. Justin Smith Morrill, a congressman from Vermont who introduced the act, was quoted to say: "This bill proposes to establish at least one college in every State upon a sure and perpetual foundation, accessible to all, but especially to the sons of toil, where all of needful science for the practical avocations of life shall be taught." The words "accessible to all" challenge every institution to achieve an inclusive academic environment where 'all' have access and thrive. This quote captures the spirit of why the Minority Engineering Program (MEP) exists. As we celebrate our 40th anniversary, this report will give you a glimpse into the history of MEP and the legacy of student access and success.

On September 18, 1874, with six instructors and 29 students, Purdue University began its first class as a land grant institution. Twenty years later, in 1894 David Robert Lewis, from Greensburg, Indiana earned a B.S. in Civil Engineering and became the first African American graduate at Purdue. In 1974, President Arthur Hansen championed the cause of diversity and approved several initiatives, including the launch of the Minority Engineering Program to address low enrollment of underrepresented minorities (URMs) at Purdue. The goal was to increase URM interest in engineering through focused, results-driven efforts to align population demographics at Purdue with the State of Indiana.

Forty years later, thousands of URMs have graduated and more have been touched through outreach, recruitment, and retention efforts. Although there has been an overall increase in URM enrollment over the past five years, only 19 African American first-year engineering students enrolled in 2013. This is eight students less than the historic low of 27 African American students enrolled in 1974. Many are alarmed at this statistic, but there is more to the story. There were 146 African Americans admitted to first-year engineering in 2013, however only 19 chose to come to Purdue. Based on feedback, their choice was driven by more competitive scholarship offers from other institutions. In 2014, an increase in scholarships resulted in a 73% increase in accepted offers. The students that are being admitted into the College of Engineering are some of the best students in the nation and, as such, they are being pursued by some of the best engineering programs. In the absence of the financial support formerly available in the 70's and 80's, college affordability has become a major focus at Purdue.

The first-year engineering class of 2013 consisted of more than 1800 students. The demographic breakdown was 61% Caucasian, 20% International, 12% Asian American, 5% Hispanic, 1% African American and 1% was a combination of two or more races/Native American/Hawaiian/Pacific Islander. While URMs comprise 18.2% of the State of Indiana's population, the 7% representation in the College of Engineering gives clear meaning to the term 'underrepresented.' In a growing national demographic of URMs there is an urgency to understand and address the challenges of achieving student access and success.

## **From The Director**



Realizing that we have endless opportunities to improve this distribution, our investment to increase matriculation of qualified students through the K-12 pipeline and into first-year engineering must continue. Outreach programs, initially targeting students in the State of Indiana, now have a national footprint. Residential summer programs focus on SAT improvement for 9th, 10th, and 11th graders. Students must be prepared to gain entrance to college, cross the cultural divide, overcome social, academic, and financial issues that might impede their progress and successfully graduate. Through MEP-specific and university-wide collaborative programs designed to improve student transition and retention, we are addressing these issues. The achievement gap between URM students and the total engineering cohort is closing. Since 2004, the first semester grade point average of URMs has increased by 50% and reached a record high of 3.2 in 2013. First-year engineering retention rates have increased from 63% to 83%. Graduation grade point averages and graduation rates are continuing to improve. And there is a strong upward trend in degrees awarded to URMs in the past five years.

Our mission is to increase student access, celebrate success as well as identify, understand, and close gaps between URM students and the total engineering cohort through focused problem solving techniques. Although much has been achieved, being better than the past is not good enough. Standing on the shoulders of Marion Williamson Blalock, who served as MEP director for more than 30 years, I am extremely proud to be a part of this great legacy. Marion's work established the Minority Engineering Program at Purdue as a national benchmark for student access and success. Our work today must raise the bar.

The words "accessible to all" call each of us to action as we celebrate our 40th anniversary. Growing our URM first year enrollment to over 150 students per cohort is one of our immediate goals. We believe we have untapped capability to do this through our current programs, new initiatives, alumni and friends. With continued growth in our supporter base, we will be able to reach and surpass this goal. Here's why: today, we have the capability to embody the intent of the Morrill Act. Since 1974 nearly 2700 URM engineering alumni have graduated from Purdue. We have been successful in growing our alumni support, but less than 3% participate in recurring gifts to MEP. Imagine the possibilities of what a greater alumni support base would do to improve access, success, and affordability for our K-12 initiatives, and our current and prospective students.

This report will highlight the people, history, and accomplishments of the Minority Engineering Program at Purdue. We would not be where we are today without the leaders, corporations, alumni, parents, and students who understand the importance of our mission and strive to position us to achieve excellence. Whether you have given your time or a financial contribution, we thank you for your efforts in helping us best serve our students. We invite everyone to read more about the broad impact of the Minority Engineering Program and look forward to working with current partners and forging new partnerships to fulfill our mission.

Boiler Up! (Hammer Down!)

