Students get a firsthand look at the anatomy of the human body.
FROM THE DEAN

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Almost two years have passed since I came to the School of Graduate Studies and Research, and I continue to be impressed with the level and quality of teaching, service and research in which our faculty and staff are engaged.

In the accompanying pages you will read about some of the amazing things that are happening at Cal U, such as the use of cadavers in our Athletic Training program, the audiology services that are provided for the Special Olympics, and the interesting people working in our Psychology Clinic.

Research is also very important at Cal U, and in this issue we have highlighted a significant grant from the Office of Naval Research relating to advanced panoramic sensing devices.

As a leader in the University’s research mission, the Graduate School undertook a number of initiatives this year. We have made more graduate assistants available to work directly in research-related activities with our professor-scientists; we have engaged professional grant writers to assist our faculty and staff; and we have continued to collaborate with the Office of the President and the Faculty Professional Development Committee to offer the annual Grant Writer’s Fellowship.

All of these efforts, and certainly those of my colleagues before me, have paid off. This year, through our Office of Grants and Contracts, we established the Million Dollar Achiever’s Award and recognized 11 members of the University community who have managed more than $1 million each in sponsored research.

Whether it is teaching, service or research, the focus of all our activities is, quite naturally, on our students. Together with all Global Online programs, the School of Graduate Studies and Research has more than 2,000 students whose academic disciplines touch upon nearly all aspects of the University. This year Cal U was ranked No. 2 in the nation for the quality of its online programs.

I have already had the pleasure of witnessing three distinguished groups of these graduate students receive their hoods and diplomas and enter the professional world as masters in their respective fields with new ideas for tackling serious, real-world problems. We are indeed fortunate to have graduate students who recognize the satisfaction and duty of putting others first, and we are proud to call them alumni of California University of Pennsylvania.

Sincerely,

John R. Cencich, J.S.D.
Interim Dean, School of Graduate Studies and Research

Where the dead teach the living
IN CAL U’S CADavern LAB, STUDENTS STUDY ANATOMY FIRSTHAND

Dr. Thomas West, left, director of the Graduate Athletic Training program, joins biology professor Dr. Edwin Zuchelkowski inside the cadaver lab in Hamer Hall.

Behind a locked door in Hamer Hall, three human cadavers lie on covered metal tables in a cool, windowless room. They represent an unusual learning opportunity for students in the Graduate Athletic Training program, and for undergraduates and graduate students studying health science, biology, forensic science or to be a physical therapy assistant.

Master’s degree candidates in athletic training — health care professionals focused on the prevention, care, treatment and rehabilitation of athletic injuries — have worked with cadavers since the program’s inception in 1991, says program director Dr. Thomas West, chair of the Department of Health Science.

As part of their post-professional training, the graduate students make careful dissections, revealing the intricacies of human anatomy. They focus primarily on the extremities, examining the cadavers from shoulders to fingertips, hips to toes — the body parts athletes are most likely to injure.

“They get to look at anatomical structures and see how the muscles, ligaments and bones all function together,” West says. “We can talk about an ACL injury, for example, and here they can actually see the (anterior cruciate) ligament in the knee.”

“The amount of learning our students gain in this class is so important to their professional growth,” Biology professor Dr. Edwin Zuchelkowski teaches the graduate class each summer, and in spring and fall he occasionally takes his undergraduate anatomy classes into the lab. The secure room is unlocked for lessons in health science and forensic science, too.

In all, the cadavers help to teach more than 200 students each year. “At the start of each course, we remind students to be respectful,” West says. “These are people who chose to donate their bodies to science. We have to respect them and their bodies.”

The cadaver lab has a separate climate control and air-handling system, with alarms that sound if the air conditioning fails. Heavy aprons hang on a closet door, anatomical charts are propped against a wall and boxes of rubber gloves are stacked on a counter.

The specially preserved cadavers now in the lab were purchased last summer from Marshall University in Huntington, W.Va., and transported to Cal U by a local funeral director.

Next summer, the funeral home staff will collect every bit of tissue, so each body can be cremated in total and the ashes returned to the provider. The remains are then interred or conveyed to the decedent’s family.

Students and professors never know the names of these individuals who ultimately arrive in the cadaver lab, but their presence makes an indelible impression.

What West polls alumni, they often describe the cadaver class as the program’s most memorable course, as well as the most challenging.

“The students are somewhat hesitant at first, especially if they have never seen a preserved body before,” Zuchelkowski says. “But by the end of the first week, they are enjoying the class. They appreciate the chance to actually see what they have only read or heard about, and to better understand the conditions they are treating.”

By Christine Kindl, communications director at Cal U
School psychology clinic offers evaluation

Graduate students learn by working with individuals of all ages

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ile California University’s School Psychology Clinic works to train future school psychologists, it also serves students of all ages who need evaluations to qualify for special services in their schools. People come to the clinic for a variety of reasons. For the child struggling to learn, an evaluation could identify a learning disorder that calls for extra help in the classroom. Other students might be deemed gifted, which qualifies them for a school-based enrichment program. Some parents bring their children to the School Psychology Clinic for a second opinion, explains Dr. Kirk John, coordinator of the master’s-level school psychology program, and clinic supervisor Dr. Elizabeth Mason.

