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## SUNY Erie Community College students participate in landmark earthquake project at University at Buffalo

While many college students are waiting tables or scooping ice cream for the summer, 24 students Erie Community College's Construction Management Engineering Technology and Civil Engineering Technology programs are busy working on a "ground breaking" research project that will change the way wood structures are built in seismic regions around the world.

The SUNY ECC student volunteers, together with students from the University at Buffalo, professor and contractors and companies throughout Western New York are building an 1,800 square-foot three-bedroom two-bathroom townhouse on twin movable shake tables at UB's Structural Engineering and Earthquake Simulation Laboratory (SEESL). The SUNY ECC student volunteers are responsible for the installation and repair of gypsum wallboards (drywalls) on the walls of the test structure.

In a series of five seismic experiments, the townhouse will be subjected to increasing levels of shaking culminating with a final test in November that will mimic the power of an earthquake that occurs on average once every 2,500 years.

It is the largest full-scale three-dimensional shake table test ever performed in the U.S. and the largest dimensional wood frame test ever performed in the world.

The experiments are all part of NEESWood, a landmark project that will play a key role in the development of improved design for wood structures in seismic regions so that taller and larger wooden structures can be built.

This is the first time community college students are participating in a project like this with a research institution.

SUNY ECC students have had the opportunity to assist in recording damage and to suggest methods for retrofitting the structure to mitigate further damage. After each test, the house is repaired and prepared for the next round of shaking.

"Through this project, we are helping to save lives," Gregory Gillis, professor of construction management engineering technology at SUNY ECC said. "We are helping to rewrite the way buildings are built."

"By working together and building a relationship between the two institutions, we can make progress in different areas of the project and students from SUNY ECC and UB benefit," Gillis said.

While the NEESWood project is unique, so are the students helping to make it a success.

The diverse group of SUNY ECC students, both male and female, range in age from 18 to in their 30s.

"The ECC students are doing all the work in this phase of construction on the house," Andre Filiatrakis, professor of civil, structural and environmental engineering in the UB School of Engineering and Applied Sciences, and the lead investigator on the NEESWood tests at UB, said. "We are treating them as if they were a contractor."

And to illustrate just how dedicated these students are, Gillis said, virtually all of the students have quit their jobs for the summer. That's in addition to their work on the earthquake project.

"The commitment our students have shown is amazing," Shawn Hill, assistant professor of Construction Management Technology at ECC, added.

Djuro Stegic of Buffalo, a Construction Management Engineering Technology student at ECC, works on a Safespan Platform System in Tonawanda. Though it means balancing a hectic schedule, Stegic said the project offers him a learning experience that is worth all the hard work.

"From class presentations on the causes of earthquakes to doing hands-on work such as drywall installation, everything I do benefits me and my future career," Stegic said.

After he graduates from ECC, Stegic said he may go to a four-year university and is ultimately see in construction project management and estimating.

April Cockrell, a Civil Engineering Technology student, is the only female from ECC working on the UB.

A resident of Snyder, she took time off from her full-time job to devote herself to working on the top

"I made the right choice," Cockrell said. "This project is fantastic and I am honored to be working on

"The scale of the house and the size of the shake tables are very impressive and I've enjoyed learning information from the simulated earthquake is gathered and used," she said.

Cockrell plans to continue her education at the SUNY Institute of Technology in Utica, NY to earn a degree in Civil Engineering Technology.

"I want to work in Buffalo to help enhance the city I love," she said.

And these students can look forward to almost guaranteed employment when they graduate. During when jobs in other industries may be scarce, SUNY ECC's Construction Management Technology has a 100 percent placement rate.

"Companies throughout the country come to our college to hire our students. They hear about us through word of mouth," Gillis said.

But ECC students who graduate from these programs typically stay in Western New York. In fact, despite incentives offered by out-of-town employers that range from additional schooling to frequent home to see family, most ECC students turn down out-of-state opportunities because they already have locally either with private industry or municipalities.

"All of the students who want jobs have jobs upon leaving the program," Gillis said.

The NEESWood project is a \$1.24 million international project funded by the National Science Foundation George E. Brown Jr. Network for Earthquake Engineering Simulation (NEES).

NEESWood involves a consortium of researchers led by Colorado State University, and including faculty from Colgate State University, Cornell University, Rensselaer Polytechnic School of Engineering at A&M University, as well as UB.

SUNY Erie Community College is a comprehensive provider of quality, flexible, affordable and accessible academic training programs, along with related services, that meet the needs of a diverse student body and promote regional economic growth.

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