Tulane Students Compete to Design Solutions for the Disabled

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Tulane University students competing to design devices to assist people with disabilities will debut their projects at the Biomedical Engineering Design Show Saturday, March 7 from 1 Ã¢â¬“ 3 p.m., in the lobby of the Boggs Center for Energy & Biotechnology. The public is invited to attend and view the designs.

The student designers are enrolled in a two-semester course called “Team Design Projects” taught by David Rice, associate professor of biomedical engineering. The class requires students to produce designs that benefit real individuals with disabilities. Last fall, the students divided into teams, chose a client and began the design phase of their project. They will continue development and testing throughout the spring, and will spend about 400 hours total developing the projects during these two semesters.

"Having a real client to go to and work for enhances the experience for several reasons," says Rice, the course founder. "One is that the students will buy into a project that they know will go into good hands instead of sitting on the shelf. It also prepares them to be able to communicate with clients."

Saturday"s design show will be the students" first opportunity to demonstrate their projects to the public. Their clients are also invited. A panel of judges will rate the projects on their functionality, aesthetics, safety, durability and more.

This year marks the 20th anniversary of the contest, which is only open to seniors. Rice said that the competing groups this year are being very creative and taking great care in their design work. “I think they are raising the standards this year,” he said. “I"m expecting good things.” Projects this year include:

Ã¢â¬Â¢ wheelchair leg lifts that will enable the user to elevate her legs

independently;

Ã¢â¬Â¢ a playground learning course for walker and wheelchair users to have fun while learning to navigate obstacles;

Ã¢â¬Â¢ a desk and seating system to enable a student with arthrogriposis, a rare congenital disorder that is characterized by multiple joint contractures and can include muscle weakness and fibrosis, to function independently in a classroom environment;

Ã¢â¬Â¢ a system to help teachers move large students between their wheelchairs and the toilet;

Ã¢â¬Â¢ a leg exercising system for a person with osteogenesis imperfecta or Brittle Bone Disease;

Ã¢â¬Â¢ a system to help autistic students relate words to pictures and to the sound of the words.