2-18-2014

Wooden Bikes Present Capstone Challenge for Engineering Students

Follow this and additional works at: http://digitalcommons.cedarville.edu/news_releases

Part of the Mechanical Engineering Commons, Organizational Communication Commons, and the Public Relations and Advertising Commons

Recommended Citation
http://digitalcommons.cedarville.edu/news_releases/14
FOR IMMEDIATE RELEASE

February 18, 2014

CONTACT: Mark D. Weinstein
Executive Director of Public Relations
(Office) 937.766.8800
(Mobile) 937-532-6885
mweinstein@cedarville.edu

Wooden Bikes Present Capstone Challenge for Engineering Students

Cedarville University Seniors Build and Test Wooden Bike Frames

CEDARVILLE, OHIO – Four Cedarville seniors are building and testing wooden bicycles for a capstone engineering project. Team leader Jake Miller said the project offers a unique opportunity for students to connect their interests in engineering, woodworking and cycling.

Assistant professor of mechanical and biomedical engineering Jay Kinsinger, the team’s capstone instructor, shares these interests. Kinsinger has been building wooden bikes for four years and riding across America and Europe. He has won top honors in the Dayton Carvers Guild show, Artistry in Wood, and built a folding tandem now displayed at the Bicycle Museum of America in New Bremen, Ohio.

According to Kinsinger, wooden bicycle frames are tough, lightweight and beautiful, with infinite design possibilities. Kinsinger said the bikes get attention because they look different, but he loves the smooth ride and the fun of building them.

The capstone team includes Miller, from Dillsburg, Penn., David Yoder of Plain City, Ohio, Gerrit Start of Saint Charles, Mo., and Cody Lewis, from Cambodia. Each student has taken the project in a different direction to investigate material strength, safety standards, efficient manufacturing and other concerns.
Kinsinger said the students must apply engineering tools in new ways to meet these challenges, and their results will eliminate guesswork from the building process. Each frame takes hundreds of hours to build, and weaknesses may easily remain hidden. The students have conducted extensive tests on materials to prevent this, and Miller said they will send completed frames to a bicycle test lab for further tests of strength.

Yoder said the team is also learning to stop and correct mistakes throughout the process to improve their results. “You have to be willing to do that,” Yoder said, “not be so arrogant to think what you do the first time is going to be the best you can do.”

Yoder said the project is sometimes frustrating because it stretches his abilities, but he enjoys learning through the process. “The work has been tremendous fun,” Yoder said.

Miller said he is using this experience to build a wooden triathlon bike outside class, and he hopes to race with it in the future.

Cedarville University, located east of Dayton, Ohio, has 3,459 undergraduate, graduate and online students in more than 100 areas of study. A Baptist university of arts, sciences, professional and graduate programs, Cedarville is recognized nationally for rigorous academic programs, strong graduation and retention rates, accredited professional and health science offerings, and leading student satisfaction ratings. Visit the University online at www.cedarville.edu.

--end--

Photo: bikes.jpg

Photo caption: Senior engineering students Jake Miller, David Yoder and Gerrit Start work on wooden bike frames for their capstone team project at Cedarville University.

Photo credit: Scott Huck

Photo: kinsinger wood bike.jpg

Photo caption: Jay Kinsinger prepares to ride his wooden bike from the University of Dayton to the University of Notre Dame (238 miles). He was
part of a team of riders from Cedarville University who were supporting the pro-life work of the Life Resource Center in Dayton, Ohio.

Photo credit: Mark D. Weinstein