



TRANSIT CAMP PROGRAM

**Summary
Summer 2010**



**Funded by a grant from the
Michigan Ohio University Transportation Center**



Meeting the Future Needs of **Transportation Flow**

Report developed by: **James A. Buri, Camp Director**

Conducted for the fourth year, Transit Camp provided an opportunity for students to spend a week at the **University of Detroit Mercy (UDM)**, exploring **Transportation Engineering** as a career. Camp activities introduced students to the field of transportation and challenges that as members of society our students will face in the near future. Safe, secure, and efficient transportation systems are essential to the economic viability, quality of life, and strength of our nation.



Camp Theme:
Reducing Congestion in our Urban Communities,
Technology, Social Implications, & Strategies

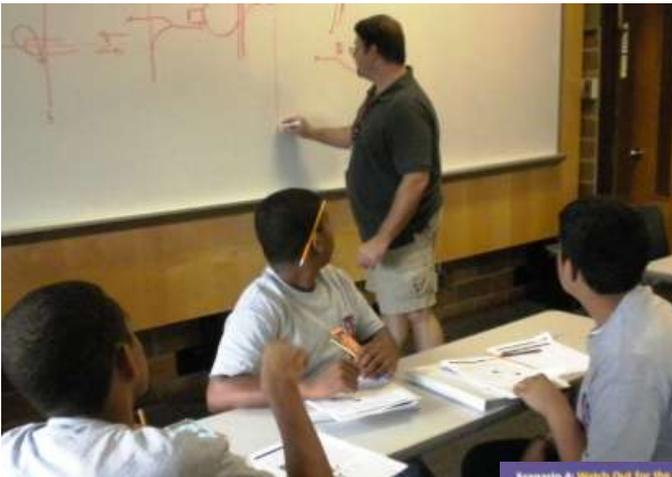


Each and Every Day

Transit Camp topics include: The impact of transportation on communities; Emerging new technologies and their effect on transportation; The science behind such topics as bridge design, city planning, construction, highway safety, motion and traffic technology; Smart cars and how they will communicate with smart highways; How traffic simulation software can be used to make intersections safer and more efficient; The making and testing of concrete; How communities work together to plan transportation; How transit systems can bring southeast Michigan together.

Hands on projects, guest speakers from industry, field trip(s) and expert University input from Civil and Environmental Engineers provided information that opened up whole new career possibilities for the high school participants.

Every afternoon after the lunch, **Mr. Robert Santavicca**, a teacher from **Western International High School** in Detroit, presented lessons from the **TRAC Curriculum** which is **transportation and civil engineering modules developed by the Michigan Department of Transportation**. These hands-on activities engaged the students in learning that had direct correlations to the morning's discussions.





Day 1

featured **Elibe A. Elibe** who is a **transportation engineering graduate** on a mission. Elibe is the Michigan Ohio University Transportation Center's (MIOH UTC) 2010 Outstanding Student of the Year. He earned a Master of Engineering degree from MIOH UTC partner Wayne State University. Elibe started the week with an overview of engineering, transportation and shared some of his practical experiences with the camp participants. His explanation of his education, research and professional work experiences sparked the students' interest.



Next, **Christina Heximer** and members of **Detroit Collaborative Design Center** at UDM spoke about the "Architecture of Urban Planning and Transportation." They presented flow of transportation from the perspective of urban planning and the use of land. We heard a brief history of Detroit and the introduction of freeways in the city. Students learned how Detroit lost its original transportation system and students learned about ideas for the future

In the afternoon, **Tiffany Gunter** from **Southeast Michigan Council of Government**, (SEMCOG) explained rail initiatives that are currently being discussed. She explained both the funding needs and the politics of getting projects started in the Metro Detroit Area.





Day 2



Dr. Utpal Dutta of the UDM, Civil and Environmental Engineering faculty presented a **computer simulation** that helped students understand

“Traffic Flow at Signalized Intersections.”

Students left this session thinking about important intersections in their neighborhoods and why there are so many traffic problems in some areas. The simulation **helped students visualize** problems that were discussed.



After a short break, students listened to **Dr. James Lynch, a UDM Civil Engineering Professor** explain **the making of concrete** and how important it is in the ‘world of transportation.’ Students had several questions about concrete, how it is made, and what is the difference between cement and concrete. After lunch, **students made several containers of concrete** that they would be testing the next couple of days.





Day 3

The students took a field trip to the **Road Commission for Oakland County**.

http://www.rcocweb.org/AboutUs/About_Us.aspx

RCOC presenters, **Dawn Bierlein** and **Danielle Deneau**, gave us a great overview of how technology is currently used and some future uses to help control traffic safety and flow.





Day 4

Dr. Alan Hoback, Chairperson of UDM's Civil, Architectural and Environmental Engineering Dept. opened the students thinking to the concept of **“Social Justice in Transportation”** as it affects **transportation decision making**. This got the students thinking about recent transportation decisions in the Detroit area specifically related to potential community impacts.



Cheryl Gregory from **Spalding DeDecker**, spoke about **“Perspectives from a Traffic Engineer”**. Ms. Gregory brought equipment that allowed students to test how velocity and mass can affect an accident.





Day 5

The last day started with reports by various students. Students were asked to review professional articles from engineering magazines.

Dr. Alan Hoback returned to speak to the students about **careers in Transportation Engineering**. Students learned what classes to take, what work student does during their Co-operative Education Experience and all the potential benefits of being a Civil Engineer.



Next we heard from **Joe Stinnett, Engineer from Ford Motor Co.** Mr.



Stinnett spoke about 'Intelligent Vehicles'. Students learned about passive and active prevention strategies to avoid accidents. We learned that vehicles will be talking to each other, talking to roadside signs and able to see pedestrians before the driver. We then went outside and viewed a vehicle that could drive without a driver. We saw how vehicles communicate with each other and the surrounding area.



After lunch, we built model airplanes and tested the results.



Transit Camp was very successful.....

Eleven students from eleven different high schools enrolled, showed up every day, and learned way more than they expected about Transportation Engineering, engineering careers in general, and the University of Detroit Mercy. Students were awarded certificates of completion and many students stopped to thank the instructors.



**Transit Camp
July 26 to July 30, 2010**