U.S. Department of Transportation
Office of the Secretary of Transportation

UTC Spotlight

University Transportation Centers Program

MATC Scholars Program Promotes Benefits of Graduate School to Under-Represented Student Groups

According to the U.S. Census Bureau, the current science, technology, engineering, and math (STEM) workforce comprises only 26 percent women, 7 percent Hispanics, and 6 percent African Americans. These figures are mirrored in the current transportation workforce—part of the reason that the U.S. Departments of Transportation, Labor, and Education are working together to strengthen skills training and career pathways across the transportation industry. In response, the Mid-America Transportation Center (MATC), based at the University of Nebraska-Lincoln (UNL), developed and implemented the MATC Scholars Program in 2010, a conference dedicated to promoting graduate study among underrepresented minorities and women in the transportation field.

Mid-American Transportation Center

2012 MATC Scholars

"We're actually filling a gap that I've seen over the years in terms of the preparation and exposure to all the graduate opportunities that are available to minority students," said Judy Perkins, Ph.D., Professor of Civil & Environmental Engineering at Prairie View A&M University and MATC Scholars Program Cofounder.

Because underrepresented students can be less likely than other undergraduates to believe they can succeed at graduate school, a key feature of the MATC Scholars Program is to address this mistaken belief head-on. Thus a majority of the conference speakers are experts chosen from underrepresented groups, who have developed highly successful careers in the private and public sectors. Their personal stories of overcoming obstacles to find professional and academic success inspire students to gain the knowledge and skills necessary to succeed. To date, about 15 faculty members from Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs) have served as faculty mentors.

"I'd say that the most important part I learned was the possibilities that could be obtained by getting higher education," reflected Metshafe Samuel, 2012 attendee from the University of Maryland Eastern Shore. "It actually gave me a renewed sense of belief that I could obtain a Ph.D."

The MATC scholars program is an intensive 3-day program in which faculty mentors offer sessions on topics including why graduate school is a viable option, financing graduate school through scholarships and research assistantships, tips for budgeting finances, selecting a program, finding a faculty mentor, and graduate study expectations. The sessions are available online so that students who did not attend the program can also benefit. Online sessions may be found at http://matc.unl.edu/scholarsprogram/presentations2015.php.

Based on their academic success, MATC Scholars have been selected from a variety of HBCUs and HSIs, including the University of Kansas, Prairie View A&M University, University of Maryland Eastern Shore, Southern University and A&M College, Tennessee State University, Lincoln University, New Mexico State University, University of Texas at Arlington, and North Carolina A&T State University. To date, more than 80 MATC Scholars have attended the MATC Scholars Program, of which about 45 percent were women.

Feedback from the MATC Scholars has been overwhelmingly positive. UNL's Bureau of Sociological Research developed pre- and post-surveys for the 2015

conference attendees and found that over 95 percent of the participants rated the program as very good (the highest category), and 100 percent of them said they would recommend the program to a friend.

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Luis A. Vázquez, Ph.D., Regents Professor and Associate Vice President for Research Integrity at New Mexico State University, with the 2015 New Mexico State MATC Scholars.

Focus groups were organized and conducted to allow students and faculty an opportunity to assess the program and discuss how their experience impacted their future plans and career goals. The majority of students in the focus groups commented that the program increased their desire to obtain a graduate degree.

Because of this event, I am more serious about making my goals of continuing education a reality," said Ms. Kamrie Dillard, undergraduate student in Mechanical Engineering at Southern University and A&M College in Baton Rouge, LA. "I am acting now (in my senior year) by learning about different programs and where my academic background and career interests will fit within the many options for graduate school." Dillard went on to say that as President of Southern University's American Society of Mechanical Engineers (ASME) Chapter, she intended to carry forward the MATC message about the career benefits and opportunities made possible [by grad school] by featuring a segment on the topic in the agenda of her Chapter's next meeting.

The 2016 MATC Scholars Program will target and encourage Native American tribal 2-year college students to attend a 4-year university and pursue transportation-related undergraduate and graduate degrees. The mentors look forward to making a difference for another group of bright and dedicated students.

The overarching objective of the MATC Scholars Program is best captured by Howard Adams, Ph.D., Founder and President of H.G. Adams & Associates, Inc., and MATC Scholar mentor who said, in reference to the program and its focus on undergraduate students, "We can bring opportunity to them. We can bring options to them. We can show them how the road opens, rather than closes."

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Ms. Elaine Armster, President, Linkscape360 LLC and 2015 program mentor, discusses career opportunities with MATC Scholars.

About This Project

The MATC Scholars Program is the collaborative effort of Laurence Rilett, Ph.D., Director of MATC and Distinguished Professor of Civil Engineering at the University of Nebraska-Lincoln; Judy Perkins, Ph.D., Texas A&M University Regents Professor and Civil & Environmental Engineering Professor at Prairie View A&M University; Erick Jones, Ph.D., Professor of Industrial, Manufacturing, and Systems Engineering at the University of Texas at Arlington; and Laviania Thandayithabani, MBA, MATC Assistant Director of Operations. For additional information about MATC, please contact Laurence Rilett at: lrilett2@unl.edu.