### ENGINEERING ACADEMY SPOTLIGHT



## **IMAGINE**

# **Imagine** their Futures!

Our students were awarded a variety of scholarships, grants, and awards, totaling in the amount of \$1.35M. Below are a few that our students were awarded:

- Roxanna Shahraki, National Merit Scholar Program Finalist
- Prasun Dhawan, Jignesh Mehta, & Hannah Enyioma Engineering Academy
- **Taylor Hunter,** Presidential Volunteer Award
- John Abraham, Humdaan Balagamwala, Prasun Dhawan, Jacob Gassman, Ryan Hunter, Allen Johnson, Athul Johnson, Ronak Patel, & Nathan Schaper, Academic Excellence Scholarship
- **Joshua Long,** Dean's Gold Scholarship

Kenneth Orji, Glorious Chikwem-Stanley, Davante Emebo, and Tiarra Rodrigues were awarded athletic scholarships to continue being studentathletes at the collegiate level.

The Elkins band, led by drum majors, **Prasun Dhawan** and **Matthew Whaley**, advance to the state Honor Band competition.

Maryn Kunthara won the National Center for Women and Information Techonology's Award for Aspirations in Computing.

**Sarah Hernandez** was named Newcomer of the Year for district Varsity Soccer.

Elkin's Unicef Club, led by **Sahil Shah**, is now the largest in the Houston-area metroplex.

InventXYZ, led by **Sai Krishnamurthy**, has successfully help two Inventathons at the local, district, and city levels.

**Kedar Pandya** and **Jet Situ** placed at the State-level Academic Decathlon competition.

Hemish Thakkar won 3 medals at the Taekwondo Nationals competition in Florida.

Robert Slaybough placed  $2^{nd}$  at State's in the discus throw.

Maryn Kunthara was awarded Model United Nations Best Research Paper award. **Anu Cherukara** is a member of FBISD's Leadership 101 cohort.

Prasun Dhawan, Hemish Thakkar, Sahil Shah, and Sai Krishnamurthy all participated in the first Academy Leadership Cadre event.

Tyler Dang, Kameron Villafana, Jacob Gassman, and Derek Lu lead the Elkins Swim team to a District championship.

The Class of 2017 presented their inventions and iterations in the Senior Project Showcase. The team of Tracy Colbert, Akhil Singh, Justin Eng, and Kylee Brouwer won 1st place for their invention of the Smart Mirror.

With the help of the booster club, students have the opportunity to obtain summer internships or mentorships from the following companies and universities:

University of Houston, the City of Sugar Land, Karl Storz, Siemens Energy, Bechtel, Lean and Flexible, LLC, and Texas Southern University.

### FORT BEND INDEPENDENT SCHOOL DISTRICT



## 2017 Academy Highlights

## **INSPIRE**





# **EQUIP**



# **IMAGINE**



## STUDENTS IN ACTION



Academy students participate in social events each semester, the popcorn and movie night and the annual end-of-year banquet.



Students complete a capstone project in their senior level engineering class – starting with a CAD drawing and finishing with a completed project.



Engineering Academy students give back to the community in many ways, including volunteering during the Chevron Marathon



Guest speakers attend our monthly meetings to inspire our students to think about engineering in the real-world and as a career.



Academy students participate in field experiences that allow them to experience the engineering field, hands-on.



## INSPIRE

# **Inspired** by Our Mission

The Engineering Academy was founded in 1999 at Hightower High School. In 2010, the freshman class of the Engineering Academy began their education at Elkins High School. The Engineering Academy now utilizes the renowned curriculum from Project Lead the Way to foster the engineering learning experience.

Mission: The Engineering Academy exists to provide students opportunities to receive in-depth exposure to a specific career pathway in the engineering field.

Vision: The Engineering
Academy is comprehensive in
nature and covers the
multiple disciplines in the
general field of engineering
with an emphasis on the
engineering design process.



#### **ENROLLMENT & STUDENT INFO:**

- **202** students currently enrolled in the Engineering Academy
- 60 seniors, 48 juniors, 43 sophomores, and 51 freshman.
- **628** students applied for admission for the 2016-2017 school year
- 79 students have committed to becoming the incoming freshman class for the 2016-2017 school year.
- 54.3% of students are currently zoned to Elkins

#### **ENRICHMENT ACTIVITIES**

Students in the Engineering Academy are required to participate in at least 4 enrichment activities each year. The purpose of the enrichment activities requirement is to have students experience the engineering world outside the confines of the classroom walls. Some examples of enrichment activities that students participated in, in the 2015-2016 school year are:

- Guest Speakers:
- Gerald Reece, Processing Engineer, DOW Chemical
- Dr. Shahrukh Irani, Industrial Engineer, Lean & Flexible, LLC
- Sathvik Vasam, Solar Engineer, Simplify Solar
- Anil Mehta, Chemical Engineer, DOW Chemical
- Brad Wood, Civil Engineer, ExxonMobil
- FBISD's Inventathon
- Orthotics and Prosthetics Lab at Baylor College of Medicine
- Engineering Career Fair hosted by the EABC
- Science Engineering Fair of Houston
- Hobby Fest at Hobby Airport
- Houston Mini Maker Faire
- Events with **Houston Astronomical Society**
- Energy Symposium at University of Houston

