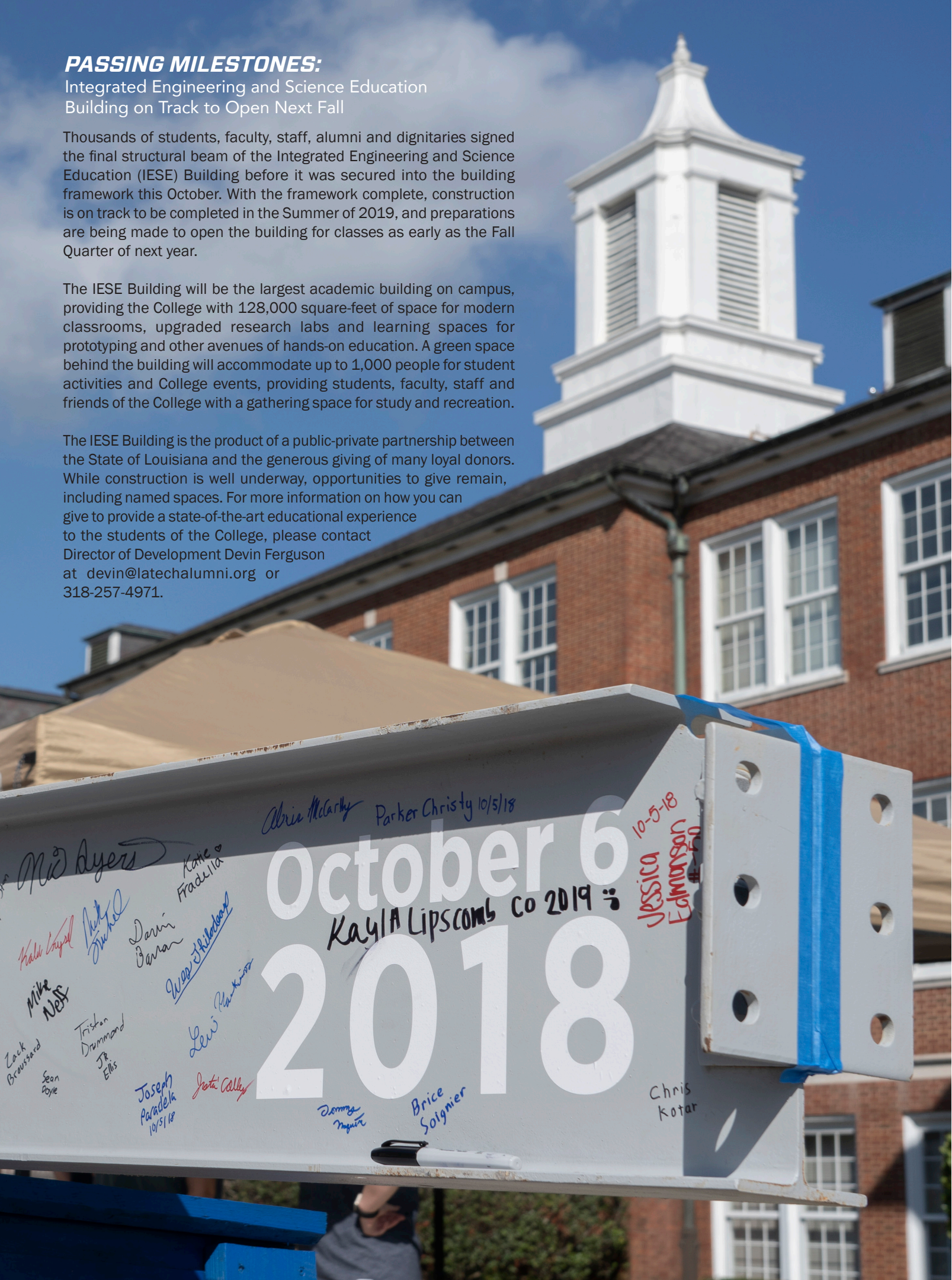


PASSING MILESTONES:
Integrated Engineering and Science Education
Building on Track to Open Next Fall

Thousands of students, faculty, staff, alumni and dignitaries signed the final structural beam of the Integrated Engineering and Science Education (IESE) Building before it was secured into the building framework this October. With the framework complete, construction is on track to be completed in the Summer of 2019, and preparations are being made to open the building for classes as early as the Fall Quarter of next year.

The IESE Building will be the largest academic building on campus, providing the College with 128,000 square-feet of space for modern classrooms, upgraded research labs and learning spaces for prototyping and other avenues of hands-on education. A green space behind the building will accommodate up to 1,000 people for student activities and College events, providing students, faculty, staff and friends of the College with a gathering space for study and recreation.