Marion Williamson Blalock

2

Dooth & mark

## Staff



**Darryl Dickerson, PhD** Associate Director ddickerson@purdue.edu



Carol Stwalley, PhD Recruitment and Retention Analyst cgss@purdue.edu



Outreach and Retention Administrator sanchezh@purdue.edu



Tasha Zephirin PhD Student Graduate Assistant tkzeph@purdue.edu

**Rachel Gully** 



Student Employment Coordinator rgully@purdue.edu



Heather Coar, M.S. Assistant Director of Communications hcoar@purdue.edu

Freddy Solis PhD Candidate Graduate Assistant fsolis@purdue.edu



James Haynes M.S. Student Graduate Assistant haynes16@purdue.edu

# History, Mission, Objectives



### **History: Then and Now**

The Minority Engineering Program at Purdue was one of several initiatives to improve diversity and inclusion in the College of Engineering. Leadership that championed this cause includes but is not limited to the individuals pictured above. Left to right, 1974 Purdue President Arthur Hansen; 1974 Dean of the College of Engineering, John C. Hancock; 1974 Head of First-Year Engineering, Dr. Richard Grace, who also launched the Freshman Honors Program and the Women in Engineering Program; Office of Minority Affairs in First-Year Engineering, Mrs. Saunie Taylor; Electrical and Computer Engineering Professor, Dr. Arthur Bond, the only African American in 1974 in the College of Engineering, championed the cause for increasing diversity in the College of Engineering; 1974 Director of the Minority Engineering Program, Marion Williamson Blalock, established a strong metric foundation for URM matriculation and over 30 years of service brought Purdue to national recognition for K-12 programs; 1974 Head of First-Year Engineering, Dr. Harold Amrine provided funding and encouraged full faculty support for these initiatives. These and so many other individuals like Dr. Phil Wankat, Dr. Eric Furgason, Barrett Robinson, Dr. William Lebold, and Jane Daniels paved the way for underrepresented minority student access and success at Purdue. Today, we have continued this commitment to diversity and inclusion under the leadership of the current Dean of the College of Engineering, Leah Jamieson, and our current president, Mitch Daniels.



Leah H. Jamieson John A. Edwardson Dean of Engineering

### **Mission:**

## Message from the Dean of the College of Engineering:

It is a genuine pleasure and honor to congratulate Purdue's Minority Engineering Program on its 40th anniversary. It is fitting time to pause and take stock of all MEP has done: the lives MEP has touched, the friendships forged, the futures shaped, the goals envisioned and achieved. It is a time to remember the bold past leadership of Marion Williamson Blalock and to celebrate the inspiring current leadership of Virginia Booth Womack. It is also a time to reflect on the history and the stories of the underrepresented minority engineering students, faculty, and staff who have made Purdue a different, better place. I extend my heartfelt congratulations to the extraordinary people of Purdue's Minority Engineering Program. You have had – and will continue to have – a profound impact on our world.

To advance engineering learning, discovery, and engagement in fulfillment of the Land Grant promise through outreach, recruitment, and retention of historically underrepresented students in their pursuit to become extraordinary Purdue engineers. Although our programs are open to all students without regard to race, ethnicity, or gender, underrepresented students at Purdue University include African Americans, Latino/Hispanic Americans, and Native Americans/Hawaiians/Pacific Islanders.

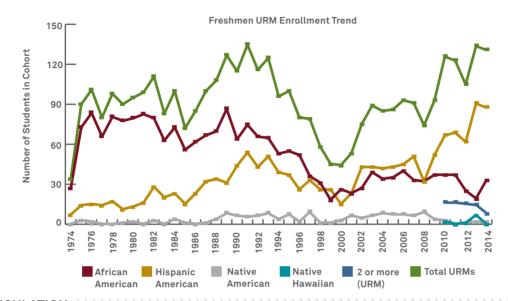
## **Objectives:**

Established in 1974, our programs have been nationally recognized and replicated. The following objectives guide our activities:

- To identify metric-driven strategies to increase the participation of historically underrepresented domestic students in engagement, learning, and discovery activities about engineering.
- To encourage interest, recruitment, enrollment, and matriculation of underrepresented domestic students in engineering at the undergraduate and graduate level.
- To provide programs that increase K-12 focus on mathematics, science, and engineering and inspire students to learn how they can use these tools to serve humanity, improve the quality of life, and make the world a better place.
- To create an environment that fosters the celebration of cultural diversity across all engineering disciplines and promotes global learning opportunities.
- To provide metrics and publications that stimulate collegial and corporate dialogue to champion the national effort to achieve workforce diversity and inclusion.

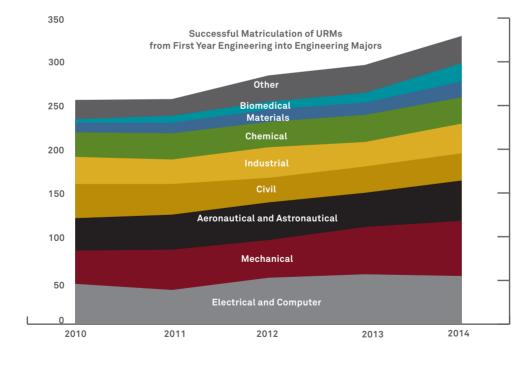
## **Enrollment- First Year and Matriculation into Engineering Majors**

FRESHMEN URM ENROLLMENT



> The past two years have demonstrated near record levels of URM enrollment in the freshmen engineering class at Purdue. This uptick in enrollment is largely fueled by an increase in Hispanic American enrollment. African American first year enrollment, which has been showing a steady decline, improved this year with additional scholarship offers.

MATRICULATION OF URMS



> Continuous improvement in the first year curriculum, student advising, learning communities, retention initiatives, and diversity focus within the schools have led to underrepresented minority (URM) students identifying majors earlier. The top majors of choice are Mechanical Engineering, Biomedical Engineering, **Electrical and Computer** Engineering, Aeronautical and Astronautical Engineering, and Industrial Engineering.

## RESEARCH & PUBLICATIONS

> Purdue's Minority Engineering Program is committed to engineering education research and knowledge sharing with the international community through peer-reviewed publications and conference presentations.

Over the past year, our investigation into the efficacy of the Academic Boot Camp titled "Can an engineering summer bridge program effectively transition underrepresented minority students leading to increased student success?" was presented at the 2014 American Society for Engineering Education Conference in Indianapolis, Indiana by Tasha Zephirin, Dr. Darryl Dickerson, Freddy Solis, Virginia Booth Womack, and Dr. Carol Stwalley.