#### **CAMPUS & COMMUNITY INVOLVEMENT**

Students in the Engineering Academy are encouraged to pursue all of their interests, including those that are closely related to the field of engineering. Students are involved in and hold leadership roles within many of the clubs and organizations at Elkins High School. Students in the Engineering Academy are required to complete 25 hours of community service each year. Some examples of campus and community involvement are:

#### Clubs:

- Mu Alpha Theta
- Technology Student Association
- Robotics Club
- Science National Honor Society
- Math and Science Club
- UIL Math and Science Team

#### Service:

- **FBISD** Community Event for JASON Project
- Robotics Camp at **DMS**
- Gritty Gator Challenge at SCE
- Shark-a-thon at JSE
- Spring Fling at AE
- Science Night at APE
- Chevron Marathon

#### **2016 CAMPUS ACCOUNTABILITY**

Elkins High School received a 2016 campus accountability rating of Met Standard based on overall student achievement, progress, performance of identified student groups, and post-secondary readiness. Under the state's accountability system based on the STAAR test, campuses and districts receive either Met Standard or Improvement Required ratings. Elkins High School also received three distinctions for high performance in ELA/Reading, Mathematics, and Social Studies, along with one other distinction in Student Progress.

### **KEEP IN TOUCH & UP-TO-DATE!**

Brian Tucker Academy Coordinator brian.tucker@fortbendisd.com (281) 634-5645 Deidra Lyons-Lewis Elkins High School Principal Georgette Bubar Advanced Academics Director



Stay up-to-date by checking our website and Twitter feed!

Website: www.fortbendisd.com/engineering

Twitter: @elkinsengineers



### FORT BEND ISD ACADEMIES

Fort Bend ISD High School Academies exist to provide specialized learning communities with concentrated and robust course pathways comprised of career and academic classes.

### The Five Dimensions of Academies

- Relevance
- 2. Rigor
- 3. Connections
- . Research
- 5. Community

## EQUIP

# **Equipped** for Success

## Our students are college ready!

Our students go on to study a variety of fields in their post-secondary education. A sampling of their majors are:

- Applied Mathematics
- Applied Physics
- Architecture
- Automechanics
- Biochemical Engineering
- Biomedical Engineering
- Biotechnology
- Chemical Engineering
- Civil EngineeringComputer Science
- Electrical Engineering
- Engineering Management
- Industrial Engineering
- Mechanical Engineering
- Nursing
- Petroleum Engineering

#### **POST SECONDARY DESTINATIONS**

Our students attend a variety of postsecondary institutions, below are a few that our students are currently attending or have attended:

- Baylor University
- Colorado School of Mines
- Howard University
- Lamar University
- Massachusetts Institute of Technology
- Pennsylvania State University
- Rice University
- Rose-Hulman Institute of Technology
- Texas A&M University
- Texas Tech University
- Trinity University
- University of Houston
- University of PennsylvaniaUniversity of Texas Austin
- University of Texas Dallas

#### **ACADEMY ADVANTAGES & OPPORTUNITIES**

Being in an Academy can provide many advantages and opportunities for students. Some advantages in the Engineering Academy are:

- Surrounded by a group of like-minded students interested in the engineering field.
- Internship, mentorship, and partnership opportunities
- Field experience and exposure to the engineering workforce
- Field trips and guest speakers

#### **GRADUATION RATE**

#### Class of 2015

4-year graduation rate	100%
Campus average	96.3%
District average	94.3%
State average	89.0%

#### **ACADEMY STUDENT LEADERSHIP OPPORTUNITIES**

#### **Leadership Positions:**

- PresidentDirector of Activities
- Director of Communications
- Secretary
- Communications Officer
- Events Coordinator
- Master MentorHistorian

#### **Additional Information:**

Our Academy student leadership group participates in a District-wide Academy student leadership cadre each term. These cadres allow for student leaders from each Academy to share best practices. In addition, the parent Booster Club leaders are invited and included at times to bolster relationships.

Students not directly involved in the leadership/ officer group still have leadership opportunities through committee work and our mentor program for incoming ath graders.

# ACADEMY COURSES & ENDORSEMENTS (Classes of 2019 & Beyond)

STEM

Multidisciplinary Studies

Academy programs of study are aligned with House Bill 5, laying the groundwork for graduation and career planning. The outlined course of study ensures that students complete a rigorous set of courses within the focal point of the Academy.

Required Course 1	Other Courses
9 <sup>th</sup> Grade - Introduction to Engineering Design	Computer Science PreAP
10 <sup>th</sup> Grade - Principles of Engineering	
11 <sup>th</sup> Grade - Civil Engineering and Architecture or	
Aerospace Engineering	
12th Grade - Engineering Design & Development	

\*Course offerings are subject to change in the event that the Texas Education Agency makes changes to approved courses and/or due to low enrollment.