



Students Design, Build, Play and Display Guitars

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Godfrey, Ill. –Jimi Hendrix had “Betty Jean,” B.B. King has “Lucille,” and Eddie Van Halen made magical music history with his very own “FrankenStrat.”

These guitar names are nearly as widely known as their famous players. So why wouldn’t any college student want to design, create and play his or her specially designed guitar, especially if they get to design and build it themselves?

At Lewis and Clark, students in Luke Jumper’s Drafting/CAD program did just that and now their unique guitars of every shape and color are currently on display in The Commons for a limited engagement—no backstage passes or tickets necessary.

“I took this class because it sounded so interesting and I was stoked to have a chance to design and build my own guitar. Who wouldn’t be?” said Justin Kanturek, an architecture student who took the class.

“It was cool to sit down and play the electric guitar just a few weeks after coming up with the body design and building it piece by piece.”

Nine students conceptualized, designed and built working electric guitars in Jumper’s Drafting/CAD Class DRFT 251-Product Design and Development during fall semester 2013. It was the first time a class has designed and built guitars as part of the Drafting /CAD program at the college.

“The class is designed to develop students’ computer-aided drafting skills and assist them in learning the process of product development,” Jumper said “I came up with the idea for students to design and make working guitars after I attended a National Science Foundation (NSF) workshop on Science, Technology, Engineering, Art, and Math (STEAM) education.”

Jumper said he knew the class would draw interest and works well due to the science principles behind it.

“Electric guitars work well because there are very few college students who would not want to have their own guitar, and there are a multitude of STEAM principles involved in a solid-body electric guitar because the design of a solid body is almost inconsequential to the sound and function and has ore to do with player comfort and visual style. So this class lets students study the art of how guitars are designed, the physics behind the way the strings vibrate, the mat involved in the layout of frets, and electrical principals when designing and installing the pickups and potentiometers just to name a few.”

Moreover, the class also was beneficial to the college’s advanced digital photography students who photographed the guitars as part of their class final project and then shared the images with the drafting students for use in their marketing plans.

The course will be offered again for Drafting/CAD students in the fall semester who have completed DRFT 140 and 253 as prerequisites. Due to overwhelming interest in the class, Jumper currently is developing a no-prerequisite class in guitar design that would concentrate on 2-D development of guitar designs, and the work of shaping the body would be done by hand instead of a CNC machine. His goal is to launch the class before Spring 2015.

The guitars are on display and free and open for the public to see in The Commons. For more information, contact Jumper at (618) 468-4928.

To view and download more photos visit <http://www.flickr.com/photos/lewisandclarkcc/>



Jumper and student Justin Kanturek, who built a guitar, pose near the display in The Commons. Photo by Louise Jett, L&C Media Specialist.

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