The IESE Building is the product of a public-private partnership between the State of Louisiana and the generous giving of many loyal donors. While construction is well underway, opportunities to give remain, including named spaces. For more information on how you can give to provide a state-of-the-art educational experience to the students of the College, please contact Director of Development Devin Ferguson at devin@latechalumni.org or 318-257-4971.



COLLEGE OF ENGINEERING AND SCIENCE
AT A GLANCE

ENROLLMENT
2,962

FIRST-TIME FRESHMAN
881

TAU BETA PI SCHOLARS
4

UTEACH GRADUATES
4

NAE GRAND CHALLENGE SCHOLARS
6

FACULTY
122

NEW FACULTY
13

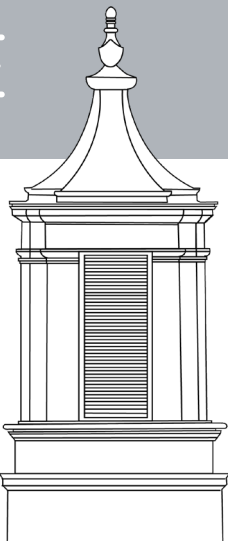
4th
MOST AFFORDABLE AND BEST VALUE PROGRAM – MS IN ENGINEERING & TECHNOLOGY MANAGEMENT
(SR Education Group Rankings 2018)

STARTING SALARY OF ENGINEERING GRADUATES
\$67,175

STARTING SALARY OF SCIENCE & TECHNOLOGY GRADUATES
\$59,947

RESEARCH EXPENDITURES (2016-17)
\$13.3M

\$1.76M
DONATED TO COES

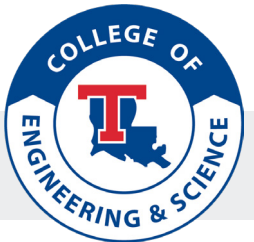


87%
PLACEMENT RATE OF GRADUATES
(within 9 months of graduation)

BS DEGREES CONFERRED
376

MS/PHD DEGREES CONFERRED
99

COES DONORS
1,057



<https://coes.latech.edu/>

(Facts and Figures are for Fall 2018, 2017-18 Academic Year, or 2017 Fiscal Year)

2018

COLLEGE OF ENGINEERING AND SCIENCE
IMPACT REPORT



DEAN'S MESSAGE



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Faculty Spotlight: **Marsha Cole**



Dr. Marsha Cole, lecturer of chemistry, considers herself a “chemistry counselor” whose goal is to teach students to apply positivity and mental dexterity to their problems.

Her mentoring, teaching and research strategies are grounded in the Twi word, Sankofa, which symbolizes the importance of learning

from the past and bringing forth what is useful. She continuously teaches her students the significance of “rolling-over” information among courses and mastering their curricula based on critical thinking and investigation rather than passing a course relying on memorization.

Based on Sankofa, Cole believes that she is the product of those that have invested in her, and works to ensure that students that she interacts with leave her class with skills that go beyond knowledge of chemistry. Students in her class sign a pledge to work hard and approach the concepts within the course with positivity. This assignment springs from her belief that students who perform poorly do so because of their mindset rather than their skillset.

“The only security in life is the one you create for yourself,” she says referring to the security of accepting responsibility for one’s own success and removing limitations placed by perceptions.

Meet **Devin Ferguson**

New College Director of Development



The College of Engineering and Science is pleased to welcome Devin Ferguson as our new Director of Development. Devin brings extensive experience in alumni relations and fundraising to the position, having served as the Director of Alumni Relations at the Southwestern Assemblies of God Univeristy (SAGU) in Waxahachie, Texas, before moving to Ruston last year with his wife, Megan, a 2012 Louisiana Tech alumna in the Kinesiology program.

Devin has been impressed with the level of alumni participation and the quality of student interactions at Louisiana Tech.

“I am passionate about the power of education and the role that opportunity plays in individual potential being realized.

Cole says her parents have always stressed the importance of having a vision, working hard and being accountable for one’s actions. Their influence, along with that of teachers and mentors helped develop her constant drive to sharpen her mind.

As a result, Cole has won five international awards and is considered a national expert in sugarcane research, sugar processing and analytical method development. She has worked with the National Aeronautics and Space Administration and the U.S. Department of Agriculture, has given 45 presentations and has published 34 peer-reviewed manuscripts.

Cole applies the plethora of skills and ideas she developed during her previous research experiences to lead her team as they develop complex, innovative projects focused on the needs of the Louisiana sugar industry. The most popular of these projects amongst her team is “Candy Cartel,” a project in which the team is investigating how to prevent terrorists from launching an attack using the three billion tons of imported sugars that come into the United States each year.

Upcoming projects include the development of a method to distinguish types of starch and of a new technology to aid in sucrose recovery with research collaborator and partner, Dr. Kevin Roberson, assistant professor of chemistry at Grambling State University. Cole is also looking into the composition of fat, hoping to better understand chronic disease with nutrition, cosmetics and medicine.

