COST 101: Helping Science and Technology Students Find Success in the Classroom

COST 101 served as means of introducing new students to Science and Technology facilities and staff at the onset of their college journey to help them feel comfortable with speaking with their instructors for advisement and class needs. Speakers from the University community were invited to share with students important facts they needed to know in order to be successful.

The final COST 101 meeting of the semester concluded on April 23, 2014. Since September 20, 2013 over 283 students have attended COST 101 over the course of the fall and spring semesters.

Students surveyed found the COST 101 very useful and voiced a desire for more time. COST 101 was held on the fourth Wednesday of each month from Noon to 1:00 pm with refreshments served. Although COST 101 was designed for COST students, as word spread, students from other disciplines began to attend as they found the seminars beneficial to their progression at the University.

The Office of Student Services and Instruction Support (OSSIS) looks forward to providing the incoming new students with a new line up of support services and speakers.

THE SCHOLOSCARS
2014 Annual Awards Ceremony

“SCHOLOSCARS,” was the theme for the 2014 COST Annual Awards and End of the Year Celebration, held on April 30, 2014, 11:00 AM - 3:00 PM in the Texas Southern University Science Center Atrium. Graduate student, Rachel Guthrie welcomed the guests and Undergraduate, Chi-Tam Nguyen, presented the occasion for the celebration. The 300 plus guests were entertained by DJ Bluetooth as they gathered for this annual event where student scholars, faculty, and staff are recognized for their achievements during the year. All were entertained by Alex Jackson’s violin solo and later the “COST Family Feud Game,” hosted by Ms. Charlotte Whaley and Mr. Jeff Shaw before our traditional ending with dancing. Dr. Azime Saydam began the

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COST Final Frenzy

The College of Science and Technology Office of Student Services and Instructional Support (OSSIS), along with its partners, the College of Pharmacy and Health Sciences, Student Academic Enhancement Services Tutoring Office, and the Health Occupations Students of America hosted Final Frenzy Study Hall on April 30th from 5:00 pm to 10:00 pm in the Science Building Atrium. The event drew over 106 students which is the largest audience since its inception in the fall 2013. Students of all disciplines attended Final Frenzy to receive extra assistance for final exams through tutoring, student groups, and/or meeting with professors.

Midterm Madness and Final Frenzy were created with these students in mind to provide extra help. Upon arrival to the event, students are placed at study tables/groups with students needing help in the same course. This form of placement allows students to begin to interact with other students, share ideas and meet others from their class or major. It is our hope that this method will contribute to student retention through the use of student study peer groups and small groups sessions led by an instructor(s) outside of the classroom.

Many professors and teaching assistants from COST participated to help give students the extra boost and study assistance they needed to do well on their finals. Mr. Wilkerson tutored Chemistry students for over 3 hours in Chemistry 132. Additionally, Mr. Brown assisted students with their questions and concerns regarding what to expect on a Biology final, answered any questions on General Biology and Microbiology. These are just a few examples of what the instructors and student tutors are doing to help ensure the success of our students.

Dean’s Student Advisory Council Town Hall Meeting

The 2014 COST Dean’s Student Advisory Council Town Hall Meeting was a successful event. A host of students, faculty and staff were in attendance on April 16, 2014 for the meeting. A representative from each department within the College was present to address all of the students’ questions and concerns.

Members of the Dean’s Student Advisory Council and Student Ambassadors hosted the event. Students attending the meeting received a complimentary lunch in exchange for completing a short survey with questions aimed at identifying student motivations surrounding retention issues. There will be a full report on the survey given to the Dean of the College later this summer. Each student was given the opportunity to fill out a comment/question card or to step up to the microphone to speak. Department Chairs responded to the questions or comments.

The goal of the meeting was to assure the students that their voices would be heard and student’s voices were indeed heard.

