the EXPLORER Newsletter

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

TSU's Aviation Program Receives FAA Accreditation

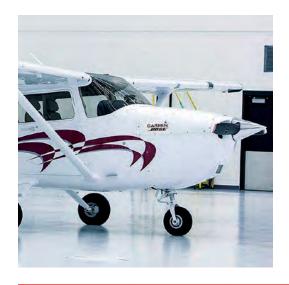


The College of Science, Engineering and Technology (COSET) received the Part 141 program designation from the Federal Aviation Administration (FAA) in November. TSU's Aviation program can continue its mission to train pilots along a specific career path. The FAA sets regular reviews of programs with a Part 141 curriculum for consistency, continuity, and acceptable flight training practices.

TSU's Aviation Science Management degree is accredited by the Association of Technology, Management and Applied Engineering (ATMAE). The program has four aircraft and two fullmotion Redbird flight simulators. Plus, veterans who enroll in the program can use their benefits to pay for coursework and flight fees. "The FAA Part 141 designation gives TSU flight students a special approved training program while attending classes toward obtaining their Bachelor of Science degree in Aviation Science Management," said Dr. Terence Fontaine, director of Aviation at TSU. "We have the title for a two-year period in which we must accomplish key metrics in order to maintain the FAA accreditation. We are excited that the hard work by our staff and leadership over the past few years has paid off."

CW39 Feature Showcases Texas Southern's Aviation Program

Texas Southern University takes to the skies through its Aviation Science program. Shannon LaNier of CW39 Houston visited Ellington Field with



TSU's Aviation leadership and students on January 12, 2021 to learn more about the University's distinctive four-year degree program. Texas Southern is the sole Texas institution to offer a four-year aviation degree and the only HBCU with on-campus flight simulators.

LaNier met Dr. Terence Fontaine, TSU's Director of Aviation, James Benham, TSU Board of Regents member, and Ahmed Farhan, a junior Aviation student pilot, as they flew in an aircraft at Ellington Field. TSU owns and houses two Cessna planes and holds classes at Ellington.

"The airline industry, the commercial pilot industry, they have all said they need the leaders and also want diversity in their employment base. This is the way to do it," Benham said. "The beautiful thing is unlike just going to the airport and getting your pilot's license, you can get your license and your ratings, but you also get a four-year-degree from one of the most outstanding institutions in the state of Texas at the same time."

The Aviation Management program with a Professional Pilot Concentration program began in 2016, but hundreds of students have graduated from the Aviation Science Management program that began in 1986. Students get handson experience inside the classroom with on-campus flight simulators and outside of the classroom students earn critical flight hours in designated aircraft.

COSET Engages with Aldine ISD Blanson Center for Technical Education







Dr. Shishir Shishodia, Dr. Ayodotun Sodipe, and Dr. Edward Osakue from the College of Science, Engineering and Technology (COSET) visited the Dr. Archie Blanson Career and Technical Education High School, a campus of Aldine Independent School District (ISD) in Houston on April 8, 2021. The visit was in response to an invitation from Mr. Franklin Higgins, the Director of Technical Education for Aldine ISD. The team did a short presentation to the Aldine team about programs in COSET that Aldine ISD students could benefit from. Dr Shishodia and Dr. Sodipe explained the various summer programs being organized at TSU and future developments that Aldine ISD students can benefit from. Dr. Shishodia emphasized the possibility of the students getting stipends for participating in the TSU Summer

Programs. Mr. Higgins and Ms. Wanda Ardoin-Bailey, Coordinator of Campus and Student Initiatives with Aldine ISD indicated great interest in TSU's programs. Blanson CTE High School offers health professions programs such as physical therapy, nurse assistant, dental assistant, and many more that are college ready with state of the art equipment and curriculum. The team visited their science department, robotics lab, architectural and mechanical design drafting lab, manufacturing lab, welding lab, and construction technology lab. A highlight of the visit was a demonstration on a construction site simulator. The program focuses on certificate programs such as robotics, inventor, certified nursing assistant, certified dental assistant etc. These certifications ensure that the graduates are job-ready in these

disciplines. Higher education is an attractive option for graduates in order to maximize their life-long income and enhance their economic and social wellbeing. Aldine ISD is already pursuing cooperative efforts with Lone Star College and Houston Community College System in dual credit system. COSET offered its cooperation and partnership that will provide the advantages of a 4-year university. Aldine ISD appears to be interested in working on partnership.

