
Developing the Next-Gen Transportation Workforce through Safety Curriculum

Safety Coalition Meeting

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Agenda

Background – how did we get here?

Workforce challenges and barriers

New strategies for attracting talent

What works well...and why?

Pathways to partnerships

Student outcomes



How did we get here?

- You?
- Me?
- The industry?



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Southeast Transportation Workforce Center

The Southeast Transportation Workforce Center (SETWC) conducts research, builds programs, and strategically creates partnerships to support development of a diverse, career-ready transportation workforce in the region.

**Women in Transportation Playbook:
Inspire, Engage and Empower**

U.S. Department of Transportation
Federal Highway Administration

THE UNIVERSITY OF
MEMPHIS
Southeast Transportation
Workforce Center

Workforce of the Future

Diverse

Tech-savvy

Sense of
purpose

Sense of
belonging



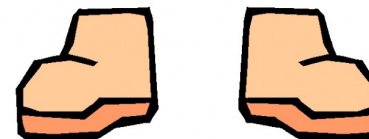
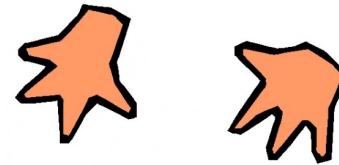
Workforce of the Future

- Rapid evolution of technology transforming system operations and how work is done
- Transform data into information – and other data considerations
- Complexity of problems blurs lines between disciplines
- Lifelong learning is essential



Challenges and Barriers

- Career awareness
- Misperceptions
- Finding 'fit'
- Understanding the K-12 community
 - Students
 - Teachers
 - PARENTS
- Competition from other industries



New Strategies for Attracting Talent



Comprehensive pipeline efforts
(that start EARLY!)



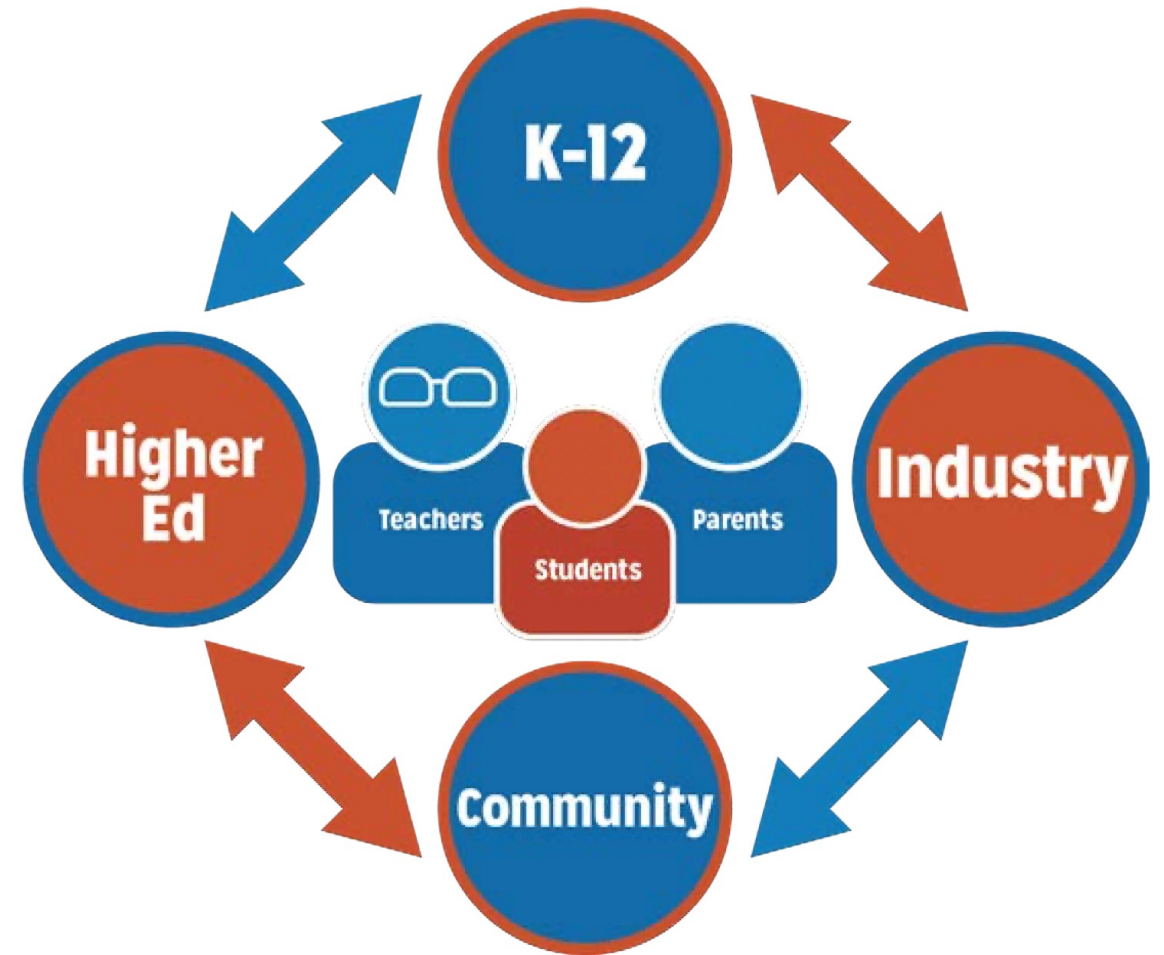
**Strong industry-education
partnerships**