Annual Awards Ceremony

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Awards Ceremony by presenting awards to Dr. Shishir Shishodia, Distinguished Advisement/Mentoring Award; Dr. Daniel Vranceanu, Distinguished Research/Scholarly Activity Award; Nin Wang, Distinguished Graduate Student; Chi Tam Nguyen, Distinguished Undergraduate Student; and Helen Pittman-Cockrell, Distinguished Staff Award. Dr. Desirée Jackson presented Student Scholarship Recognitions, the Departmental Outstanding Student Awards, Dean’s Student Advisory Council Recognitions, COST Student Ambassador Recognitions, and Special Student Recognition. Dr. Lei Yu presented the Dean’s Leadership Awards to Chi Tam Nguyen, for Exemplary Student Leadership; Kenyata Thomas, for Outstanding Service; Dolly Spencer, for Outstanding Dedication and Commitment; and Shishir Shishodia, Exemplary Contribution to college services. He made special mention of the Annual Faculty/Staff Campaign contributing a record $25,132.00, and of the four 2013 Homecoming Awards including 1st Place Campus Float won by the College.
ITC Business and Education Mission to China

Dr. Lei Yu, Dean of the College of Science and Technology, joined the International Trade Center (ITC) Business & Education Mission to China on April 13-22, 2014. The mission was led by the Honorable Congressman Al Green. One of the purpose was to promote and establish long-term cultural and educational exchanges between the U.S. and China’s leading institutions of education. Dr. Roger Hart, the Director of TSU Confucius Institute, was also a member of the delegation. As part of the mission activities, the delegation had the opportunity to visit Beijing Jiaotong University, Confucius Institute Headquarters, and to meet leaders of a number of other institutions in Beijing, Tianjin, Shandong, Xian, and Shanghai. The mission was extremely productive and successful, gave great exposure for TSU and its programs to various international collaborative opportunities.

COST Research Week
Big Data and Interdisciplinary

The College of Science and Technology successfully organized a one day Research Week Program on Thursday, April 3, 2014. The program was very well attended by faculty and students alike resulting in a near-capacity crowd. Dr. Sriram Iyengar, Associate Professor at the School of Biomedical Informatics at the University of Texas Health Science Center-Houston, was the keynote speaker who delivered a research seminar entitled, “Meaningful Interdisciplinary Research and its Impact.” Dr. Iyengar described how a similar interdisciplinary approach between engineering and mathematics has revolutionized computer animation and the entertainment industry. Following Dr. Iyengar’s presentation, the program transitioned into its panel discussion segment entitled “Technological Advances in Science and Technology and Job Market trends.” Panelists included: Dr. Narendra Gosein, Senior Principal in the Structural Diagnostics Services Group of Walter P. Moore; Dr. Sriram Iyengar, Associate Professor of Biomedical Informatics at UT Health Science Center Houston; Dr. Jonathan Silberg, Associate Professor in Biochemistry & Cell Biology/Bioengineering at Rice University; and Dr. Daniel Vrinceanu, Assistant Professor of Physics at Texas Southern University. The panel was moderated by Dr. Lila Ghemri, Chair of the COST Research Committee.

In Memoriam

Dr. Debabrata Ghosh (1933 - 2014)

Dr. Debabrata Ghosh, Retired Professor of Biology, passed away at his home in Houston, Texas on April 29, 2014 surrounded by those closest to him. He was 80.

Dr. Ghosh graduated from the University of Calcutta, Kolkata, India with a B.S. degree in 1956. He then moved to the United States and obtained a Masters Degree in Plant Physiology and Chemistry and a Ph.D degree in Plant Physiology and Biochemistry from Texas A&M University, College Station. He completed his postdoctoral training at the University of Texas, Austin before joining Texas Southern University in 1966.

In 1968 he was awarded the Robert A. Welch Foundation Grant. In 1972 he was awarded the first NBRs grant amounting to 5 million dollars to Texas Southern University. Dr. Ghosh mentored and guided the Master of Science theses of 35 graduate students from the TSU Department of Biology. Dr. Ghosh served as the chair of the Department of Biology from 1998 through 2004.
NSF CREST External Advisory Board Meeting

