

IDOT Engineering Academy



Artisan Consulting Engineers, LLC initiated in 2011 along with the sponsor help of Northern Illinois Minority companies (NIMCA), to pilot a program in Rockford in conjunction with Rockford Public School District 205 called the Illinois Department of Transportation Engineering Academy.

The program is a four to six weekend dedication on Saturday mornings. The program exposes groups of students from Rockford High Schools to civil engineering and other related fields. Each session typically features a lecture, a hands-on learning portion, and a presentation by an industry professional. The curricula and activities are based on TRAC2 learning modules developed by the American Association of State Highway Transportation Officials (AASHTO).

The lectures cover topics ranging from road building and land development to environmental issues to urban planning. The hands-on components allow students to use math and science to solve real-world problems in a team environment. The professional's presentation give students an opportunity to hear from and ask questions of local experts on topics ranging from local development issues to technical engineering questions to career and academic advice. One goal for the program was to expose Rockford students to internships, summer work opportunities and potential permanent employment in the field. The program also features at least one field trip to area industry, which to date have included trips to the IDOT District 2 Office, to the Rock River Water Reclamation District, and to a Manufacturer's Exposition.

The program has been an annual event from 2011 to 2016. Thomas Okite (Owner of Artisan Consulting Engineers) has been the leader and program coordinator since its inception. Speakers each week from the "real world" are also invited to share applications with the students. This includes professional engineers from the State, City and numerous local companies. Similar academies have been offered to students in Chicago, Peoria, Springfield and East St. Louis.

Highlights of Weekly Classes Include:

- Scientific study, particle sedimentation rates
- Effectiveness about managing erosion
- Introduction to highway and city planning
- Consideration of air quality, water quality, sound pollution and habitat loss
- Estimating road costs
- Building a three-dimensional road
- Running traffic simulations using computer-assisted design software.
- Urban planning and design; Students designed roadways for their own cities.
- Students also take a field trip to the District 2 IDOT office in Dixon

"These students are excited about the prospects of engineering. They realize it isn't just a technical pursuit. It involves making lives better for the community around us. They are dealing with real issues and learning how they, as engineers, can help solve problems that they see in their everyday lives. The program is exciting because it opens up career opportunities that they may not have otherwise considered." - Thomas Okite, Artisan Consulting Engineers LLC.



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