COSET has invited Mr. Higgins and his team to bring their students for a visit to TSU in the Fall of 2021. There was enthusiasm on both sides and an understanding for the need to continue communication to foster a great relationship between TSU and Aldine ISD. It was a wonderful experience and productive visit.

TSU Aviation Student Earns Private Pilot's License

Ms. Lubianka Lanka recently made history as the first female student in the Aviation Science Management program to earn her Federal Aviation Administration Private Pilot license. This is the first milestone for the junior aviation science major who is pursuing a commercial license. Lanka passed her FAA Check ride, the final examination to

get a pilot license on Sunday, May 30. It's an accomplishment she says she couldn't have done alone. She thanked her instructors, Rob Sherill and Ed Pataky, for preparing her and always being willing to answer any questions. "It definitely makes me happy, and I'm looking forward to the next step in my aviation career."



Academic Organization Fair - Health Occupations Students Association Future Health Professionals

As we slowly transition from the virtual life back to in-person interactions, on-campus activities have steadily resumed. One of the most notable events held in the spring semester was the Academic Organization Fair. This event was hosted on April 21 in the Sterling Student Life Center. Numerous organizations on campus gathered to showcase their academic affiliations and recruit prospective members in the process.

HOSA-Future Health Professionals is a student organization that provides professional healthcare skill development for students of all ages and prepares students to lead and innovate in this pivotal sector of healthcare under the leadership of Dr.

Ayodotun Sodipe . HOSA was represented by four members of the executive board namely Ms. Jessica Allagoa (President), Mr. Chukwudalu Ononenyi (Vice president), Ms. Alma Perez (Treasurer, Spring 2021 Graduate) and Mr. Maxwell Orori (Assistant Treasurer). Each Executive Board member worked hard to put together an outstanding showcase that incorporated a spin-the-wheel contest, refreshments, sign up sheet, COVID care packages, a fact board and special prizes.

We successfully gathered a total of 30 new members. This was indeed a lucrative event and a rewarding way to wrap up the spring semester of 2021.



TSU Student participated in NASA Virtual Experience

NASA Community College Aerospace Scholars (NCAS) selected Paris Garrett of TSU to attend the NCAS Virtual Experience, March 1-11, 2021.

Paris Garrett's successful completion of a five-week online NCAS course earned him a spot to participate in the NCAS Virtual Experience. Paris Garrett is one out of 104 college students from across the country, to participate in the nine-day virtual experience. Selected college students learn more about NASA's missions and careers in science and engineering throughout the virtual experience. Students form teams and design a mission to explore Moon or Mars. Each student team specifically arranges a company infrastructure,

assigns responsibilities, manages a budget, and develops communications and outreach strategies. Students also attend briefings given by NASA subject matter experts, receive information on how to apply for NASA internships, and virtually tour NASA's unique facilities during the event.

Professor Momoh A. Yakubu Selected for The Carnegie African Diaspora Fellowship

Texas Southern University professor Momoh A. Yakubu was awarded The Carnegie African Diaspora Fellowship. He will be traveling to Nigeria to assist the University of Lagos in the science of bioinorganic chemistry, and growing research capacity and output. Yakubu will work alongside University of Lagos professor, Dr. Tolulope Mojisola Fasina, mentoring graduate students and faculty, collaborating on research and curriculum development, and hosting educational workshops.

The Carnegie African Diaspora Fellowship Program, now in its eighth year, is designed to reverse Africa's brain drain, strengthen capacity at the host institutions and develop long-term, mutually beneficial collaborations between Universities in Africa, the United States, and Canada. It is funded by the Carnegie Corporation of New York and managed by the Institute of International Education (IIE) in collaboration with United States International University-Africa (USIU-Africa) in Nairobi, Kenya. A total of 527 African Diaspora Fellowships have now been awarded for scholars to travel to Africa since the program's inception in 2013.

The fellowship goals are to help establish collaboration between the fellows and host universities, enhance research outputs, encourage undergraduate and graduate research through mentoring and co-advising of students, enhance curriculum co-development, exchange faculty/ students' visits between the



Universities, and establish productive collaborative interdisciplinary research, etc.

The University of Lagos project is one of 56 projects that will pair African Diaspora scholars with higher education institutions and collaborators in Africa to work together on curriculum codevelopment, collaborative research, graduate training and mentoring activities in the coming months.

Dr. Kazakos Awarded TSU Presidential Achievement Medal

Professor Demetrios Kazakos,
Department of Mathematics was
awarded the 2020 - 2021 Texas
Southern University Presidential
Achievement Medal for overall
outstanding teaching, scholarly/creative
activities, and service.