The External Advisory Board (EAB) meeting of The NSF CREST Center for Research on Complex Networks at TSU was held on May 2, 2013. Eight EAB members attended the meeting. The EAB Chairman Dr. Wei Zhao (Rector of University of Macau) called the meeting to order at 9:00 am and then TSU Provost, Dr. Ohia and COST Dean, Dr. Yu expressed their warm welcome to all EAB members on behalf of TSU and the College. Center PIs, Co-PIs, and Directors of Education and Technology Transfer reported their activities to the EAB members. This year’s EAB keynote speaker was Dr. Hesham Rahka who is a Professor and the Director of Center for Sustainable Mobility at Virginia Tech who presented his research achievement in transportation sustainability and intelligent transportation systems. The six research presentations from faculty and students, as well as over 20 research posters attracted many attendees’ attention. During the last academic year, the Center team members have published over 25 journal publications and 59 conference publications, and have been actively working as PIs on about $3 million in additional research grants from NSF, NASA, Army, Qatar, US DoT, Texas DoT and Southwest Region University Transportation Center. At the end of the meeting, the EAB members expressed their satisfaction regarding the Center’s current performance and also shared their comments on future development of the Center.

Airline Pilot Program at TSU

During Black History Month, Texas Southern University, a historically Black University, was awarded its coveted Federal Aviation Administration Certificate approving its Private Pilot Ground School Course. This event is notable because TSU now has the only four-year, state-supported pilot program in Texas. The movement toward obtaining this Pilot Certificate began in December 2011. At that time, Black Airline Pilots from all over the country, of them TSU Aviation Management graduates, flew to Houston on their own time to convince University President, Dr. John Rudley that this program is needed at Texas Southern, with results that will be seen all over the world. The inaugural class was held on June 2, 2014, and the Private Pilot License received at the completion of the course will be the first step toward becoming an airline pilot. For those who accept this challenge, “Welcome to the Millionaires’ Club.”

Career and Job Fair

The Maritime, Transportation, and Engineering Career and Job Fair was hosted by the Department of Transportation Studies in partnership with the Office of Career Placement and Department of Engineering Technology. The purpose of the event was to train the students in resume writing and expose them to employers with opportunities that match their specialized degrees and training. Employers in attendance included: Exxon Mobil, City of Houston, Port of Houston Authority, U.S. Customs and Border Protection, NASA, PLS Logistics, and State of Texas Alcohol and Beverage Commission. Students had an opportunity to network with human resources representatives from the above companies in a relaxed yet professional environment.

Administrative Professionals Appreciation Luncheon

The College of Science and Technology honored its staff for their exemplary contributions and service to the College at a luncheon held Wednesday, April 23, 2014 in observance of Administrative Professionals Day. Our staff has worked tirelessly to accomplish the objectives, goals and mission of the College. COST staff continues to represent the College with the highest standards of excellence and dedication to students. We salute and appreciate our staff for a job well done … keep shining with success!
Faculty Spotlight  Daryl Wilkerson

Mr. Daryl F. Wilkerson joined the Department of Chemistry as an Instructor and Laboratory Coordinator in the fall of 2008 after serving as an Instructor of Physics at Texas Southern University for twenty years. He was born in Dallas, Texas where he fell in love with science at an early age. In 1982, he was awarded a Bachelors of Science in Physics from TSU. In 1988, he earned Masters of Science in Chemistry also from TSU with his thesis entitled “A Study of Radionuclides as found in the aqueous environment near a coal fired electric power plant.” His research centered on the study of selected radionuclides (K-40, U-238, U-235, and Th-232) and their daughter products in the aqueous environment surrounding a coal-fired electric power plant near Houston, Texas. He utilized Gamma-ray spectroscopy, consisting of a NaI(Tl) scintillation detector and a multichannel analyzer to analyze the samples.

Presently, he is a candidate for Ph.D. in Environmental Toxicology in which his research involves air quality emissions modeling and forecasting of highly reactive volatile organic compounds (HRVOC) in the Harris County area. He is developing an Atmospheric Chemistry-Transport Meteorology model of HRVOC’s using a grid computing approach. Part of his research includes using computational chemistry fluid dynamics software to predict flow variables including wind speed, direction and mass transport of air pollutant dispersion.