Innovative immersive
experiences

What works well...and why?

- Transportation-STEM Academy at East High School – Shelby County Schools (Memphis, TN)
- Engineering Apprenticeship Program - University of Memphis



Transportation-STEM Academy (

A playbook for developing transformational education through industry-academ



LAUNCHING IN 2017...
A one-of-a-kind Optional high school connecting students to cutting-edge degrees & careers!

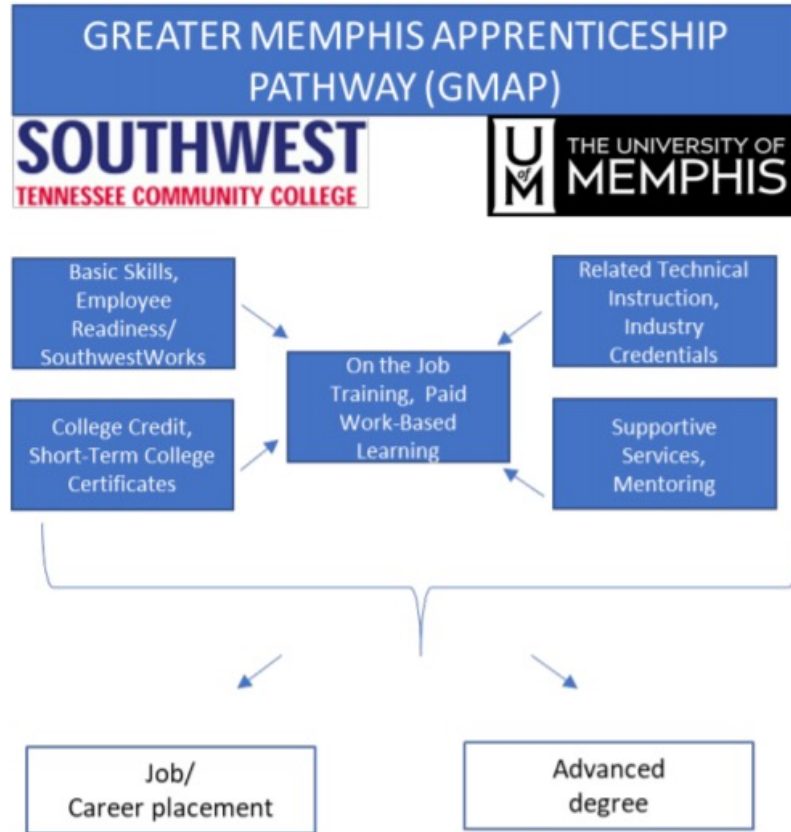


The NEW Transportation-STEM Academy at Historic East High School!



SHELBY COUNTY SCHOOLS

UofM Engineering Apprenticeship Program



UofM Engineering Apprenticeship Program

I-81: A Brief Overview

- I-81 serves as a critical freight corridor, connecting with five other interstates
- This Corridor passes through 21 cities and towns
- It experiences heavy traffic volumes for both commercial and passenger vehicles.



The Problems

The corridor faces significant safety and reliability issues due to competing travel demands.

