

# *the* EXPLORER *Newsletter*

BIANNUAL PUBLICATION OF THE COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY AT TEXAS SOUTHERN UNIVERSITY



## Mr. William Hudson Gives Fall 2020 Commencement Address at COSET, Texas Southern University

The College of Science, Engineering and Technology (COSET) virtual commencement was held on Sunday, November 22, 2020 at 9:30 am in the Health and Physical Education Arena at Texas Southern University. Mr. William G. Hudson, Chief Operating Officer/ Chief Financial Officer/Director, Office of Financial and Support Services, Harris County Public Health presented the

commencement address.

Mr. Hudson has over 15 years of healthcare management and public health leadership experience. Under Mr. Hudson's operational leadership, Harris County Public Health is building an advanced bio threat detection network in partnership with Microsoft. He has worked with Harris County leadership to ensure a multi-million dollar renovation of

the abandoned Riverside Hospital.

Mr. Hudson received his Masters in both Public Health Management and Organizational Behavior from Benedictine University, and a dual Bachelor of Science in Biology and Chemistry from Texas Southern University.

One hundred sixty-seven students in the College graduated in Fall 2020.



## Fabulous 50: Free Health Professions Admission Test Preparatory Program

Fabulous 50 program provides extensive after-hours tutoring to biology, chemistry, and physics majors who are interested in medical, dentistry, veterinary, optometry and other health-related professions. Every eligible participant receives a stipend and a free Kaplan course upon completion of the tutorial program. The program is funded by a Title III grant to Texas Southern University.

Since 2011, the number of students majoring in Biology has increased

drastically. With this, there is a great need to support students opting for health-related fields by providing strong advisement, tutorial courses, test taking skills, health related seminars, exposure to shadowing programs, and providing internships. Thirty students are awarded scholarships that comprise MCAT summer test training via Kaplan, summer stipend, and MCAT examination fee.

The program which is now in its second year, started in October 2019

with after-hours tutorials to 100 students who were freshman, sophomore, junior, senior and post baccalaureate, with an average GPA of 3.65.

Dr. Ayodotun Sodipe, Department of Biology, serves as the director of the program. Tutorials are provided by Dr. Daniel Vrinceanu (physics), Dr. Bruce Prince (chemistry), Dr. Jason Rosenzweig (biology), Dr. Shishir Shishodia (biology), and Dr. Shiela Pope (critical analysis and reasoning).

## National Science Foundation Research Infrastructure in Science and Engineering Virtual Summer Internship Program

NSF RISE Summer Undergraduate and High School Research Program on Characterization, Dynamics, and Biological Impact of Indoor Airborne Dust Exposure was held from June 1 through August 7, 2020. Five undergraduate and 3 high-school students participated in the program. The participants received \$4000 stipend for the 10-week program. Faculty and graduate students provided mentoring and academic advisement to the students. The program involved academic enrichment courses and seminars to strengthen graduate school preparation. Several workshops for GRE

preparation, personal statements, and interviewing skills were conducted. The program has very extensive hands-on laboratory research training, however, with the onset of the pandemic, that component was converted to a virtual one.

The participants attended daily virtual meetings on Blackboard Collaborate Ultra and the entire research team met every Friday to exchange ideas and discuss their results.

The principal areas of research involved cell signaling, microbiology, environmental sampling, environment

modelling and python programming.

An abstract by Mr. Abhinav Vadassery, a high school student was accepted for presentation at the Texas Junior Science Symposium. The research was conducted on the topic "Impact of Particulate matter (PM2.5) on ACE2 receptor and COVID19 infections." Dr. Daniel Vrinceanu, Department of Physics, serves as the director of the program. The Co-PIs on this program are Dr. Jason Rosenzweig (biology), Dr. Shishir Shishodia (biology) Dr. Hyun-Min Hwang (EIS), and Dr. Sridhar Bhaskar (Florida International University).