Mr. Wilkerson coordinates the chemistry laboratories and graduate teaching assistants for the department. He is very passionate about the knowledge, health and safety of all the students at TSU. In his classes, Mr. Wilkerson is responsible for educating students in the fundamentals of inorganic and organic chemistry. He is very proud of his graduates and many have gone on to become doctors and pharmacists.

Mr. Wilkerson has coordinated STEM Workshops for middle and high school students at TSU. He organized presentations on “Chemical Reactions” which included several demonstrations and hands-on activities with endothermic reactions, exothermic reactions, and the properties of polymers.

Research Spotlight  Daniel Vrinceanu

Dr. Vrinceanu’s main research interest is in the study of behavior and dynamics of matter under extreme conditions through the use of theoretical and computational methods. Rydbergs are atoms at highly excited levels, with large quantum numbers and exaggerated properties. They play a crucial role in our understanding of Cosmology and Early Universe during the primordial recombination. The calculation of the rates of collisional and radiative processes of Rydberg atoms leads to more precise modeling of the free charge density during that era, which in turn, when correlated with observational data on microwave cosmic background, provides more precise determination of dark matter prevalence in the Universe. In laboratory, the study of Rydberg atoms will ultimately lead to a better control of matter at quantum level, as has been demonstrated in Ultracold Plasma experiments.

Dr. Vrinceanu studies these phenomena and other strongly correlated systems, such as anti-matter formation in highly magnetized plasmas, by performing large scale Molecular Dynamics simulations and classical trajectory Monte Carlo simulations. Plasmonic resonances on the surface of nano-particles and low field nuclear magnetic resonance are other examples of systems that under extreme conditions have unexpected and intriguing behavior.

Theoretical contributions of Dr. Vrinceanu include several aspects in mathematical physics such as classical symmetry and quantum groups and algebraic methods for solving Schroedinger’s equation. Along the computational axis of his research, Vrinceanu’s work concentrates in data science and visualization of large data sets, modeling and system biology of cellular signal pathways and advanced digital signal processing methods that use the universal statistical properties of noise.

At TSU, he obtained funds for building and operating the High Performance Computing Center, a shared resource that has the goal of expanding the research and training, accessible to a wide range of scholars across the campus.
Staff Spotlight Helen Pittman-Cockrell

Helen Pittman-Cockrell has been employed at TSU in the Department of Biology since arriving in Houston in August 1984. Ms. Pittman-Cockrell received her BBA majoring in Office Administration from Delta State University, Cleveland, Mississippi in 1984, and an Associate Arts Degree majoring in Business Education and Secretarial Science from Coahoma Junior College, Clarksdale, Mississippi in 1982. Since beginning at TSU in the Department of Biology, she has worked with 6 different department chairs. When she first arrived, there were just a few hundred biology majors, and now the number of biology majors exceed 700 (including both undergraduate and graduate students). Ms. Pittman-Cockrell has assisted with advisement, served as a mentor, and in some cases supervisor for many of the Biology students. Over the years, she has become the only staff personnel in the department with 18 Faculty both full-time and adjunct. Although her title is Administrative Assistant, many of her duties include but are not limited to advising, registering students, supervising undergraduate students, graduate teaching assistants, obtaining quotes, ordering and placing requisitions. Throughout the years, she has assisted PI’s and Directors with monitoring budgets for their grants, and assisted with submitting progress reports. She is an invaluable resource for the department. She enjoys working with the faculty, staff and students here at TSU. In her personal life she has been blessed with a wonderful husband (a TSU alumnus) and five children, two TSU alumni and one soon-to-be TSU Tiger. Each day Ms. Pittman-Cockrell tries to raise the bar for herself. She strives for excellence in all that she does. She strives to serve as part of the solution and not the problem. Here is a quote that she feels is instrumental as she conducts her day-to-day responsibilities:

*We are what we repeatedly do. Excellence, therefore, is not an act but a habit.*