At the 2014 Frontiers in Education Conference in Madrid, Spain, our research on intentional embedding of noncognitive skills into the Summer Engineering Workshops was presented: "Development of Non-Cognitive Skills in Minority Engineering Outreach Programs," authored by Tasha Zephirin, Dr. Darryl Dickerson, Freddy Solis, and DeLean Tolbert.

#### INVITED LECTURES

 > Dr. Darryl Dickerson was invited to present on MEP's retention programs and their specific impact on African American engineering student persistence and performance as part of the National Society of Black Engineers (NSBE) Retention Strategic Roundtable. The presentation provided programmatic structure and metrics as a model for replication.

Additionally, Dr. Dickerson and Virginia Booth Womack co-presented on the theme "Addressing the Challenge-Evidence Based Interventions" at the 2014 National Association of Multicultural Engineering Program Advocates National Conference in San Jose, California.

#### NATIONAL RECOGNITION

> Virginia Booth Womack was selected to serve as Interim Executive Director for the National Society of Black Engineers from December 2013-August 2014 with permission from Dean Leah Jamieson. This is the second time Purdue has provided support to NSBE during transition. During the interim period, Womack led the NSBE staff to: an increase in Board of Corporate Affiliates members; the launch of new Summer Engineering Experience for Kids (SEEK) camps in Chicago and Atlanta; and seeding for 2015 camps in Harrisburg, Pennsylvania and Milwaukee, Wisconsin. New initiatives launched during Womack's term included an Algebra by 7th Grade initiative for rising 3rd graders and year-long engagement efforts to integrate SEEK rising 6th graders into existing NSBE Jr. Chapters.

Virginia Booth Womack, Director of Purdue's Minority Engineering Program, received the 2014 National Association of Multicultural Engineering Program Advocates (NAMEPA) Outstanding Minority Engineering Program Administrator Award. She was recognized at the 2014 NAMEPA National Conference in San Jose, California. The award was established to honor members who have made exceptional contributions in pre-college enrichment, recruitment, leadership, and retention. It recognizes and honors NAMEPA members for their service in college-level administration and their dedication to increasing minority participation in engineering. The award also recognized Booth Womack for inspiring others to make service a central part of their lives.

## Outreach

### Summer Engineering Workshops (SEW)

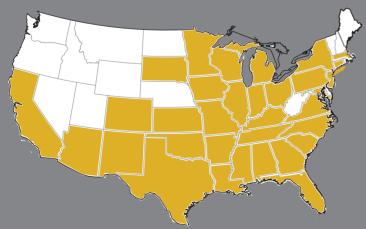
Developed in 1976, MEP Summer Engineering Workshops were designed to invite 6-8th grade students to Purdue University for a full week of discovery, engagement, and learning about college and careers in engineering. In 1980, the Purdue University Pre-Freshman and Cooperative Education (PREFACE) program was launched to focus on 9th and 10th grade students. These workshops consist of hands-on engineering projects as well as faculty engagement. Student participants are exposed to:

- ↗ Tours of engineering laboratories
- <sup>7</sup> Engineering design process
- Academic success strategies
- P Engineering careers and impact
- ↗ Campus life
- ↗ College preparation
- ↗ Life skills



Participants from Summer Engineering Workshops 6th/7th/8th Grade





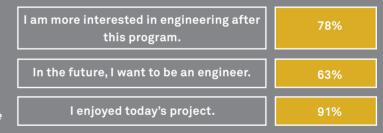
Summer Engineering Workshops have touched 1,279 students from 34 states (plus DC, Guatemala, & Peru) over the past 10 years.

### MEP Ambassador Program & School Visits

Developed in 2014, the Minority Engineering Program (MEP) Student Ambassadors work as a team and collaboratively with the MEP Program office staff to deliver early education on-campus and off-campus outreach services to expose historically underrepresented and other elementary, middle, and high school students to the field of engineering.

Through partnerships with target schools in Indiana and Chicago, the MEP Ambassadors deliver on-site innovative, hands-on engineering projects to inspire and encourage students at an early age to pursue careers in engineering. This semester alone the MEP Ambassadors visited more than 1300 middle and high school students in Indiana and Illinois. The goal of the MEP Ambassadors is to increase interest in engineering by providing a positive STEM experience. This fall we were visited by 250 students and the entire faculty of the ITW David Speer College Preparatory Academy freshman class in connection with the MEP Ambassador Program.

### **MEP School Visits: Attributes and Impact**



### MEP 2014 Student Ambassadors



### Christian White, Sophomore, Chemical Engineering, Hometown: Toledo, Ohio

As an aspiring chemical engineer, Christian D. White is an outstanding sophomore at Purdue University. Originally from Toledo, Ohio, Christian was drawn to pursue engineering after participating in the MITE academic boot camp after her junior year in high school. Already deeply committed to a career in chemistry, she was able to merge her desire to help others through the field of Chemical Engineering. Outside of academics, Christian enjoys participating in the National Society of Black Engineers whose mission is: "to increase the number of culturally responsible Black Engineers who excel academically, succeed professionally, and positively impact the community." Through this organization, she is able to practice organizational leadership, participate in charitable events, and learn from her peers and alumni.



## Recruitment



Dr. Eric Furgason (ECE) has been conducting engineering projects for MEP since 1974.

### >MEP PROMISE

#### Target Audience: Selected College-Ready High School Seniors Goal: Apply to Purdue!

Purdue's Recruitment Of Minorities Interested in the Schools of Engineering (PROMISE) program was established in 1975. PROMISE is a two-day campus based recruitment effort designed for high school seniors. Participants learn about the admissions process, financial aid, the first year engineering curriculum, and college success strategies. The agenda includes engineering classroom visitation, campus tours, meals in our world class dining halls, research laboratory tours, and social activities. At the close of the PROMISE program, participants have the opportunity to complete their on-line admissions applications. PROMISE is offered at no cost to the participants and occurs before the admissions application deadline to ensure students are considered for scholarships. Students are responsible for their travel to and from the Purdue main campus.