Since 1988, the clinic has offered a variety of psycho-educational services to the public and to the University community while providing a training facility for graduate students in school psychology. Students from age 2 through adulthood visit the clinic for “a wide variety of referral reasons, from school readiness to learning and behavior problems to gifted identification or educational pursuits,” says Dr. Elizabeth Mason, director and supervisor of the clinic. “In our clinic, the graduate student/ intern school psychologists get their best experiences in evaluation and dealing with difficult cases, and writing comprehensive reports with suggestions for research-based, data-driven interventions,” says Mason, who has 33 years in the field.

“We serve the students in the school psychology program with practicum and internship experiences,” Mason says, and “we serve the University community and the (western Pennsylvania) area with school psychological services.” Once tests and evaluations are completed, the clinic staff shares the results with the students and their parents, if the client is younger than 18, and then offers recommendations. For some students, the results could mean they are entitled to special education services in their schools. For a preschooler, the evaluation might determine kindergarten readiness. “There was one mother who brought her boy in when he was 7 years old, because of attention and behavior problems and for gifted determination,” Mason recalls. “She subsequently brought him back every year for 12 years, through his application for college, to update his progress and needs.”

Psycho-educational testing in the private sector can be expensive, costing hundreds of dollars, explains John. The clinic charges only $50 for its battery of tests, and Cal U students receive free evaluations. “It provides a benefit for Cal U students and the public in general,” he says. “The clinic provides a community service.”

Graduate students studying to become school psychologists make about 150 evaluations a year under the supervision of Cal U’s faculty, which includes licensed psychologists and state-certified school psychologists. “Faculty members have a lot of experience. Some are still active in the field, so students get cutting-edge information,” says John, who has 32 years of experience. “Like all fields, it keeps changing. We have to keep up to date.”

“The clinic provides graduate students with the opportunity to put what they learned in the classroom into practice. It offers invaluable opportunities and experiences for graduate students.”

By Cindy Caicilo Meco, a Pittsburgh-based writer

When you think of top-tier research universities, California University of Pennsylvania may not immediately come to mind. But Jeffrey Sumey, an assistant professor in the Department of Applied Engineering and Technology, says Cal U can “run with the big boys” when it comes to engineering technology research.

For more than three years, Sumey has been involved in a partnership with Augusta Systems, a high-tech company headquartered in Morgantown, W.Va., helping to design and develop technology for specific military tasks. The research conducted under the auspices of the Office of Naval Research (ONR) is technologically sensitive, but the success of their collaboration is not. Sumey and Augusta Systems are currently in the third phase of a multi-phased project with ONR. Their research for phases one and two already has moved from the research board to reality.

“The project involves advanced panoramic sensor technologies, 360-degree lens systems and sophisticated computer processes to create something to be used to assist American soldiers overseas and to protect civilians at home,” explains Sumey. “It’s really exciting to be a part of something this important.”

U.S. Rep. John P. Murtha helped to secure funding for the program. “It was tremendously important for the business partner to leverage the research capabilities of a State System (of Higher Education) school to gain access to cutting-edge technology,” Sumey says. “Since Congressman Murtha is such a strong supporter of Cal U, he backed the project and helped it come to fruition.”

One of the fringe benefits of this government-sponsored grant is the ability to involve students in the research process. Although there are no graduate-level engineering technology programs at Cal U, Sumey and his department can identify top-caliber undergraduates to help with the research.

Every semester, in the past, Sumey has tapped a top senior Computer Engineering Technology student for a work-study job. This semester, he has selected Jesse Josephic, a Computer Science major. In addition, says Dr. John Cencich, interim dean of the School of Graduate Studies and Research, a graduate assistant is being identified to provide other relevant support for this research team.

“This is the type of cutting-edge research undertaken by our outstanding group of professor-scientists that makes us all proud. We are committed to providing support in any way we can.”

“When Professor Sumey invited me to participate in this research, I was honored”, Josephic says. “I’ve had other work-study jobs, like tutoring in the Math Lab. All else pales compared to this. This is real industry work, and I’m excited to be a part of it.”

The research offers students the experience of a lifetime. Not only do they have an opportunity to become involved in cutting-edge projects — something that will enhance their resume and their marketability after graduation — they also have a chance to see firsthand how private industry, a public university and the government can work together for the common good.

Assistant Professor Jeffrey Sumey with his ‘computer on wheels’ mobile robotic test platform: “It’s exciting to be part of something this important.”

The potential for more public-private-government partnerships in the future appears great as the University’s reputation in the field of technology continues to grow.