Student Spotlight Ariel Bowman

Ariel Bowman is a scholar in the Houston LSAMP program and a member of the Thomas F. Freeman Honors College. She is also a Student Ambassador and member of the Dean’s Student Advisory Council for the College of Science and Technology. Ms. Bowman has been recognized as the Outstanding Sophomore, and the Outstanding Junior for the Mathematics Department. Ariel is also a two-time recipient of the Elaine M. Taylor Memorial Scholarship. She has also received the COST Faculty and Staff Scholarship. Ms. Bowman is recognized by Who’s Who Among Students in American Colleges and Universities, and she received Dean’s List, and President’s List honors all four years she has attended TSU. She participated in a Research Experience as an Undergraduate (REU) at the University of Iowa in Biostatistics. She presented her research at the University of Nebraska at Lincoln at the Nebraska Conference for Undergraduate Women in Mathematics and at events here on the campus of TSU. Ariel Bowman was the 2013-2014 President of the Society of Urban Mathematicians, a math club at TSU. She was also a Supplemental Instructor for the Math Department, where she conducted Algebra Recitations. Ms. Bowman graduated from TSU with a Bachelor’s Degree in Mathematics and Minor in Health Studies in May 2014. She was Valedictorian of the spring 2014 class. Ms. Bowman will be entering the Doctoral program in Applied Mathematics at the University of Texas, Arlington in fall 2014.

Alumni Raves James Dickinson

Jim Dickinson studied economic geography and cartography at the State University of New York at Oswego where he earned a degree in Geography. Seeking adventure after college, he joined the Peace Corps. Returning stateside, Jim was drawn to the oil boom in Houston where many of his university classmates had found employment. He quickly found a position at Exxon Production Research Company in the geophysical data processing department. After the good times in the oil patch turned bad, Jim decided to go back to his original profession with upgraded skills. He explored the Transportation Planning programs at Texas A&M and TSU. When he met Dr. Ledé in the fall of 1993 he decided that the TSU program was right for him. While working full time at Parsons Brinckerhoff conducting regional travel surveys for the Houston-Galveston Area Council, Jim started the program in the spring of 1994. When the surveys were completed in 1996, the H-GAC offered Jim an entry-level position in the Transportation Planning department. He then graduated in the summer of 1997.
Student Accomplishments

TSU-Health Occupations Students of America

The Texas Southern University Chapter of Health Occupations Students of America (HOSA)-Gamma Eta Rho continued its commitment to the College of Science and Technology by co-hosting the Midterm Madness and Finals Frenzy, where students come for tutorial sessions in biology, chemistry, and math. Members and officers participated in exciting team building exercises such as paintballing and laser tag. In April, HOSA members participated in the Texas HOSA State Conference in San Antonio, where all ten members placed in the Top 4 of their health-related competitions, with eight members qualifying for the National Conference in Orlando, FL. HOSA officers closed the semester with the induction of new officers.

Courtney Tewary Interns at Houston Zoo

In January, Courtney Tewary was selected for an internship in the Hoof Stock Department at the Houston Zoo. The 275 hour program generally lasts until early May. She was given the opportunity to work behind the scenes with animals, zookeepers, and veterinarians. In the Hoof Stock Department she worked with giraffes, rhinos, zebras, tapirs, okapis, and a variety of other animals. She performed keeper chats in front of exhibits in which she educated the public about certain species such as the rhinos and giraffes. She gained experience on all aspects of animal care such as health and disease, animal behavior and training, management during inclement weather conditions, birthing and nursing, and animal nutrition. She observed clinical procedures in the Veterinary Clinic regarding immunizations, medications, sedations, radiographs, surgeries, and many more. This experience has inspired her even more to pursue her goal of attending Veterinary School.

NSBE Convention

Texas Southern University chapter of the National Society of Black Engineers had a record-breaking sixteen students attend the annual national convention that was held in Nashville, Tennessee from the March 26-31, 2014. The trip was sponsored by the College of Science and Technology.

Students were exposed to professional engineers at the Career Fair who gave them advice on improving their resumes to stand out from all the other students. A number of students got interviews with major companies. One student was offered a summer internship. Other students have received follow up email or phone calls from employers. A recruiter from Toyota expressed interest in recruiting students from TSU to increase diversity in that company. John Shoboiki, participated in a raffle with Eastman Chemical Company and won $1000 for the TSU chapter of NSBE.

