

# DIGITAL Developments


NEW ADVANCES IN TRAINING FOR PROFESSIONALS, FROM TEACHERS TO MEDICAL PERSONNEL, ARE BEING PIONEERED IN CENTRAL FLORIDA.

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Medical Curriculum Technologies offers computer-based training programs for students and medical professionals.

COURTESY MCT


 You're a newly minted doctor and your assignment is to insert a central venous catheter. You insert the needle and remove the syringe. You're ready to insert the flexible wire when — oops! — it slips. If you were working on a real human, you might be in trouble. Luckily, as a medical professional in training, you're using a computer-based learning system. So you can just click to start the test over again. Or better yet, go back and practice some more. That's why the program was developed.

Class is in session, and in the digital age, any place can be a classroom, anyone can be a learner and students can access the resources they need any time they want. The latest advances in teaching and training, many of them pioneered here in Central Florida, offer more ways to meet the needs of students, provide more information in a shorter time and save money for the organizations using the technology.

## PRACTICE MAKES PERFECT

Medical Curriculum Technologies' (MCT) computer-based training for hospital and medical professionals is one of the latest entries in the field of medical training and simulation.

"There's a significant need for an efficient, effective training program for medical professionals," said Fred Clayton, MCT's co-founder and chief operating officer. The company is a spinoff of Orlando-headquartered Jardon and Howard Technologies, Inc (JHT), which develops training programs for the Department of Defense.

Life-like simulators may be the pinnacle of technological training, but only one person at a time can work on the simulated patient, Clayton points out. "With our system, 5,000 people can practice at the same time."

MCT's computer-based training system lets students, doctors, nurses and others familiarize themselves with the details of a procedure or a treatment

plan at their own pace, before they ever touch a patient — and often before they ever touch a simulator.

The program is brand new. Aimed at hospitals, its purpose is to improve patient care in a way that is also efficient and economical. Clayton worked with 30 hospital systems across the nation while researching the product. Convinced of the need, MCT developed the program in conjunction with the University of Washington and also is developing three courses for Adventist Health's Florida Hospital system.

MCT's technology is formatted to conform to industry norms, Clayton says. Eventually, hospital systems will be able to download programs as easily as interns download iTunes. DVDs also will be available and doctors will be able to access information on their personal digital devices.

## TREATING OUR NATION'S VETS

Metro Orlando's position in the simulation industry was one reason that the Veterans Administration (VA) chose the area as the location for a new VA hospital, which is expected to be completed in mid-2012. Located at the region's new medical city at Lake Nona, the hospital will be home to the new state-of-the-art VA Medical Simulation Center for Excellence and a hub for training all VA medical personnel nationwide. At the heart of the center is a system-wide strategic education and planning initiative called SimLEARN, or Simulated Learning Enhancement and Advanced Research Network. Its goals include not just training individual medical personnel, but training the trainers, developing curricula, developing and

standardizing policies and procedures related to virtual-learning situations, disseminating best-practices information and conducting research on emerging simulation technologies, according to Paula Molloy, SimLEARN's program manager.

Rather than training upcoming doctors and nurses, SimLEARN is intended



COURTESY IDEAS

to enhance the careers of seasoned professionals who are already part of the Veterans Health Administration system. They serve a specialized population and encounter medical challenges that are not as frequently seen in the civilian population — conditions such as post-traumatic stress disorder and traumatic brain injury — as well as issues specific to aging and female vets.

The center will include virtual patients (interactive computer simulations of real-life clinical scenarios) and high-fidelity mannequins, which simulate human body functions such as pupils that react to light, bodily systems that respond to drugs and "bladders" that produce urine.

SimLEARN and the VA hospital also will partner with the UCF medical school and others, Molloy says.

## TEACHING THE TEACHERS

Preparing students for med school and other advanced programs is another critical need. Having an experienced teacher can help. Two Orlando-based tech companies, IDEAS and eSchool Solutions, teamed up to create *TeacherStudio™*, a comprehensive web-based professional community that supports educators.

Developed in cooperation with the Seminole County school system, *TeacherStudio* provides an online connection for educators in participating school systems. It also supports and enhances professional development, especially for new teachers.

Nearly half of beginning teachers quit during their first five years, says Kelly Pounds of IDEAS, a former classroom teacher herself. The main reason they leave is that they feel alone and unsupported by their schools and their districts. The loss costs school systems billions of dollars a year.

*TeacherStudio*, which debuted this year at an International Society for Technology in Education conference, lets teachers post video lesson plans, answer questions for each other, find or serve as a mentor and, in general, participate in an effective, collaborative environment.

It also lets school districts help teachers improve. For instance, professional development frequently consists of attending conferences and writing reports, Pounds says. With *TeacherStudio*, districts have a tool to monitor how teachers put into practice what they learned at a conference.

"This is the missing link in professional development," Pounds says. ✖