#### University Collaboration:

MEP collaborates with the Office of Admissions by offering a 'PROMISE Mini' program to underrepresented and interested families who visit during Fall Preview Days. This collaboration provides another opportunity for prospective families to visit, have lunch, and learn more about what MEP has to offer.



Students participating in the MITE Academic Boot Camp.





Dr. Cheng-Kok Koh (ECE) has been conducting MEP graduating scholars, Vicente Garcia, engineering projects for MEP since 2008. ChE '13, and Hermes Perez, IE '13.

### >MEP Engineering Preview

### Target Audience: Admitted Engineering Students

#### Goal: Choose Purdue!

Engineering Preview was launched in 1975 to encourage students who have received offers of admissions to choose Purdue. This is referred to as yield. The average yield of URMs in the College of Engineering is 18%. Preview is a two-day program that gives participants an opportunity to meet and hear from current engineering students, faculty, and staff about their experiences and have their questions answered regarding life at Purdue. The yield for MEP Engineering Preview participants last year was 58%. Engineering Preview is provided at no cost to participants, except for their travel to and from campus.

#### **University Collaboration:**

Office of Admissions: The Admissions-based Destination Purdue program collaborates with MEP Preview by providing campus and cultural center tours, organizing additional student panels, and providing information and materials to assist with yielding students to Purdue. *Division of Diversity and Inclusion (DDI):* The DDI mirrors Engineering Preview through the campus-wide launch of OurPurdue. This event is a cross collaboration of all Multicultural and Minority Program Directors to invite admitted students from Indiana and Chicago for a twoday campus experience at no cost. Yield from this program last year was 75%.

### >MITE Academic Boot Camp

Target Audience: Selected Rising High School Seniors

#### **Goal : Academic Preparation**

The Multiethnic Introduction to Engineering (MITE) program was initiated at Purdue University in the summer of 1975. Originally a two-week program, MITE is now a five-week college simulation program modeled after the Freshman Engineering Academic Boot Camp. MITE attendees are immersed in first year engineering courses including Chemistry, Calculus, and engineering projects. The agenda includes SAT review, engineering design, time management, and social acclimatization to college life. Student participants build a strong sense of community and are able to return to their high schools with a better evaluation of their potential. We have seen an average improvement in SAT math scores of 90 points. The highest increase was 180 points as measured through pre- and posttesting. All participants apply to Purdue at the close of the program.

#### **University Collaboration:**

MITE participants learn about all STEM disciplines during the five weeks. For one week, students participate in the Seminar for Top Engineering Prospects (STEP). Collaboration with the Science Bound Program and diversity directors in STEM have resulted in several MITE participants matriculating into technology, science as well as engineering majors.



### Anais Arnaiz, Senior, Aeronautical and Astronautical Engineering, Hometown: Miami, Florida

Anais Arnaiz is an Aeronautical and Astronautical Engineering student from Miami, Florida. Both she and her family knew that Purdue was the right school for her after they attended MEP's Preview program for prospective students her senior year of high school. That summer she was also able to participate in the Engineering Academic Boot Camp where she bonded with other incoming students and gained a better perspective of what college was going to be like. Being at Purdue for five weeks in the summer prepared Anais to make a smooth transition from high school and understand the hard work required for success. She was able to establish a family away from home at Purdue that has persisted since her freshman year. She credits MEP as being a huge factor in her coming, staying, and succeeding at Purdue.

## Retention

### **First Year Retention Efforts**

While the academic rigor and Purdue environment present a difficult transition for students in general, underrepresented minorities may face additional obstacles such as academic and social isolation and negative stereotypes. We know that every student admitted to Purdue has the ability to successfully attain a Purdue Engineering degree and our role is to ensure that students have the confidence and resources to achieve this goal - whether they are a first generation college student, only minority in their class, or feel that they just don't belong in the Purdue Engineering Academic Boot Camp (ABC) and Engineering 180 (ENGR 180), we have demonstrated that participation in these efforts is correlated with a higher first-year retention rate for Fall 2013 Participants.

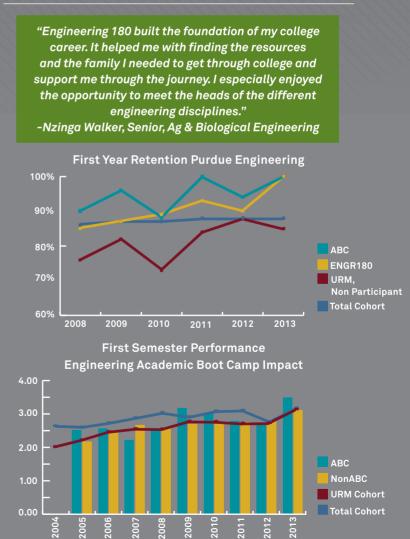
### > Engineering Academic Boot Camp (ABC)