He graduated from the
National Technology University of
Athens, with a degree in Electrical,
Mechanical and Industrial
Engineering. He received a Master's
Degree from the Electrical Engineering
Department, Princeton
University. During his study at Princeton
University he was an Alcoa Fellow.
He subsequently completed his Ph.D.
studies at the University of Southern
California, where he specialized in
Statistical Communication Theory. For a
two year period, was a Postdoctoral
Research Associate of the National

Research Council at the National Aeronautics and Space Administration, Johnson Space Center, Houston, Texas. At that time NASA was involved in the development of the Earth Resources Technology Satellite, and he was employed in the creation of novel statistical data processing algorithms for multi-spectral image data obtained by the satellite. He developed real time estimation procedures that performed well without any loss in performance, completely alleviating the problem of storage of huge amounts of data. His statistical processing algorithms were selected for the final implementation of the Large Area Crop Inventory Experiment (LACIE).

Following his postdoctoral appointment, he accepted the position of Assistant Professor of Electrical Engineering at the State University of

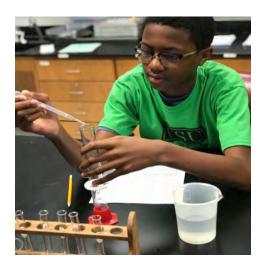


New York at Buffalo. Later he moved to the position of Associate Professor of Electrical Engineering at the University of Virginia. In 1985 he was promoted to Professor of Electrical Engineering at the University of Virginia.

In the summer of 2004 he moved to the University of Idaho to chair the Electrical and Computer Engineering Department. In August 2006, he became the Dean of the College of Science and Technology at TSU for a two year period.

Texas Southern University Summer Scholars Academy





TSU Summer Scholars Academy is a local outreach program that focuses on the basics of biology, while incorporating other aspects of the STEM fields to the anatomy and physiology of the body. This is an exciting and dynamic area that is highly relevant to the understanding and treatment of human disease. The program is designed to teach the basics of subjects such as biomedical sciences, to enable participants to acquire an integrated understanding of their previous knowledge in STEM. This course provides a combination of fields such as biology, pharmacy, forensic science with emphasis on technology/engineering to broaden their capability to design biomedical equipment and devices. Students are also exposed to the basics of coding where they learn computer and app programming, 3D printing, model building, and circuits. At the end of the program, scholars should have adequate exposure in the following areas: biomedical and physiological functions, anatomical and histological structures, pharmacy, forensic science, airways simulation process, and engineering and technology.

The TSU Summer Scholars Academy consisted of learning the basics of STEM and engaging in hands-on experiments. A day-to-day schedule consisted of STEM learning such as robotics, science with math, biology, and chemistry in the morning. Students were then sent to enrichment classes to explore STEM careers, experiments, and skills to become successful in their future career fields. Scholars were able to develop friendships, obtain team building skills, and grow as individuals.

At the end of the designated time, students created at home projects to manifest some of the tools they learned throughout their session. Students were then able to present their project in a culminating session to show evidence of learning.

56 students aged 8-17 years from Houston, Beaumont, and Winnie area participated in this program in a virtual setting on Zoom and Blackboard platforms. Every student completed a project aligned with curriculum produced by instructors. 100% of parents stated that students would return due to high level of rigor and teacher commitment.

Ms. Felica Davis Awarded STRIDES Scholarship

Ms. Felica Davis has been awarded the prestigious Strengthening Training and Resources for Inclusion in Data Engineering and Sciences (STRIDES) scholarship. The STRIDES scholars receive training in research, teaching, entrepreneurship, leadership, and administration.

As a third year PhD student in environmental toxicology, Felica Davis has gained valuable understanding of data analysis, geographical information systems, remote sensing and a working knowledge of environmental policy and management. She has a passion for exploring environmental issues and looks forward to sharing her knowledge and experience of this topic as she enters the field of research and teaching.

In the early years of the Texas native's professional career, she worked in the oil and gas industry as a quality assurance inspector. Her incredible talent was immediately recognized and she quickly rose to senior quality inspector and project manager. Ms. Davis has acquired many skills



throughout her career including exceptional analytical skills, strong attention to detail, multitasking, and working under pressure to meet scheduled deadlines.

The STRIDES scholarship is awarded by the National Science Foundation AGEP STRIDES grant to TSU, UH, and Rice Universities.

