COMMUNITY COLLEGE TIMES

Institutions partner to promote rapid tech

BY CARISA CHAPPELL, *Published November 6, 2009*

To help fulfill its mandate for funding through the National Science Foundation (NSF), the National Center for Rapid Technologies at Saddleback College (California) has developed strong partnerships with several institutions across the country.

Each of these partner institutions—Edmonds Community College (ECC) in Washington, Portland Community College (PCC) in Oregon, Honolulu Community College (HCC) in Hawaii, St. Louis Community College (SLCC) in Missouri, the University of Louisville, Georgia Institute of Technology and Milwaukee School of Engineering—plays an important role to introduce and promote rapid technologies, from working on projects with architects to exposing elementary and high school students to new manufacturing technologies.

ECC is including additive technologies, the process of making something efficiently through layering, to its materials science programs. It is working with both the Society of Manufacturing Engineers and the American Society of Tests and Measures to come up with standards and testing methods for additive technologies.

The Materials Technology Education Center at ECC—an NSF Advanced Technological Education (ATE)-funded program to develop resources for teaching new technologies—is hosting regional workshops to help K-16 institutions adopt additive technology into their curriculum.

Scott Murakami, director of the Pacific Center for Advanced Technology at HCC, said that his center is very involved with the Honolulu architectural community in using additive technology to produce architectural models. The college is working to develop processes that will allow solid models of structures to be produced by additive manufacturing technology equipment.

In addition, HCC is assisting other community colleges in the state to incorporate the technology into their career technical programs.

Murakami said that 3D printing, which produces physical objects from 3D data, helps to enrich career and technical education, especially in architecture.

Sometimes old and new technologies are combined. PCC is including additive manufacturing technologies into its more traditional subtractive manufacturing program. Proponents of the technology say that subtractive rapid prototyping technology complements additive manufacturing.

Partner colleges in NSF's ATE program have often had extensive experience on their projects and share their knowledge. SLCC, which partnered with Saddleback, is working on processes and techniques for reverse engineering and producing physical model parts and full products. SLCC's role in Saddleback's rapid tech center is to develop an eight-hour educational model on "digital shape verification (DSV)." The module will serve as a summer workshop program to teach of 3D scanning and how to use its data.

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