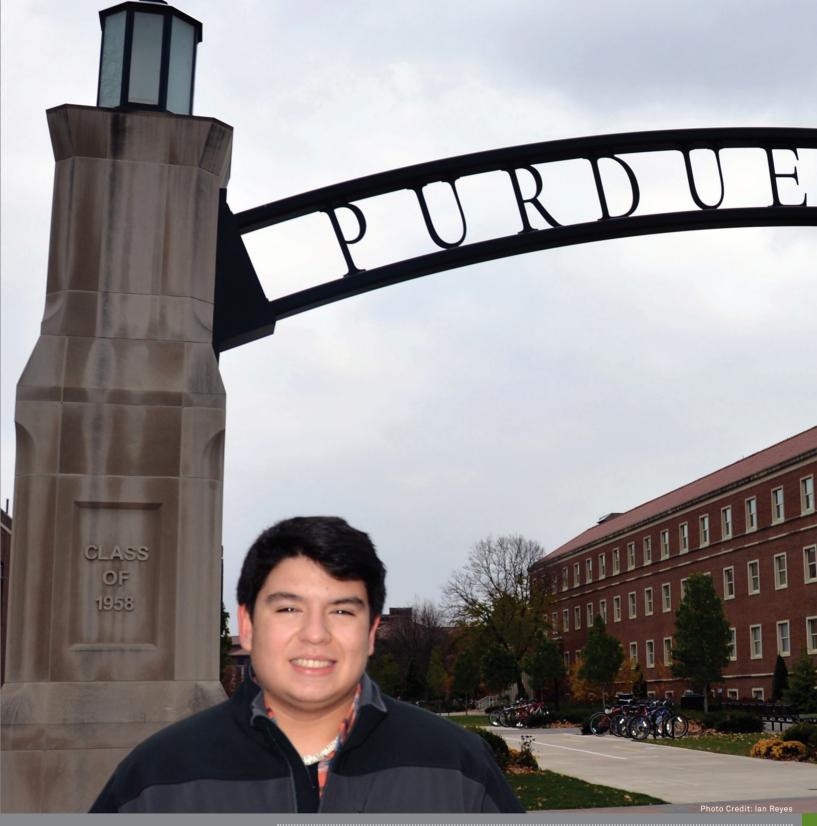
Launched in the summer of 2005 in the College of Engineering, the Engineering Academic Boot Camp was developed to improve the transition of underrepresented engineering students into the majority campus culture. Former MEP Assistant Director Allene Manning was tasked to condense a full semester of work into a non-credit bearing five week simulation of the first semester engineering experience at Purdue. Calculus, Chemistry, Physics, MATLAB, English, and an engineering design project were included along with professional mentoring, corporate tours, time management, team building, and social activities. Embracing the best practices of learning communities, engineering students were required to live, study, and have classes together in preparation for global competition in the fall. In 2006, the Colleges of Science and Technology adopted the Academic Boot Camp model; Agriculture was later included. Each area designed their camps to align with the needs of their college. After a three-year pilot period, the Engineering Academic Boot Camp has demonstrated the importance of transition of URMs into a majority institution in achieving first semester performance and first year retention in engineering.

"The Engineering Academic Boot Camp truly gives you a glimpse into your first semester in engineering. It's difficult, exciting, stressful, and fun all at the same time. I can honestly say my grades wouldn't be where they are today without it." -Linda Johnson, Sophomore, Mechanical Engineering

#### Engineering 180 (ENGR 180)

Engineering 180, the Minority Engineering Program Seminar, was established in 1987 to promote awareness of campus-wide academic and non-academic support systems; to facilitate interaction between students, faculty, staff, upperclassmen, alumni, and corporate sponsors; and to develop and share strategies for academic and professional success. Open to all students, it offers a platform for corporate and alumni supporters to meet and greet students as mentors and/or prospective employers. Through weekly assignments, students develop content for a personal portfolio to guide their educational development and showcase their personal, professional, and technical skills.





### Sam Vargas, First Year Engineering Program, Hometown: Chicago, Illinois

Samuel Vargas is a first-year engineering student from Chicago, Illinois. He was initially attracted to Purdue because of the high ranking of the College of Engineering. However, Sam finalized his decision to attend to Purdue after discovering the Minority Engineering Program and their summer Engineering Academic Boot Camp. The idea of getting acclimated to Purdue prior to the first semester was really appealing to him. The study skills that he learned and the free tutoring services offered through the Academic Success Center have translated into a truly successful semester. Outside of school, Sam is interested in the intramural sports offered at the CoRec. He is also involved in the Society of Hispanic Professional Engineers (SHPE) and sub-groups within SHPE such as SHPE Jr. and the SHPE go-kart team. Sam's advice to incoming freshmen: "Go to class! Also, do not be afraid to seek help if you are struggling in a class. There are always people in MEP and at Purdue willing to help you with what you need."

## Retention

### Academic Success Center

The Minority Engineering Program (MEP) Academic Success Center is located in the Neil Armstrong Hall of Engineering. The Center offers an ideal enviroment for study and collaborative learning for all students with free tutoring services in gateway engineering courses, supplemental instruction, and exam prep sessions. The goal for the center is to promote academic success. In the fall and spring semesters, the Academic Succes Center was visited 2,440 times. The analysis of center usage demonstrates that more frequent attendance correlates with increased academic performance.

### Scholarships

Through gifts from our alumni and friends, endowments, university funds, and generous corporate and non-profit support, MEP offers a number of scholarships to reward academic achievement and provide need-based support to students. We currently support more than 160 students through our holistic scholarship program. In a survey of students who declined their offer to attend Purdue, more than half cite financial reasons for their decision. MEP scholarships have been an instrumental tool in improving student access and success by making attendance more affordable.

### > BoilerMentor Program

The Division of Diversity and Inclusion launched the BoilerMentor program in an effort to ease the transition of students to Purdue. The program connects students from diverse backgrounds to resources and leadership development opportunities across campus that will support academic success and social inclusion through a peer mentor experience. BoilerMentors assist the Emerging Leaders Scholars and other interested students to create an inclusive network that involves upperclassmen and graduate students, faculty, staff, and alumni.

### **Student Organizations**

We have a rich 40-year history with student organizations that promote diversity and inclusion in engineering. The oldest organization is the National Society of Black Engineers (NSBE), founded at Purdue University in 1975. The most recent diversity-focused student effort is the Latinos in Science and Engineering (MAES) organization. The Purdue chapter was established in 2009. MEP formally advises the Purdue chapters of NSBE and MAES, and we provide support to the American Indian Science and Engineering Society (AISES) and the Society of Hispanic Professional Engineers (SHPE). Involvement in these student organizations is correlated with higher retention rates and higher academic performance compared to peers.