TSU Maroon Tails

The 25th Annual International Women in Aviation (WAI) Conference was held from Thursday, March 6 through Saturday, March 8, 2014, in Orlando, Florida’s Disney’s Coronado Springs Resort. With the support of Dean Yu, Provost Ohia and Dr. Olowokere, the ‘TSU Maroon Tails Chapter’ was able to attend and participate in the 2014 conference. The students were immersed in the tactics and strategies essential for successful aviation careers. Chapter members in attendance were Sharon Hudson, Chapter Founder and Advisor, Stephanie Fagan, President, Marco A. Gonzalez, Membership Chair, Edward Williams; Web Developer/Community Relations Chair, Tatiana Williams, Treasurer; Orlan Washington, member; Samyria Bennett, member, Delecia Holmes, member; Lydia Ndagire, member; and Nezabian Thomas, member.

Additionally, the TSU Maroon Tails Chapter is featured in the current Women in Aviation International magazine for their community service during the “Wings Over Houston Air Show”, October 25-27, 2014.
Scholarly and Creative Activities

Publications

Chen X., Y. Qi, D. Li and Y. Wang, “Dual Right-Turn Lanes in Mitigating Weaving Conflicts at Frontage Road Intersections in Proximity to Off-Ramps,” accepted for publication in Journal of Transportation Planning and Technology, 2014.


Reports


Theses

Yan Lu, “Safety Impacts Of Short Left-Turn Lane At Unsignalized Median Openings” March 6th, 2014 (Advisor: Dr. Yi Qi).

Guangqi Liu, “Use Of Directional Median Openings on Urban Median-Divided Roadways”, March 10th, 2014 (Advisor: Dr. Yi Qi).

Conference Proceedings


Fast Forward Skills Workshop

The TSU Maritime Industry Advisory Board hosted a workshop for Maritime students on April 10, 2014 to equip them with the skills to help them thrive in a work environment. Twenty undergraduate and graduate students attended the workshop. Survey results indicated that the students saw value in the development of the critical skills of communication, interpersonal, and adaptability and wanted additional training in those areas.

Visit from SUNY Maritime College

Earlier this year, TSU Maritime Transportation Program established a relationship with one of the most prestigious colleges in the United States of America for maritime education- State University of New York (SUNY) Maritime College. The Director of Graduate Admissions from SUNY Maritime College Mr. Alexander Bodeham recently visited with TSU Maritime Student Association members to discuss maritime graduate program options at SUNY Maritime College. Mr. Bodeham invited TSU Maritime students to attend their annual job fair in New York which attracts over 300 companies.

Black Pilots of America Summer Flight Academy to Begin July 2014

The Black Pilots Association Summer Flight Academy will be held at TSU, July 12-25, 2014. The Summer Flight Academy has helped translate this excitement to academic studies which form the foundation of a productive career in aviation. The instructors are experienced flight instructors who volunteer their time to share their combined experience of 165 years in the aviation field with the young people in the BPA Summer Flight Academy. Successful participants receive 10 hours of flight time and 40 hours of ground school. They must have at least a B average and be between the ages of 15 – 19. Students who complete the course and at the approval and supervision of the instructor may be allowed to perform a solo flight of the aircraft.

TSU Students Participate in SpaceX3 Launch

The College of Science and Technology students in the Biology Department led by their mentor and lead principal investigator Dr. Alamelu Sundaresan participated in the SpaceX3 launch on April 18, 2014 at Kennedy Space Flight Center. The three students representing Texas Southern University: Ivory Ellis, Elvis Okoro, and Olivia Madison were part of the University Research (UR) 1-Investigation of Countermeasures to Modulate and Augment the Immune System project. The study uses a newly synthesized compound which was found to enhance immune cell response in microgravity. The samples were studied aboard the International Space Station (ISS) for 30 days and returned on May 19, 2014. Genetic and protein analysis is currently being conducted on the samples.

Patent

TSU researchers Drs. Xin Wei, Yuanjian Deng, Renard L. Thomas, and Bobby Wilson received a US patent (US 8709226 B2) for their invention “Instantaneous electrodeposition of metal nanostructures on carbon nanotubes.”