



TRANSIT PROGRAM

**Summary
Summer 2009**



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



Meeting the Future Needs of **Transportation Flow**

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

Students spent a week at the **University of Detroit Mercy (UDM)**, exploring **Transportation Engineering** as a career. This class introduced students to the fascinating field of Transportation as well as issues, concerns, and challenges that 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. Hands on projects, guest speakers from industry, field trip(s) and expert university input from Civil and Mechanical Engineers provided insights that opened up a whole new career idea for the high school student participants.



We had a great time..... And learned a lot!!!!

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



Day 1

featured an Introduction from the **Dean of Engineering** at UDM, **Dr. Leo E. Hanifin**. The over view from Dean Hanifin set the tone for the week and gave students an idea of the importance of Transportation Engineering.



Next **Dr. Alan Hoback** of UDM's **Civil and Environmental Engineering Dept.** opened the students thinking to the concept of “**Social Justice in Transportation**” in transportation decision making. This got the students thinking about recent transportation decisions and their impact in the metropolitan Detroit area.

After lunch, **Tiffany Draper** 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 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 neighborhood and why there are so many problems in some areas. The simulation helped students visualize problems that were discussed.

After a short break, students heard **Dr. James Lynch**, a UDM Civil Engineering Professor, discuss the **making of concrete** and how important it is in the ‘world of transportation.’ Students raised questions about concrete and how it is made. After lunch, students made several containers of concrete that they would be testing during the next couple of days.





Day 3

Christina Heximer and members of “**Architecture of Urban Planning and Transportation**” Organization 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 look at ideas for the future



Later that morning, **Dr. Alan Hoback** returned to speak to the students about a career in Transportation Engineering. Students learned what classes to take, what a coop student does and all the potential benefits of being a Civil Engineer. The students had several questions about engineering and the University of Detroit Mercy.

After the lunch break, which the students loved, **Mr. Sils, a teacher from the Detroit Public Schools**, presented lessons from the **Transportation and Civil Engineering modules (TRAC)** 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.





At the end of the day, **Dean Hanifin** and professionals attending a meeting of the **Intelligent Transportation Society of Michigan** at UDM took the time to talk one-on-one with the Transit Camp students. What a great experience this was for both. Several connections were made and this experience of talking to real working people may help influence campers to become future Engineering students.





Day 4

continued to reinforce Transportation Engineering with two speakers from Industry.



First we heard from **Cheryl Gregory** of **Spalding DeDecker**. Ms. Gregory brought a model of 'mag-lev', one of the latest means of transportation. Here you see Ms. Gregory working with the students.

Next we heard from **Joe Stinnett** who is an Engineer from **Ford Motor Company**. Mr. Stinnett spoke about **'Intelligent Vehicles'**. Students learned about passive and active prevention strategies to avoid accidents. We learned that, in the not very distant future, vehicles will be talking to each other, talking to roadside signs and able to see pedestrians before the driver.





Day 5



Transit Camp ended the week with a **Field Trip** to the **Road Commission for Oakland County**. Presentations by **Dawn Bierlein** and **Danielle Deneau** demonstrated to the students how traffic flow is controlled in 'real-time.' Students located traffic data gathering devices out on the street. This trip really put the whole week together. There were a lot of questions.

