Florida Atlantic University Geomatics Engineering Alumni Leads Student Tour at Miami Tunnel

The Geomatics engineering program at Florida Atlantic University was recently given a unique opportunity by FAU Geomatics program alumnus Robert Loane ’11 and his employer, Bouygues Civil Works of Florida, who extended an invitation to 20 students, faculty, staff, and industry advisors from the Geomatics engineering program to tour the construction site of the tunnel boring operations between Watson Island and Dodge Island in the city of Miami.

The pinnacle of the visit was walking into the tunnel which has been dug 700 feet to date, to view the $45-million tunnel boring machine (TBM). The TBM is a 457-foot-long, 43-foot-diameter electric digging machine which is controlled from a closet-sized room with touchscreen displays, computer terminals, and numerous knobs and switches. Two of the touchscreen displays are devoted to providing the pilot with information about the position and orientation of the TBM in real time during production.

“The site seems like a small city which provides many support services that are almost entirely geared toward making the pilot of the TBM the most important person in the entire operation,” said Steve Krupa, supervising hydrogeologist for the South Florida Water Management District and a member of the FAU Geomatics Engineering Program Advisory Council.

It is the specialized knowledge and skills in Geomatics engineering that keeps the 265-ton cutting head digging along the path of the tunnel as designed. Without the tunnel surveyors, the guidance displays in the control room would be devoid of information and digging would not take place.

This unique opportunity allowed FAU Geomatics engineering students to see first-hand the future possibilities of a career in Geomatics engineering. The Geomatics engineering program offers courses for those seeking a career as a land-surveyor professional. It was originally created in response to the 2005 change in Florida statutes requiring that individuals seeking state licensure as professional land surveyors be trained at the baccalaureate level. Geomatics engineers design, develop and operate systems for collecting and analyzing spatial information about the land, oceans, natural resources and manmade features.

The Geomatics engineering program successfully prepares graduates for the required licensing examination to become a licensed Professional Surveyor and Mapper (PSM) in the state of Florida. Florida law also permits individuals with bachelor degrees in other disciplines to take an additional 25 credit hours of surveying-related courses in order to become eligible to take the PSM licensing examination.

The 120-credit, four-year degree program provides students with the professional skills required for today’s geospatial specialist. The College of Engineering and Computer Science’s focus on moving toward eLearning also is reinforced through this program, with upper-division courses offered online.

The program will be opening for enrollment for the fall 2012 semester. For more information on the program and enrollment, contact Ashley Morgan at 772-873-3447, or visit the Geomatics engineering website at www.cege.fau.edu.