Dr. Warren Williams Retires from TSU Department of Biology After 47 Years

Dr. Warren E. Williams is happy to conclude his educational career on a high note. He retired as Chair of the Department of Biology after an illustrious career of 47 years at Texas Southern University.

Dr. Williams received his Ph.D. from the University of Illinois in 1975, his M.S. degree in cellular and molecular biology from Texas Southern University in 1969 and his B.S. degree in developmental biology from Texas Southern University in 1967. He was officially hired at the Texas Southern University in 1974 as an assistant professor of Biology. However, his experience at Texas Southern University actually began in 1967 when he served as an instructor of Biology.

He served as department chair more than one occasion. He has been the chair of the Biology Department since 2011. Dr. Williams has always prioritized education and students' interest over his own research and academic development. Even grants he administered were focused on student education and development. Dr. Williams' service to the department may be characterized as a selfless dedication to the faculty, staff, students, and a common cause of providing the best environment for the faculty for their work and development, best education for the students and their preparation for the competitiveness in the real world outside the walls of the University.



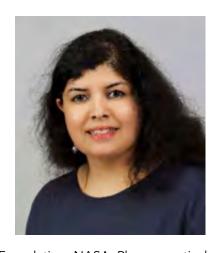
The College is grateful to Dr. Williams for his service and wishes him a happy retirement.

Dr. Alamelu Sundaresan Appointed as the Interim Chair of the Department of Biology

Dr. Alamelu Sundaresan is Professor in the Department of Biology. She joined TSU in Fall 2005 as a tenure-track Assistant Professor of Biology.

Dr. Alamelu Sundaresan was the recipient of the Scholarly Research and Creativity award at Texas Southern University for 2018-2019. Apart from being the department's lead Professor in Anatomy and Physiology (15 years), she has also partnered in STEM education with the NSF with a Peer mentoring initiative for core courses such as Math 131, Phys 237, Chem 131 and Biol 131. She has held a number of department, COSET and University level leadership committee positions. She is also a renowned Space Life Scientist & Immunologist. She holds more than 50 peer reviewed publications, including three patents for growing human bone outside of the body.

A veteran of shuttle flight, ISS spaceflight and parabolic flight experiments, she also works with nutritional supplements in human cells and animals to study their ability to enhance the immune system and prevent neurodegeneration. She collaborates actively with the University of Texas Health Science Center at Houston Medical School in inflammation, toxicity and the immune response. There are also active projects with NASA's Johnson Space Center in Houston. Her space research primarily focuses on study of human immunology in adverse environments, and what happens when the immune system is compromised such as in cancers, microgravity and auto immune conditions. She is and has been the Principal Investigator of 21 grants funded by the National Science



Foundation, NASA, Pharmaceutical Industry (J and J, Amino Up, NuVue Therapeutics, Nestle) and the NIH. She has earned many Research awards at the European Biochemical Society, NASA, International Society of Complementary and Alternative Medicine and TSU. She has also had radio and television appearances and is a dramatist. The most recent video interview was with the United Nations Organization in June 2021.

Dr. Aladdin Sleem Appointed as Interim Assistant Dean for Student Services and Instructional Support

Dr. Aladdin Sleem received his Ph.D. degree in Computer Science and Engineering from the University of Louisville in 2003. Before joining TSU in September 2006, he was the Chief Services Officer and the Senior Vice President leading the Services Division of Trendium, Inc.; a software development company specializing in data networks and telecommunications software.

Currently, Dr. Sleem is an Associate Professor in the Department of Computer Science and he has served his department, college, and university in several roles. At the department level, he helped the department establish the TSU Cisco Network Academy in collaboration with Cisco Systems in 2007. He also proposed a new Computer Networks concentration for the undergraduate program which

was approved and is being offered since Fall 2009.

At the college level, Dr. Sleem led the Department of Engineering as the Interim Chair between 2018 and 2020. During this period, he worked closely with the Engineering faculty to successfully renew the ABET accreditation for the Electronic Engineering Technology (ELET) program. He also led all the program assessment efforts for the entire college for several years.

At the university level, he served as the Chair of the University Curriculum Council (UCC) from 2012 till 2019. During this period, he established a proposal tracking system that helped track curriculum modification proposals throughout the approval as well as the implementation phases. In 2012, Dr. Sleem was selected to become a



member of the leadership team of the SACS-COC/LUMINA HBCU Degree Qualifications Profile project that introduced the Degree Qualifications Profile paradigm to TSU.