## Summer Maritime Academy

Every year, the Transportation Studies department offers the Summer Maritime Academy (SMA) to high school students. It is a 1-week non-residential program designed to introduce high school students to the maritime industry. The program also introduces students to the Maritime Transportation Management and Security degree program and

scholarship opportunities at TSU. During the week, the topics of logistics, security, and the environment (vehicle emissions) were covered and students enjoyed field trips to the Port of Houston Authority and U.S. Coast Guard facility. U.S. Customs and Border Protection Agency officials also visited with students and demonstrated cargo

screening techniques to detect contraband items in cargo. Students also learned transferable skills through sessions on leadership, dealing with change, and effective communication strategies.

SMA is an annual event and has been welcomed by high school students.

## Faculty and Staff Annual Campaign

### COSET gives to Student Education

The faculty and staff of the College of Science, Engineering and Technology gave a combined total of \$19,371 in the 2020 Faculty/Staff Giving campaign. It was announced at the Giving Campaign Victory Celebration Thursday, December 10, 2020. Interim Dean Azime Saydam, Dr. Oscar Criner, Ms. Dolly T. Spencer, Dr. Bobbie Wilson were recognized as Leadership Donors of \$1,000.00 and more. COSET won awards for 100% participation and for meeting and exceeding its goal. Ms. Rita Didikiri won a prize during the University Kick-Off and Ms. Rachel Mizzell and Ms. Sharon Hudson won prizes during the COSET Mini Kick-Off.

Hats off to the COSET faculty and staff and to the mighty ambassadors:

Rita Didikiri, Gertrude Florent, Tioka Freeman, Nadareh Jahed, Denita LaShore, Rachel Mizzell, Lu Nasser, Helen Pittman, Charmyn Simon, Delois Smith Johnson, Dolly Spencer, Charlotte Whaley, and Judith Wilson for a job well done! Each Ambassador is awarded a Medal of Appreciation.

At the Victory Celebration, COSET senior student Patricia Ngantcha gave a heart wrenching testimony of the benefits of contributing to the annual faculty/staff campaign. She said, "I am here today to mostly say one thing which is Thank you. The impact that the scholarships offered at TSU has on so many student's education is more than you can imagine. There are a lot of students going through so much

financial burden especially during these Corona virus pandemic which have caused a lot of people to lose their jobs and consequently are not able to pay for their tuition and take care of their personal needs.

Receiving this scholarship relieves some of that financial burden and enables students to focus more on what is important that is our education and for that I will like to extend my appreciation to everyone. It is so inspiring to receive such help and it pushes me to keep working hard till I reach a point where I can in turn help other students in need."



Patricia Ngantcha





# Professional Pilot Program

College of Science, Engineering and Technology



Flight instructors, Capt. Sherrill and Dr. Connelly with Mr. Sunmisola Odumabo.

Mr. Odumabo climbing out of TSU's Cessna training aircraft which he flew for his flight examination. Mr. Sunmisola (Sunmi) Odumabo earned his Pilot's License on Tuesday August 4th after passing his FAA practical examination."



## TSU Celebrates its Newest Pilot

Mr. De’Ran Williams was the first to graduate from the recently formed Professional Pilot Concentration within the Department of Transportation, earning both his FAA Pilot’s License and a Bachelor of Science degree from TSU. Outgoing and charismatic, his personality was esteemed by fellow students and faculty alike. He was also a founder of TSU’s chapter of OBAP (the Organization of Black Aerospace Professionals) as well as involving himself in numerous leadership roles

throughout the campus. Showing great poise in the air, he passed his FAA practical examinations, written, oral and flight practical on his first attempt at each and graduated TSU with a stellar GPA despite taking on as many as 20 semester hours in a single term

De’Ran Williams, recently entered the United States Navy! Shown taking the oath, Mr. Williams shined at TSU where he was in inspiration to his fellow students and served as role model for all students in the Aviation department.



Although the staff and faculty do miss seeing De’Ran on campus and at the airport, their pride in the achievements of their first graduate gives everyone at TSU a great sense of pride and happiness for Mr. Williams and his continued success.