American Indian Science and Engineering Society (AISES)

To increase substantially the representation of American Indian and Alaskan Natives in engineering, science, and other related technology disciplines.



*Latinos in Science and Engineering (MAES)* To promote, cultivate, and honor excellence in education and leadership among Latino engineers and scientists.



National Society of Black Engineers (NSBE) To increase the number of culturally responsible black engineers, who excel academically, succeed professionally, and positively impact the community.



#### Society of Hispanic Professional Engineers (SHPE)

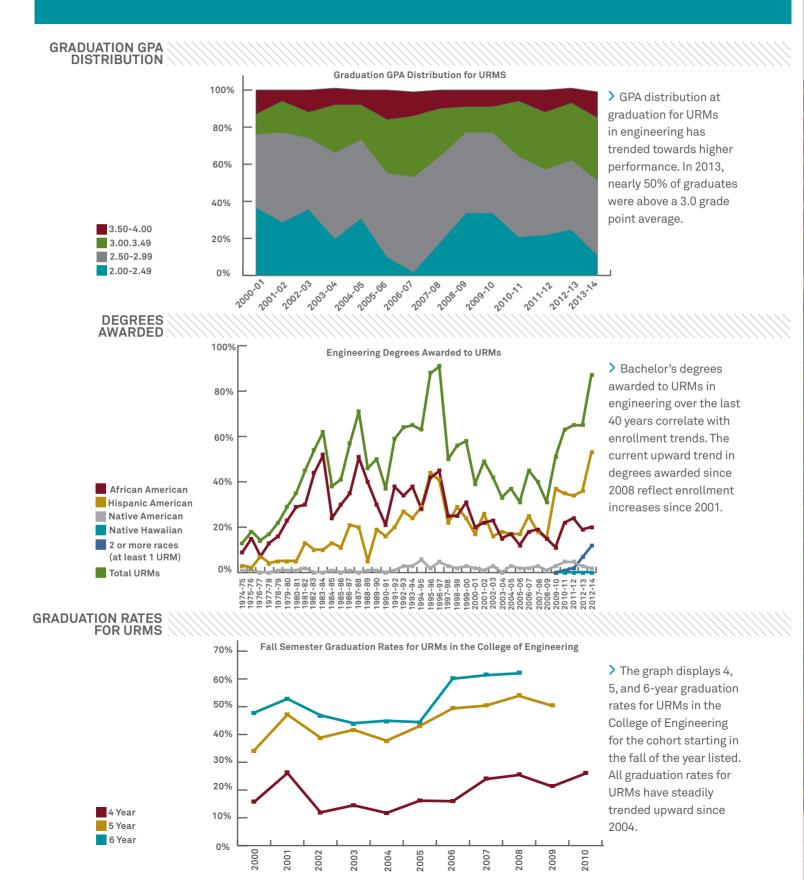
SHPE changes lives by empowering the Hispanic community to realize its fullest potential and to impact the world through STEM awareness, access, support, and development.



### Sydney Puckett, First-Year Engineering Program, Hometown: Munster, Indiana

Sydney is an enthusiastic freshman who is planning on studying mechanical or civil engineering. She was first inspired to attend Purdue after 8th grade, when she participated in the Minority Engineering Program's (MEP) Summer Engineering Workshop (SEW). "I enjoyed the camps and camp leaders, and came back for the same program the following summer. When it was time to actually go off to college, the lifestyle and the campus that I experienced before made me feel like Purdue was already a fit." She has always enjoyed art and drawing, and credits seeing a design project that she worked on in summer engineering workshops come into fruition as the reason she ultimately decided to become an engineer. Sydney is very active and is involved in NSBE, Purdue University Dance Marathon, Shreve Club, Pet-a-Puppy, and Convocations. When asked about MEP, she said, "The MEP office has definitely supported me as a student. For example, they wanted to know what I thought about implementing help sessions for a class that I'm in, took my idea, and ran with it. From a tutoring plan for students to a simple, 'You can do it! We believe in you!' They've definitely been on my side. My peer mentor, Claudia, is also a big help, especially since she has been in my shoes."

## Graduation



### Ermias Enyew, Senior, Mechanical Engineering, Hometown: Indianapolis, Indiana

10

Ermias has been involved in the Minority Engineering Program (MEP) throughout his studies at Purdue. He is a brother of the Gamma Rho Chapter of Alpha Phi Alpha Fraternity, Inc., has held various positions with the National Society of Black Engineers (NSBE), and is a Purdue Mechanical Engineering Ambassador. In his free time he enjoys playing tennis, swimming, and traveling the world. His advice for the next generation of Purdue students, "Make sure you take advantage of all of the different opportunities here at Purdue, including organizations, research, study abroad programs, and much more. It will help you grow, build connections, and make you a well rounded individual." Ermias credits the MEP Academic Success Center, its tutors, and the class resource binders for his success as an engineering student. He plans to graduate and work in the oil and gas industry and would eventually like to return to school and obtain his MBA.

NATIONAL SOCIETY OF BLACK ENGINEERS A Vitige Metallingted Through Party Proceeds And Patture Leaders Provided AS Particle University Agent R. Bird protostanting

ANTHONY MARKER BROWER A. SMILLE LOGAN IL BRIAN R. H

TO INCREASE THE MUMILIE OF CULTURALLY RESPONSIBLE BLACK INGINISING TO EXCEL ACADEMICALLY SUCCESS INCREASE OWALLY, AND FORTIVILY IMPACT THE COMMUNITY.