Recently, Dr. Sleem was a team member of the TSU SACS-COC Compliance Certification Team that helped the university receive the reaffirmation of accreditation from SACS-COC in December of 2020.

Dr. Nancy Glenn Griesinger Appointed as Interim Chair of Mathematics

Nancy L. Glenn Griesinger, Ph. D. is a Professor of Statistics in the Department of Mathematics at Texas Southern University. She recently wrote a textbook, Elementary Statistics: A Guide to Data Analysis Using R (2021). It is the first college textbook to present the statistical programming language R at the introductory statistics level. It is also the first college textbook to have an African American woman as the lead author.

Professor Glenn Griesinger has received millions of dollars in grants from agencies such as NASA (National Aeronautics and Space Administration). She is currently being funded through TCEQ (Texas Commission on Environmental Quality) in collaboration with Dr. Mark Harvey of the Department of Physics at Texas Southern University.

A graduate of Rice University in Houston, Texas, she was the first African American to receive a Ph. D. in Statistics from the university. Upon graduation, Professor Glenn Griesinger was a postdoctoral researcher with NSA (National Security Agency).

Professor Glenn Griesinger's area of expertise is nonparametric statistics, which provides alternatives to parametric methodologies such as ANOVA (analysis of variance) when assumptions are not met.



She is a methodologist. That is, she devises new statistical methodologies and focuses on creative applications of existing methodologies.

For her career accomplishments, Professor Glenn Griesinger has been inducted into the Smithsonian Museum of African American History and Culture in Washington, D. C.

Drs. Oscar Criner and Desiree Jackson Return Back to the Faculty After Serving in the Dean's Office for over 13 years

Dr. Oscar Criner, Professor of Computer Science, Interim Associate Dean for Administration and Development and Dr. Desirée Jackson, Professor of Biology, Assistant Dean for Student Services and Instructional Support (OSSIS) have served in the Office of the Dean since 2009. Dr. Jackson was instrumental in building the OSSIS from ground up. She conceived and developed the OSSIS which currently has 3 full-time academic advisors serving over 1500 students in an academic year.

Dr. Jackson earned a Ph.D. in Biomedical Sciences from Meharry Medical College with specialty in molecular parasitology. She moved to Houston and joined the laboratory of Dr. Edward McCabe at Baylor College of Medicine, working first as a postdoctoral fellow, and then as a research associate working on the identification and sequencing of the human glycerol kinase gene, and on developing a DNA screening tool for β-thalassemia in Texas newborns. Dr. Jackson came to Texas Southern University in 1996 and was

recognized as the TSU Teacher of the Year 2001-2002. She served as Interim Department Chair of Biology Department for three years and subsequently, as Acting Chair.

Dr. Criner received his early education in the public schools of Texas and graduated from Phillis Wheatley Senior High School in Houston in 1956. He attended Howard University in Washington graduating with a B.S. in mathematics and a minor in physics. After graduation, he spent a year teaching physics at Grambling College and then returned to the graduate school at Howard. He received the Ph.D. degree in applied mathematics from the University of California at Berkeley in 1972. His study and dissertation research areas were nonlinear partial differential equations and the multidimensional calculus of variations. He has been Interim Associate Dean since 2009.

Both Dr. Criner and Dr. Jackson will continue to serve the College as faculty members in their respective departments.

The College thanks them for their service.





Ms. Delois Johnson Retires from Chemistry Department

Ms. Addie "Delois" Smith - Johnson, a native of Selma, Alabama, relocated to Houston, TX, in 1988 from New Orleans, Louisiana. She holds an Associate's Degree from Selma University and is a proud member of the Zeta Phi Beta Sorority, Inc. In 1995, she began her career with Texas Southern University as a Data Entry Clerk in the Office of Registrar. Since that time, she has held several administrative positions across the campus including the Graduate School, the Office of the Provost,

and most recently, Administrative Assistant for the Department of Chemistry.

When asked, about her greatest joy as an employee of TSU, she states, "The interaction with students" and she often reminds them that, "Everyday is not a sun shining day." On her desk, is her 'Wall of the Future'; a collage of children whose parents she has been able to influence as they matriculated through their studies. Each picture has a special a story, just as her story!



The College is grateful to Ms. Smith-Johnson for her service, and wishes her all the best for her retirement.



AZIME S. SAYDAM Editorial Director

OSCAR H. CRINER Editor in Chief SHISHIR SHISHODIA Editor

DESIRÉE JACKSON Associate Editor DOLLY SPENCER Associate Editor

CHARLOTTE WHALEY
Associate Editor