## Aviation and Technology Programs Reaccreditation

The Departments of Engineering, Industrial Technology, and Transportation Studies (Aviation Science Management Program) went through reaccreditation process this year. In spring 2020, the Department of Engineering has received full re-accreditation for 6 years from the Accreditation Board for Engineering and Technology (ABET) for its Electronics Engineering Technology program. Simultaneously, the Construction and Design programs in the Industrial Technology Department and the Aviation Science Management program in the Department of Transportation

Studies received reaccreditation with a 2- year report by the Association of Technology, Management, and Applied Engineering (ATMAE) in fall 2020. The ATMAE reaccreditation process was conducted virtually.

Accreditation is a peer-review process that requires comprehensive, periodic evaluations; a key element being the requirement that programs continuously improve the quality of education. Programs must set specific, measurable goals for students and graduates, assess their success at reaching those goals, and improve based on the results. The accreditation

criteria are developed by technical professionals to assure every program meets the demanding standards that prepare graduates to enter their engineering professions.

The reaccreditation of these programs culminates a process of evaluation by faculty and staff that started six years ago. The final 18 months of that process included the preparation and submission of a comprehensive self-study report for the program under evaluation. This was followed by a campus visit by Program Evaluators. The re-accreditation extends for another 6 years.



## Pre-Engineering Summer Academy in the Department of Engineering

The 2020 TSU-UNITE Pre-College Engineering Program and the Research Engineering Apprenticeship Program (REAP) was hailed a success by students and parents alike; after 4-week, and 6-week intensive student learning educational programs. Similar to the traditional, onsite programs, the virtual summer programs did engage students in project-based learning to expand critical thinking skills with STEM-based activities Coding Robotics Virtual Academy and Research.

A flexible, easy to use remote learning solution gave the students instant access to high quality academic content on their laptop, phone or tablet, whenever and wherever they wanted it. Through this program, a solution that combines cutting-edge video, audio and AI-driven analytics with lecture capture and webcasting technology was created. Instructors delivered lectures just as they normally do, enhancing their presentations with PowerPoint slides and handwritten whiteboard notes. Each student was able to individually build

and program a drone as part of their lab work. Research Students were provided with lab equipment and technology to perform environmental experiments and data analysis. Materials for lab experiments were mailed to student's residences or picked up via a drive-in pick-up from a location at the Ennis and Wheeler junction; and with compliance with all CDC social distancing requirements.

All in all, it was a fulfilling Summer. All 47 student participants did well. Each student was paid a stipend of \$400.00 and \$2,000.00 respectively for diligent participation; and representatives of the funding agency expressed pleasure with TSU for the conduct of this year's program despite the COVID 19 pandemic. Anchoring the overall activities was a team consisting of Ms. Marcia Robin-Stoute, an instructor in the department of engineering. Ms. Robin-Stoute has been the program coordinator for the department's summer academy. She has handled in a very efficient manner all

pandemic-related problems associated with the program. Worthy of mention is the valuable contributions from Ms. Kimberly Scranton. She helped develop delivery tools to conduct the internship.

Dr. David Olowokere has been the Principal Investigator for the project. He provided oversight and needed liaison between TSU and the funding agency, The team has indeed made tremendous contribution to the success of the program, and without a doubt, they have been the key to the program success. Several faculty members within the Department and the College, and even beyond, from other TSU colleges deserve special thanks for making this program a success. Also greatly appreciated is the involvement of professionals from several local engineering organizations.

In the meantime, the Engineering Department looks forward to another success story next summer as they continue to receive funding from the Department of Defense.



# Signature Programs

## Department of Transportation Studies

The Department of Transportation Studies at TSU offers a Bachelor of Science degree in Maritime Transportation Management and Security, Aviation Science Management, and Professional Pilot Certification. The Maritime Transportation Management and Security program emphasizes the national priorities of logistics, security, and environment in a single curriculum. The Port of Houston, U.S. Coast Guard, and U.S. Army Corp of Engineers are a few of our partners who help guide our program.

