



**David J. Chard**  
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Endowed Dean

## Training in the 21st Century

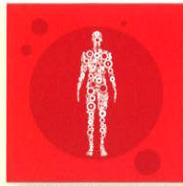
Gone are the days of the one-room school-house, where one teacher would instruct children of all ages in unison. Today's classrooms are part of complex schools and school systems created to handle a large number of students while employing few adults to teach and provide supervision. What we have today was designed for efficiency over a century ago. Back then, schools were expected to develop good citizens and provide a safe place for children to stay while their parents were working in industry.

Though we haven't changed many things about our schools, we expect and need much more from them now. Society keeps changing with advancements in technology and we expect students to compete globally, graduate from college, and be career ready. Unfortunately, the efficiency model developed many years ago is no longer suitable for our schools.

To deliver what the 21st century requires, we acknowledge that schools must address the needs of each student, not just the collective whole. This means that rather than using the "one size fits all" approach we've employed in the past, we must shape teaching to respond to the needs of different kinds of children in different kinds of schools. Similarly, we can't assume there is one way to prepare all education professionals. To be effective, we must address the needs of our communities and that means fine tuning what we do to prepare the professionals our schools need.

For us in the Simmons School, it's important to be nimble and our small size allows us to move quickly. As you can read in our cover article, we created a Master's in education policy and leadership a year ago, and now we are adding an urban school leadership specialization to the degree. These programs allow us to prepare educators to work in a wider range of schools. We are doing this by collaborating with education institutions in greater Dallas. Consequently, we get great opportunities to hear what area schools need.

Making adjustments on how we prepare educators takes effort. In addition to examining evidence of what works in education, we need to keep our eyes and ears open to the needs of our community so we can equip our students to lead schools that our community's children deserve.



## Researcher to Direct New Applied Physiology Lab

The new 3000-square-foot Applied Physiology Laboratory on the first floor of the Annette Caldwell Simmons School of Education and Human Development is quiet for now, and half-empty, waiting for students who will learn how to use it for research.

But by this spring when Scott Davis, assistant professor of applied physiology and the lab's director, gets it up and running, the space will be humming with activity. Davis, who joined the faculty of the Applied Physiology and Wellness Department in August, expects the lab's research component to be fully functional so that research and teaching can begin in January. The space includes three distinct lab areas connected though technology to give students hands-on experience with research.

Davis looks forward to having both undergraduate and graduate students working with him. Sixty students currently are majors in the applied physiology and sport management program and 100 are enrolled in department courses.

"The opportunity at SMU got me into more of what I would consider a traditional university setting where I could do teaching, research and have access to students. I think it's a nice combination to be around students who want to learn and have them be part of the research," Davis says. Both he and Associate Professor Peter Weyand, an expert in human locomotion, will teach in the lab.

With his work on multiple sclerosis, Davis is bringing a new field of research to SMU. "The



*Scott Davis (left), director of the new Applied Physiology Lab in Simmons Hall, brings his expertise in multiple sclerosis to SMU and will offer students opportunities to do research. Kristine Eikrem Engeset (right), an applied physiology major, runs on a treadmill in the lab to measure her oxygen and determine her aerobic fitness.*

Davis completed a postdoctoral fellowship in integrative physiology at the University of Texas Southwestern Medical School in Dallas, where he still maintains a laboratory in the Department of Neurology. There, he researches the workings of the autonomic nervous system—the part of the nervous system that controls the body's responses to environmental stimuli like heat, cold and stress. Much of Davis' research focuses on the problems multiple sclerosis patients have with autonomic functions, such as extremes in temperature, which profoundly affect them. Davis plans to invite his patients to participate in studies at the Simmons Hall lab.

The lab will feature a chamber that controls environmental factors such as temperature and humidity. It also will include a biochemistry lab for analyzing biological samples, as well as a DEXA, a device that measures body composition and bone density. Force plates, which measure the force athletes place on the ground when running and jumping, also will be built into the floor in one corner of the lab.

students get access to some of the cutting-edge research that's going on and use some of the techniques that we talk about in class," Davis says.

Peter Gifford, department chair and associate professor of applied physiology and wellness, notes that up to 20 percent of students applying to institutions of higher learning, list the health industry as their career goal. "The applied physiology and sport management program at SMU attracts students wanting to advance careers in the health field," he says. "Having a researcher like Scott Davis is instrumental in achieving that goal." Gifford believes that through teaching, research and a state-of-the-art lab, the program will achieve national recognition.

**To learn more about the applied physiology and sport management program, visit [smu.edu/APSM](http://smu.edu/APSM).**