Cole and Roberson have a 2-year-old daughter, Zuri.

Student Spotlight: **Tyler Fontenot**

Electrical Engineering Junior



To hear Tyler Fontenot describe his activities at Tech, it’s difficult to understand how he finds time to work on all his projects and maintain his 4.0 grade-point average.

When Tyler says he’s “waist deep in everything,” that’s not much of an exaggeration. He’s the Team Manager for the Louisiana Tech Eco-Car team, which means that

he is in charge of keeping the team on schedule to prototype, build and adjust the new car for the Eco-marathon Americas 2019 competition, and Head of Rocketry for the Aerospace Engineering Club, which means that he is the lead for building the club’s rocketry program.

He’s also a member of the Biomedical Engineering Society, the Amateur Radio Club, and the College Student Leadership Council, and a soccer referee for the Northeastern Louisiana Soccer Referee Association.

Despite his hectic schedule and the lack of sleep that entails, Tyler says that he enjoys every facet of his life at Louisiana Tech. His favorite thing about attending Tech is the small town-like atmosphere.

“There’s a team feel even in the classroom. Because of the small class size and the block schedules, not only do most of

us students know each other, most of the professors know us. I think that’s unique.”

The small class size is one of the most important reasons that he chose Tech, but it wasn’t the only one. As a potential engineering student, Tyler took Tech’s reputation as a premiere engineering university into account as well.

The younger brother of two Louisiana Tech alums who majored in Biomedical Engineering and Education, Tyler understood the opportunities that spring from an education at Louisiana Tech.

One such opportunity presented itself last year when Tyler earned a summer internship with Zachry Group as an electrical estimating intern. He learned of the internship at GumboFest 2017 where he met company representatives. He says that the hands-on, practical experience he gained in his classes helped him on the job.

“I was well qualified, and I think the employers and other employees enjoyed working with me and the other Tech students there.”

Tyler hopes to carry the same level of professionalism and skills to his internship at Marathon Petroleum as a reliability electrical and instrumentation intern this summer.



A student is working on a prototype that could improve usability for a wearable mobile device.

Research Spotlight:
COES Collaboration Earns \$3 Million Department of Defense Contract

Louisiana Tech hopes to help the U.S. Air Force save money and manpower by building a more modern, innovative supply chain management system that can be used to maintain total asset visibility for cargo management, air craft maintenance and similar tasks. The University has partnered with CenturyLink and 1Prospect Technologies, LLC to develop this technology over the next two years.

To facilitate the research, the three partners have received a \$3 million Rapid Innovation Fund contract award from the Department of Defense. The contract award will support faculty and student research at the University, 1Prospect Technologies and CenturyLink.

A team of six faculty members and nine students at Louisiana Tech University will develop the new technology by combining the convenience of mobile devices with the capabilities of the Internet of Things, while maintaining the security necessary to contain and process U.S. military information.

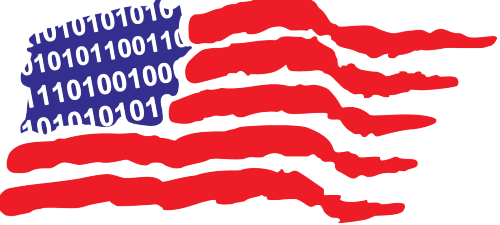
The faculty team, led by Dr. Jean Gourd, program chair of computer science and associate professor of computer science and cyber engineering, consists of Dr. Kelly Crittenden, program chair and associate professor of mechanical engineering; Dr.

Benjamin Drozdenko, assistant professor of cyber engineering; Dr. Box Leangsuksun, associate professor of computer science; Dr. Mike O’Neal, professor of computer science; and Dr. Galen Turner, professor of mathematics and statistics.

The Tech research team will develop the system architecture to enhance the military’s current system capability and reduce costs and technical risk by updating the existing legacy system to include modern mobile technology that uses instruments the size of a Raspberry Pi to maintain and send information across the system. The new system will improve usability and asset visibility, and provide an apparatus in which data support applications will be easier to update and will, thus, increase accountability.

The team’s combined expertise in cyber security, distributed and cloud computing, the Internet of Things, large software system design and implementation, and information and communication theory will create opportunities to experiment with novel techniques within the project.

The research will culminate with a prototype at the end of the two-year performance period.