To date, 80 students have graduated from the degree program since the program was launched in the fall of 2010. The graduates are employed throughout the Gulf Coast region and internationally at prominent organizations such as Port of Houston Authority, Peace Corps, and Kirby Corp. Other graduates have gone to graduate school and law school. The transportation studies department at TSU also offers a Master of Science degree in Transportation Planning and Management. Programmatic emphasis is on preparing the students to enter the transportation-related public and private sectors with considerable training and advanced knowledge concerning planning and policy, logistics and management, systems and technology,

and homeland security. Students can structure their degree programs based on their career goals. For those focusing on planning or operations careers, the TSU transportation program has a strong foundation in traffic operations, transportation planning, public transportation, and Intelligent Transportation Systems. For those pursuing management careers, TSU transportation programs have strong foundations in transportation principles, economics and finance, logistics, homeland security, and transportation policy and management. In the past 10 years, more than 100 students have graduated from the degree program. Majors in transportation are provided with unique opportunities to work with transportation experts through the Innovative Transportation Research Institute, and Center for Transportation Training and Research. These centers provide programs or training with specialized internships and research exposure through ongoing applied and empirical research and demonstration activities.

The Aviation Program has the distinction of being the only four-year Aviation Program with a FAA Part 141 status in the State of Texas, offering two

concentrations. The Aviation Science Management Program is professionally accredited by ATMAE. The Pilot Concentration program is currently applying for AABI Accreditation. The retention rate for the Aviation Science Management Program was 47.37 in 2018.

The TSU Aviation Program provides many paths for student employment. We currently have Alumni working all over the United States in capacities to include, Airport Manager, Air Traffic Controller, Airline Employee, Weather Advisory Analyst and Military Service. Our first graduate with an Aviation Science Management Degree with a Professional Pilot Concentration will graduate from The U.S. Naval Officer Cadet School on November 19, 2020.

Our Aviation Program recently signed an exclusive memorandum of understanding with the United States Coast Guard. Our Transportation Studies Department students will have the opportunity to receive Officer Candidate status based on their application and acceptance into the Coast Guard Academy. In addition, we will provide flight training for 20 Junior Air Force Cadets this coming summer at TSU's office at Ellington Field.

## Department of Computer Science

The Department of Computer Science offers both undergraduate and graduate programs. The Bachelor of Science program offers two concentrations – one in general computer science and another one in computer networks. The Southern Association of Colleges and Schools (SACS) accredit both the undergraduate programs. The undergraduate program had a retention/graduation rate of around

85% over the past 3 years.

The graduates from the program are employed as information and technology consultant, cyber-security consultant, information systems manager, database administrator, multimedia programmer, systems analyst, games developer, and technical writer. The department also offers an accelerated integrated BS and MS (4+1) program. Currently the

department has collaborative programs with University of Texas Health Science Center in data science; University of Texas San Antonio, Rice University and University of Houston in data engineering and science.

The department also has a collaborative research program advanced wireless research with Rice University, University of Michigan, and University of Utah.



# Obituary

## Dr. John B. Sapp and Memories

Dr. John B. Sapp, Jr. was a native Texan, born in Galveston, Texas. He attended Texas Southern University (TSU) and received a BS degree (1962) and an MS degree (1964). He later attended the University of Houston and received his Ph.D. (1971). He began his teaching career at TSU in 1964 and had done further study at Lawrence Livermore National Laboratory. During his tenure at TSU he mentored many students at the Masters and Doctoral level and had many peer reviewed publications. He served as Associate Dean and Interim Dean on

more than one occasion. He was the chair of the Chemistry Department since 2001.

In a word or two - Will be really missed. Respected. Mentor. Indebted memories. Decent man. Straight shooter. No Nonsense. Good adviser. Reliable. Friend. True Friend. Will be sorely missed. Reached out. Desk sign, "I could agree with you, but we'd both be wrong."-a tribute to his frankness. Great leader. Loved faculty. Cared about everybody. Fair. Good sense of humor. Direct. Cared about students. Shared his



chocolates. Great mentor. Made sure we took care of the students. Shot straight from the hip. Loved to watch the news. Loved to read the newspaper- read the obituary to make sure his name was not there. Well loved. Gracious. Editorialist. Contributing writer to the Houston Informer newspaper. History enthusiast. One who paid it forward. Dean Sapp. Rest in Peace.



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