## Combined Five Year Total Giving FY2009 - FY2014\*

#### ALUMS & FRIENDS

#### TOTAL 5Y GIFT ABOVE \$100,000

Don and Liz Thompson

#### TOTAL 5Y GIFT \$10,000 - \$49,999

Sandy Alston Tony and Angela Harris Lara and Wayne Kauchak Anthony Wilder Miller Aidoo Osei Bill and Marian Roach Barrett and Janet Robinson Sandy Rogers

#### TOTAL 5Y GIFT \$5,000 - \$9,999

Jerry and Paula Burris Akasha N. Davis Percy and Shireen Gilbert Liz and Dave Klimes Janet Y. Spears Donna H. Thompson Phil and Dot Wankat Michael and Michele Whitt Shawn D. Williams

#### TOTAL 5Y GIFT \$1,000 - \$4,999

Kevin T. Alcorn Kimberly A. Azar-Anderson Ernesto Barajas Michael Berghoff Vincent C. Bush Michael and Nikole Childress Gary and Lynn Cummings Juan Ernesto de Bedout Deidra L. Fair Sikita K. Grayson Reggie D. Hayes Inez Hua Dre and Sabrina Hughes Maurice and Tamara Markey Lindsay Martin and Trineice Robinson-Martin Kat Mayfield Kevin and Wanda Nevills Keith C. Oxley William and Nancy Payne Carolyn Percifield Javara D. Perrilliat Tim and Audrey Reust Greg and Nancy Rodriguez Marion R. Ruffins Samantha A. Sanders Donald W. Shepardson Michelle R. Spencer-Gay S.A. Stern Dexter and Elana Thompson Monique C. Vann Tina S. Williams

#### TOTAL 5Y GIFT \$100 - \$999

Oyedotun Ajao DeAnna and Jorge Alvarez Betty Anderson Ragnar and Kristy Avery Juan Ayala Melissa L. Bagley Carmen E. Ball Gloriane M. Barbour Michael and Julie Bates Curtis and Lauretta Baylor Rayman and Merneatha Bazilio Kenneth and Kathleen Beache Amos H. Belcher Kirk E. Bemis Warren and Orlena Blanchard

Kelvin B. Bradley Alonzo S. Bright Millicent J. Broadus Jerome Broadus Danny and Sandra Brown Jay and Bethanne Brown Mary C. Brown Sharika A. Brown Tracy A. Brown Aaron and Christy Brundage Elmer and Judy Buchta Kyle Burson and Ayna Garcia-Burson Jerry L. Carlin Emily R. Chavez Joe Cieply Marc and Frances Clarke Darian and Gregory Collins Michele Cooper and Frederick Thompson Deirdre A. Coy Rafael O. De Jesus Bryan Dennis and Yolanda Hockaday-Dennis Shauntea C. Denton Roger deQuay Darryl A. Dickerson Angela F. Dodd Timothy and Nicole Driver Daryl E. Dunbar Phil Foster Lynette A. Foster-Nettles Juan C. Garcia Andres Garro Gidey A. Girmay Paul W. Hamann Artie L. Harris Mike and Terry Harris Markika M. Harris Cicely M. Hart Maurice A. Hilt Veronica D. Hinton-Hudson Matthew W. Hopson Edward B. Howard Willrene W. Howard Sharron D. Hunter-Rainey Kyle B. Iton Shannon D. Jackson Chuck and Marcia Johnson Pam Johnson Joseph A. Johnston Darren Jones Renee Kelly Himani S. Kesliker Stephanie C. Kidwell Kevin J. Kirsch Mark J. Knott Sean R. Kovich Miles P Lamb Travis B. Langster John W. Logan Jill M. Longoria Kenneth R. Macon Stephen A. Madison Mario and Maria Magana Robert W. Malone Osmil Martinez and Kimberly Leja Anna-Maria McGowan Camille and Edward McKinley Joshua R. McKinsey Eric and Kimberlee McLaurin Carl L. Meert Ekow and Marie Mensah Stan Merritt Marshawn Z. Merriwether Frank and Becky Mlynarczyk

Dominic and Carla Montoya

Yolanda Muhammad

David R Munoz Rachel M. Myers Wilbur and Sabrina Myrick Mary and Eric Nauman Jabbar Nelson Delfreda L. Norman Mark A. Norton Roy T. Okamoto Claude M. Oliver Austin D. Ortiz Ebun Osaze John H. Percifield Milton and Deborah Perez Hermes E. Perez Dawn M. Perry Tory Pitts Norha Plumey and Ismael Torres Rav Prieto Patricia A. Prieto Bryce E. Randle Richard W. Rea Shannon M. Rice Efren Robles James K. Rockaway Francis D. Rodriguez Herman H. Rose Javier F. Saenz Keith and Donna Schuessler Blake F. Scott Marty Scott Daryl B. Seaton James C. Skridulis George and Stephanie Smith Waleska Soto and Juan Gonzalez Michelle A. Spencer Jeff and Nikki Sriver Nikkia S. Starks Twain K. Summerset Val Taylor Sonia A. Teran Christopher and Devin Thomas Joseph M. Tittle Godwin and Esther Tongo Erin S. Trujillo Steven M. Trujillo John A. Turak William and Debra Vance Hector M. Verde Rafael E. Verde Karen Vermillion John and Marcia Vian Eliud Villanueva Tammy J. Walker Justin and Keri Wheeler Leslie Williams Johnny A. Williford Damon and Sylvia Wilson Samuel G. Wilson Virginia Booth Womack Terri and Jeffrey Woodard

#### TOTAL 5Y GIFT \$0 - \$99

Laurie and Alex Abell Israel J. Alvarado Charles D. Applewhite Ricardo J. Arrechea Artagnan and Laura Ayala Gratz and Dorothy Bailey Bruce W. Bishop Geoffrey L. Bland Art Bond Brent A. Boyd Sidney and Greta Bryson Scott E. Bulkley