CyberCorps®

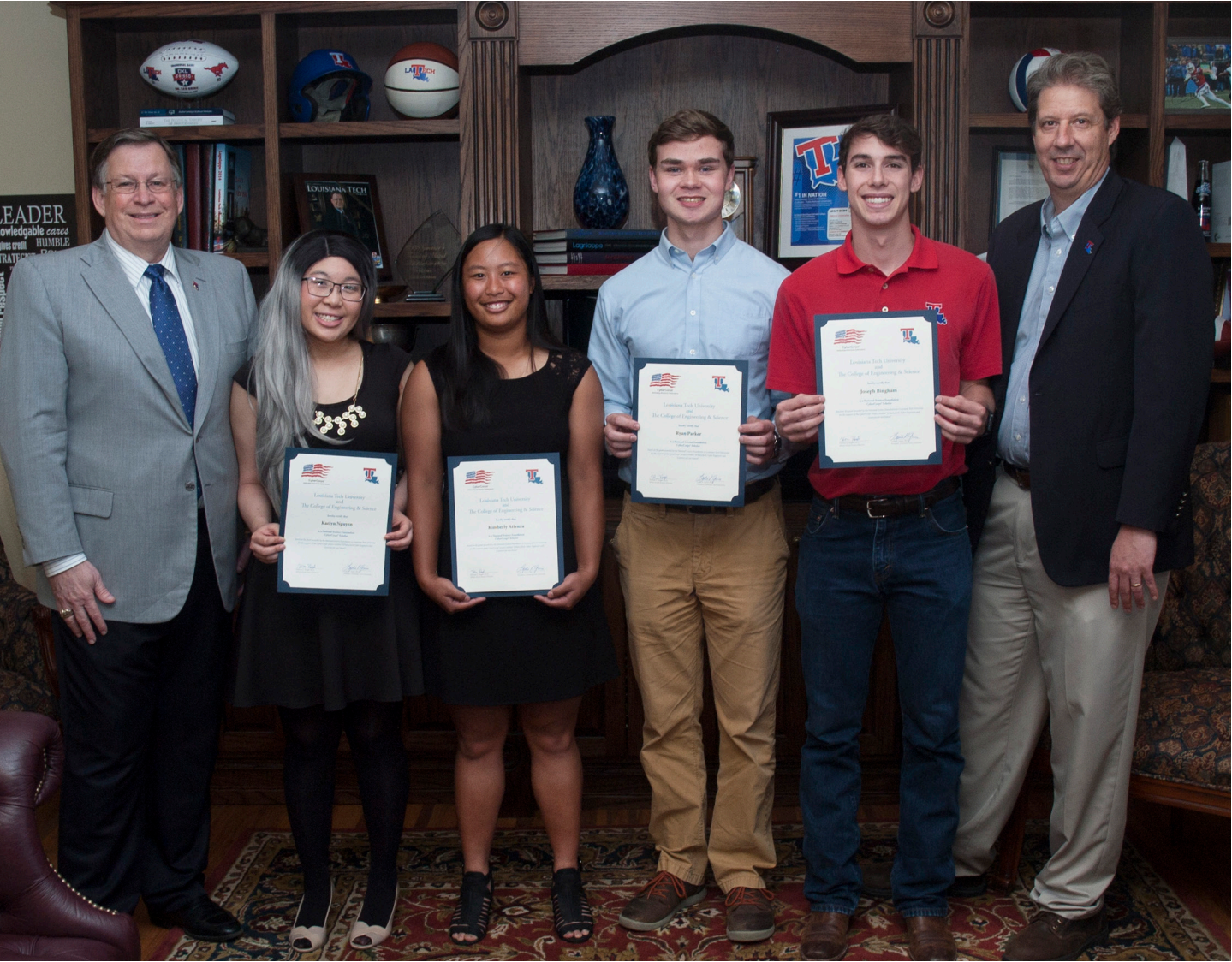
Defending America's Cyberspace

Engineering Security:
CyberCorps Scholarship

Four College of Engineering and Science students received prestigious CyberCorps Scholarship for Service (SFS) awards for the 2018-19 academic year. Kimberly Atienza (computer science), Joseph Bingham (cyber engineering), Kaelyn Nguyen (computer science) and Ryan Parker (computer science) earned the distinction for excellent academic achievement and commitment to a career in cybersecurity.

The CyberCorps SFS program is funded by a \$3.5 million grant awarded to the College by the National Science Foundation. The grant will provide scholarships to 36 students over a five-year period to prepare them for jobs as cybersecurity professionals within the government workforce.

To be eligible, students must be enrolled in either the Computer Science program with a Cybersecurity concentration or the Cyber Engineering program, have a junior standing or higher and maintain a 3.0 grade point average. To learn more about the Louisiana Tech program, go to <https://coes.latech.edu/students/cybercorps-scholarship-program/>.



Tech President, Les Guice (left) and College of Engineering and Science Dean, Hisham Hegab (right) with CyberCorps scholarship recipients, (left to right), Kaelyn Nguyen (computer science), Kimberly Atienza (computer science), Ryan Parker (computer science), and Joseph Bingham (cyber engineering).