

# HARRIS-STOWE STATE UNIVERSITY

## SCIENCE & MATHEMATICS ACADEMY

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## 2014 SUMMER/FALL NEWSLETTER



2014 Science and Mathematics Academy Participants

**CONGRATULATIONS** to the 2014 Science & Mathematics Academy participants and welcome to Hornet nation! The scholars began their STEM academic journey at Harris-Stowe State University with an orientation program. Captain Alexis Johnson, a civil engineer by training and an AMC Military Construction Manager, Engineering Division, Air Mobility Command at Scott Air Force Base, IL, served as the keynote speaker. Dr. Craig Smith, biology lecturer at Washington University in St. Louis presented STEM career opportunities during the annual White Lab Coat Induction ceremony. Thank you both for your informative presentations.

During the academy, the scholars were engaged in a variety of STEM related activities taught by various Harris-Stowe State University faculty members; attended presentations from guest lecturers; and engaged in weekly STEM field experiences. Once again, Sandra Burton and the members of the Boeing-St. Louis Aerospace Alumni Chapter of the National Society of Black Engineers graciously hosted a “meet and greet” reception for the academy students. I also appreciate the contributions of the STEM Advisory Board members: Lawrence Nwachukwu, PE; Travis Pryor; Drs. Celerstine Johnson, Seqwana Pryor, Craig Smith and Donald Lawrence.

Finally, the scholars ended the academy by showcasing their respective group projects at the Science Expo. Christopher Hicks, Senior EHS Engineer for Sensient Technologies Corporation, served as the keynote speaker. I appreciate Mr. Hicks for attending the closing ceremony and celebrating with us.

The 2014 Science & Mathematics Academy participants are off to a great start matriculating at Harris-Stowe State University. Scholars the preparations for a STEM career are arduous but rewarding tasks. Study hard and invest in your own academic future because the sky is the limit.

Best,  
 Dr. Tommie Turner  
 Director of the Institute for Sciences and Mathematics



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## BACKGROUND

Numerous first generation underserved students have difficulties adapting to college life due to lack of mentoring, cultural exposure to higher education and academic preparedness from high schools. Universities are being critiqued on their graduation rates in order to continue receiving state and federal funding. Academics, tuition and graduation rates are combined together in higher education. Thus, universities are constructing the academic infrastructure to assist matriculating students toward graduation.



## PURPOSE

Harris-Stowe State University received the largest grant in the history of the institution in August 2008 when the National Science Foundation (NSF) awarded the university an incredible \$2.498 million for increasing retention in the areas of STEM. In 2014, the university received another 1.7 million dollars from the NSF to continue the STEM initiatives on campus. On July 5, 2009, Harris-Stowe kicked-off the inaugural summer component of the grant, the Academy for Science & Mathematics for incoming freshmen. The NSF grant provided room and board, allowances for meals and a stipend for each student. All academy participants were expected to be fully engaged in the daily summer enrichment activities and not allowed to work externally except on weekends. The Academy for Science & Mathematics prepared approximately 40 incoming freshmen from the St. Louis metropolitan area for the rigor and successful completion of first-year science and mathematics college courses through academic instruction, supervised study sessions, field experiences, various seminars and guest speakers. The students specifically focused on introductory concepts of biology, chemistry, mathematics and physical science taught by Harris-Stowe State University faculty members. After the academy, participants had a better understanding of Harris-Stowe State University's academic expectations and resources. The purpose was to prepare the students to develop greater interest, confidence and persistence in the study of foundational STEM courses.



## THE 2014 SCIENCE & MATHEMATICS ACADEMY WHITE LAB COAT CEREMONY

The Academy for Science & Mathematics provided the selected participants with a sense of community, camaraderie and self-identification as STEM majors. Borrowing from the tradition of the White Coat Ceremony established in 1993 by The Arnold P. Gold Foundation at Columbia University's College of Physicians and Surgeons, each academy participants began the summer enrichment program by receiving their Science & Mathematics Academy laboratory jacket and certificate of membership. Dr. Craig Smith, biology lecturer at Washington University in St. Louis served as the opening keynote speaker.



## SCIENCE, TECHNOLOGY, ENGINEERING AND MATH FIELD EXPERIENCES

The students had an opportunity to experience diverse STEM field experiences and meet STEM professionals. The STEM field experiences ranged from the biodiversity of plants to the history of aviation. These engaging adventures included traveling to the James S. McDonnell Prologue Room at the Boeing Company, Litzsinger Road Ecology Center and the World Aquarium at the City Museum.





## 2014 SCIENCE & MATHEMATICS ACADEMY CLOSING SCIENCE EXPO



At the culminating Science Expo, the students and Harris-Stowe State University faculty highlighted their group research projects to the university academic community, family and friends. Christopher Hicks, Senior EHS Engineer for Sensient Technologies Corporation served as the closing keynote speaker.



### FROM A STUDENT'S PERSPECTIVE

**Name:** Anjane Miller

**High School:** North County Tech

**Major:** Nursing

**Why I Chose Harris-Stowe:** "I believe that HSSU's system fits me and I can learn about being at a HBCU."

**Goals with Degree:** I want to work in a hospital as a ER nurse and then attend med-school to become a ER physician.

**What I Liked Most About the Summer Academy:**

The academy exposed me to real college experiences.

**Words About the Faculty:** The faculty were really great— they taught me things about myself that I didn't know and I enjoyed learning from them.