Peter B. Carlsgaard Daniel and Kara Chudecke Cvnthia J. Cobb Corey L. Collins Amado G. Dehovos Adan H. Diaz Chad S. Dickerson Scott W. Dominguez Vanessa D. Duson Gregory and Kimberly Finses Robin and Jeffrey Fites Keith and Michelle Gillis Vernon B. Goler Peter L. Grimmer Michael R. Guardiola Harriett E. Hamlin Dave Harris Eric L. Harris Anthony and Brenda Heldt William E. Hinson Bob Hollimon Gene A. Huber British Hyrams Gayle M. Ingram Mark and Sherry Jennings Odell Johnson Tanya and Adolphus Jones Percy L. Kirklin Monica and Jarod Klaas William and Trina Kovalski Ignacio Laguna Peralta Bryan A. Locey Penelope G. Lora Ramirez Joel M. Lugo Ginger and Allen Lyons Mauricio Madiedo Alejandra Magana De Leon and Bedrich Benes Lucas Malm and Lydia DeNuccio Allene D. Manning Brian A. McNair-Williams Rosemond A. Moore Kamwana N. Mwara Emmanuel U. Nzewi Beverly M. O'Connell Francisco A. Pagan-Moreno Basil and Michelle Perez Angel L. Pineiro Sherie M. Purefoy Sabrina M. Reed Joshua and Nicole Reid Sam and Carla Robinson Guv E. Russell Justin S. Sampson Cassandra and Theron Shell Chris and Patty Siener Mary E. Sosa Stanley E. Starnes Melissa F. Stewart Tonya R. Strong-Charles Christopher L. Sutton Gayle and Sarah Thelen Paul C. Thomas Cynthia and Archangel Valencia Hector Vega-Barreto and Shakira Morera-Felix Kimberly K. Wafford Nosakhere Walcott Mark and Shari Weinzapfel Tony and Kimberley Will Keith M. Williams Bryant C. Williams Laverne D. Wisdeom Donald and Tammy Wisniewski Jennifer and Darius Wright Tom and Deanna Wyrick Damian M. Zink

## CORPORATE DONATIONS

#### TOTAL 5Y GIFT ABOVE \$100,000

General Motors Foundation Inc. NACME US NAVY

#### TOTAL GIFT \$75,000-\$99,990

### Air Products & Chemicals, Inc.

#### TOTAL GIFT \$50,000 - \$74,990

Ayco Charitable Foundation Shell Oil Company Caterpillar Foundation Alcoa Inc. Intel Corporation

#### TOTAL 5Y GIFT \$25,000-\$49,990

Delphi Foundation, Inc ExxonMobil Chemical Company Boeing Shared Services Group Lockheed Martin National Society of Black Engineers Lockheed Martin Foundation Eli Lilly & Company Foundation Inc MGP ArcelorMittal USA Inc. United Technologies

#### TOTAL 5Y GIFT \$10,000 - \$24,990

Boeing Company Northrop Grumman PPG Industries Foundation The Dow Chemical Foundation

#### TOTAL 5Y GIFT \$5,000-\$9,990

Rockwell Collins Inc. Phillips 66 Company 3M The Dow Chemical Company Northrop Grumman Foundation GKN Sinter Metals

#### TOTAL 5Y GIFT \$1,500-\$4,990

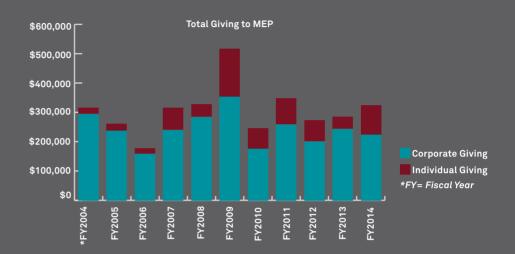
Solar Turbines Incorporated Eaton Charitable Fund General Electric Company John Deere and Company QUALCOMM Inc. BAE SYSTEMS Info. & Electronic Sys.

#### TOTAL 5Y GIFT UP TO \$1,500

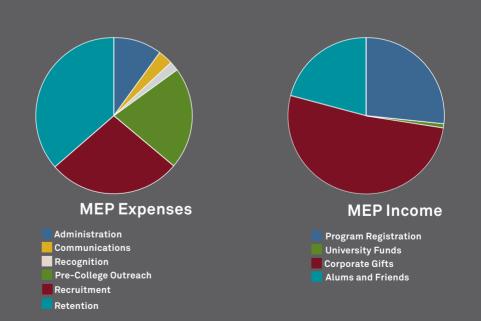
Eastman Chemical Company Foundation Inc. Eaton Corporation Ingersoll Rand Honda of America Manufacturing Incorporated Dow Corning Fidelity Charitable Gift Fund Silicon Valley Community Foundation Kimberly-Clark Greater Kansas City Community Fdn. TEK Systems Symantec Network for Good

\*IN RECOGNITION OF OUR 40 YEAR HISTORY, THE GIVING LEVELS PRESENTED HERE REFLECT THE TOTAL GIFT OF INDIVIDUALS AND CORPORATIONS OVER THE PAST FIVE YEARS.

### Annual Giving Trends from 2004-2014



### 2014 Annual Program Budget



The Minority Engineering Program could not achieve its mission to enrich the profession of engineering through the full participation of men and women from African American, Hispanic/Latino American, Native American/ Hawaiian/Pacific Islander descent without the generosity of our donors. Thanks for your one-time or recurring monthly gift to sustain our programs throughout the year. To make a contribution, please visit bit.ly/givetoMEP or contact Hilary Butler at 765.494.6383 or habutler@prf.org.

Designed by: Heather Marie Coar, 2014 EA/EOU



**Minority Engineering Program** Neil Armstrong Hall of Engineering, Room 1264 701 W. Stadium Avenue West Lafayette, IN 47907-2045

> 765.494.3974 mep@ecn.purdue.edu www.purdue.edu/mep



facebook.com/PurdueMep @PurdueMEP instagram.com/purduemep



