



LANGSTON UNIVERSITY TRANSPORTATION ACADEMY (LUTA)

OVERVIEW: Langston University hosts the Langston University Transportation Academy (LUTA) annually. The primary objective is to attract a diversified group of young people into the transportation workforce. Few minorities enter transportation professions. To increase diversity of future transportation professionals in the United States, it is necessary to deliver intervention efforts that are geared toward encouraging underrepresented students to take science, technology, engineering and mathematics academic courses. It is advantageous for young people to be recruited early in secondary school and exposed to career choices and opportunities in the transportation industry. Therefore, the academy has three related objectives: (1) to create awareness of and stimulate interest in career opportunities in the transportation industry for secondary school students; (2) to attract a broad and diverse selection of bright minds, and acquaint and stimulate them with the various aspects of the transportation industry; and (3) to increase the number of students who choose careers in the transportation industry. Figure 1 shows LUTA students.



Figure 1: LUTA students visiting the SPTC

LUTA curriculum generally involves learning about land, air, water, and space transportation, and how these modes of transportation interface with each other. Also, students hone their computer, math, chemistry, and communication skills.

Promoting fast, smooth, and safe transportation is one of the underlying themes of the Langston University Transportation Academy. During the recent LUTA, students visited the Oklahoma Department of Transportation (ODOT), where they learned about bridge design, roadway design and construction, and testing of concrete and reinforcing steel used in road construction (Figure 2). Students also learned about the planning process in road and bridge construction and about the importance of science in constructing safe and durable roads and bridges.



Figure 2 In the Materials Lab at the Oklahoma Department of Transportation, learning about materials used in asphalt and concrete

Students visited the Oklahoma City Metro Aviation Career Center where they learned about the history of aviation and aviation technician careers. They also visited the Tulsa Air and Space Museum to learn more about air transportation, and a little more about the connection to Oklahoma. At the museum, students engaged in flight simulation.

To learn about water transportation careers, students visited the Tulsa Port of Catoosa. The Port is an inland multi-modal bulk shipping complex and industrial park, which includes the Maritime Education Center. Most of the space is leased to other companies involved in manufacturing, processing, and transportation industries. Students were given a tour of the facilities. At the Maritime Education Center, students engaged in self-directed learning activities through video presentations about the history, economic, and environmental impact of the Port. Students



learned that for each day the port were to close, Oklahoma would lose \$2 million.

The Federal Railroad Administration presented information to academy students that included careers in the railway industry and the various companies that operate in Oklahoma. Students learned that railroads are privately owned and operated and play an important role in transporting people and goods.

Students visited the Midwest City Police Department where they learned about the dangers of driving while drinking or under the influence of drugs. The various tests given to people suspected of being under the influence were demonstrated. Figure 3 shows an exercise that involved students driving go-karts. First, carts were driven under normal conditions to simulate sober driving; then the karts were adjusted so that reaction time was slowed to simulate reaction time for impaired driving.



Figure 3 LUTA Students participating in driving exercises

Students also learned about safe driving through a six-hour Defensive Driving Workshop facilitated by First Gait Enterprise. This workshop provided real examples of families that were impacted by the loss of children, family members, and friends as a result of accidents that could have been prevented. Students learned how to recognize road hazards, scope the environment, and be proactive in avoiding unnecessary deaths, especially those of young people. Two of the students' parents participated in the workshop, and together with eligible students earned a certificate that could be provided to their auto insurance agents to possibly reduce their premiums.

Other LUTA highlights included a visit with Dr. Kent Smith Jr., president of Langston University, who encouraged students to take advantage of programs, like LUTA, and to follow their passion. He told them not to follow the crowd, but to focus on accomplishing their dreams. "Don't waste time listening to someone who will not help you to accomplish your goals." Dr. Smith encouraged the students to academically prepare themselves because opportunities are awarded to the prepared.

Students kept journals of what they learned each day. At the end of the program, students were asked to write an essay on what they expected to learn, what they actually learned, and what they thought they would do in the future as a result of being part of the Academy. Responses helped to validate the LUTA strategy.

About the Academy Director

D. Chongo Mundende of Langston University is the LUTA Director. Please send inquiries to dcmundende@langston.edu.

The *Southern Plains Transportation Center* is a consortium of eight universities in U.S. Department of Transportation Region VI: the University of Oklahoma, Oklahoma State University, Langston University, University of Arkansas, University of New Mexico, Louisiana Tech University, University of Texas at El Paso and Texas Tech University.



The SPTC provides a unique opportunity through large-scale, multi-institutional initiatives, to develop comprehensive, cost-effective, and implementable solutions to critical infrastructure issues facing the transportation systems of the region and the nation, and to prepare transportation professionals for leadership roles through *Research, Leadership, Collaboration, Education, Outreach, Tech Transfer* and *Workforce Development* activities.