Annually, there are over 2,000 vehicle crashes, with 26% involving heavy trucks, the highest percentage for any interstate in Virginia.

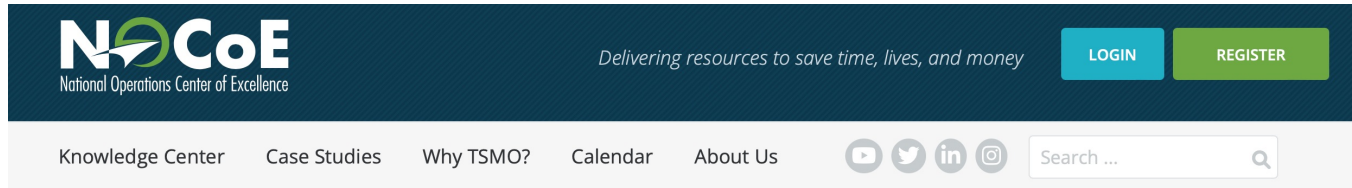
Travel delays are unpredictable and impact both heavy commercial vehicle on-time performance and passenger vehicle travel.

Example: Over 45 major crashes occur each year, taking more than four hours to clear.

Contributing factors to long crash clearance times include a lack of capacity, rolling terrain, unreliable detour routes, and constrained configuration.



UofM Engineering Apprenticeship Program



Tournament Overview

Join the Tournament

2023 Tournament

2021 Tournament

2020 Tournament

2019 Tournament

2018 Tournament

ITS Professional
Capacity Building
Program

Workforce Resources

Transportation Technology Tournament

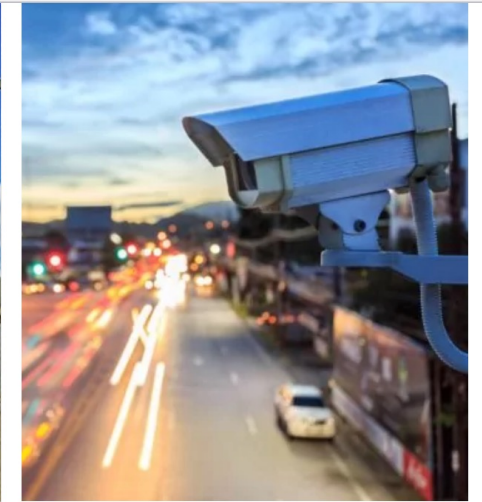
Overview

The National Operations Center of Excellence (NOCoE) and the [U.S. DOT ITS JPO's Professional Capacity Building \(PCB\) Program](#) are hosting a competition for students to work directly with public agencies to solve real-world transportation problems utilizing ITS and TSMO solutions.

This will be the competition's seventh year. The 2018 - 2023 tournaments featured extremely competitive teams with innovative solutions. More information on previous years is available via the menu on your left.

Tournament Process

1. Student teams will assemble to work with a public agency on a specific transportation problem.
2. After submitting an initial contest application identifying the team and the problem, students will work with academic advisors to learn about potential ITS and TSMO solutions via online training programs outlined below. Teams will also meet with U.S. DOT and NOCoE subject matter experts for Q&As and discussions on each module.
3. Teams will then utilize their experience, education, and new coursework to develop a solution or suite of solutions to directly address the originally defined problem. Students will submit their solutions via a 10 page proposal.
4. Three finalist teams will be chosen from these proposals and will compete in a live event at the [ITE Annual Meeting](#) in Philadelphia, PA. Teams will give a presentation in front of a panel of judges made up of leaders in the ITS and TSMO community. One team will then be selected as the 2024 Transportation Technology Tournament Winner.



Lessons Learned

- Must reach students EARLY
- Elevate awareness of (and respect for) all transportation jobs – STEM for all
- Full pipeline approach
- Don't reinvent the wheel
- Tell the story of transportation
- **Partnerships!**



Lessons Learned

Pathways to Partnerships:

- Research or data-based engagement
- Value proposition – for all stakeholders
- Understanding communication and systems
- Identify strategies for ‘quick wins’
- Building relationships and trust
- Recognize it is a long-term game
- Make sure to develop a sustainable model



Outcomes

- Excitement!
- Developing individual interests
- Understanding of real-world connections
- Building career identity
- **Choosing transportation!**



Thank you!

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