Sumey notes that the Robotics Corridor Project in 2007 also was funded through the ONR, along with the National Science Foundation and a consortium of industry, government, foundation and education partners. He also utilized grants from the Department of Defense to help develop the curriculum for the University’s Robotics Engineering Technology program. Sumey is excited about the prospects for the future.

“Cal U is really on the move,” he says. “I can’t wait to see what’s next.”

By Cindy Kravec, a Peters Township-based writer

Research partnership puts Cal U on the radar
High-technology project links University, business and government
MILLION DOLLAR ACHIEVERS

The Office of Grants and Contracts at Cal U is administering 100 active projects totaling $5.6 million. Here is a list of the achievers and a summary of their work:

Eleven faculty and staff members have written grants totaling $1 million or more during their careers. They were honored

11 GRANT WRITERS REACH CAREER-TOTAL BENCHMARK

Cal U celebrates

TEAM PROVIDES AUDIOLOGY TESTS, HEARING AIDS

Three years ago, Belsterling volunteered to conduct hearing screenings at the first national Special Olympics in 2006, he was hooked.

“It's wonderful to see their reactions when they first hear the aids," said Belsterling. "Once they do it, they're often hooked... and want to volunteer... even after they graduate." (By Cindy Cacek Mico, a Pittsburgh-area writer)

Professor, students screen athletes at Special Olympics

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 iter Dr. Ralph Belsterling volunteered to conduct hearing screenings at the first national Special Olympics in 2006, he was hooked.

"Once I started, I didn’t want to stop," says Belsterling, an associate professor in the Department of Communication Disorders and clinical director for the Healthy Hearing program of Pennsylvania.

"It’s very rewarding at many different levels, both professionally and personally," he adds, “especially since I have a sister with Down syndrome.”

Now Belsterling is passing his enthusiasm along to his students. He takes them to Special Olympics events to help with the screenings, and so they can learn how to serve people with intellectual disabilities.

Special Olympics launched its Healthy Athletes initiative in 1997 to help the athletes improve their health and fitness. The initiative also assists health care professionals in learning about the athletes’ special needs, making them more confident and comfortable in caring for this underserved population.

People with intellectual disabilities have a 40 percent greater risk for health problems, and health care professionals often are not trained or experienced in caring for them, according to the Special Olympics website.

Belsterling is part of the movement to change that.

A year ago he served as an international volunteer and health care trainer at the 2009 Special Olympics World Winter Games in Boise, Idaho. About 1,000 athletes received hearing screenings, and some were fitted for hearing aids on the spot.

"The testing we do is rather quick; it’s an 8-minute process," says Belsterling.

For this test, the athlete does not need to respond. By using state-of-the-art equipment, the testers can pick up on various problems, such as excessive ear wax or fluid in the ear.

Additional testing is provided for athletes with more serious hearing issues.

"There was a group from Libya where all the athletes were deaf. We fit the whole team with hearing aids,” Belsterling recalls. “It’s wonderful to see their reactions when you turn on their hearing aids.”

The hearing aids provided to athletes from Third World countries were solar-powered and designed to last for several years, because the recipients often find it difficult to obtain standard batteries and supplies.

Some athletes at the Games already had hearing aids, but they were not working properly.

“Hearing aids are like glasses,” Belsterling explains.

“Team PROVIDES AUDIOLOGY TESTS, HEARING AIDS

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DR. RALPH BELSTERLING, GRADUATE COORDINATOR, DEPARTMENT OF COMMUNICATION DISORDERS

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Cal U’s online learners may not know Jon Kallis, although thousands have seen his work. As the instructional designer for the Office of Web-Based Programs, he operates behind the scenes.

Kallis administers eCollege, a learning management system used to deliver coursework over the Internet to students across the globe.

Kallis keeps the system running smoothly, so students can complete their assignments whenever and wherever they choose.

He follows Quality Matters guidelines to ensure best practices for distance education.

He works with the Office for Students with Disabilities to make online classes accessible and appropriate for students with special needs.

Kallis also helps Cal U professors integrate audio, video and even social media into their online lessons.

In all but a handful of Cal U’s Global Online programs, learners log in through eCollege. Students on campus may take an online course with this learning platform or find that a face-to-face class has an eCollege component.

In any case, most online learners appreciate the difference between text-only PowerPoint slides and a lesson enhanced with sound and moving images.

“It’s more fun than just reading text,” says Kallis, who holds a bachelor’s degree in information systems management from Duquesne University and a master’s in multimedia technology from Cal U. “I’ve received a lot of positive feedback through our professors. The presentations aren’t static, and students like that.”

Nearly 60 professors used eCollege during the fall 2009 semester. And these online educators are tech-savvy, Kallis says.

“They ask about new buzzwords — wikis, blogs, podcasts and things like that. One professor is trying to figure out a way to use Twitter in his classes.”

Kallis keeps up with technology trends and shows educators how to capitalize on them.

“Like Twitter, these innovations pop up out of nowhere,” he says. “Students are using them. Our professors want to grab students’ attention and make integrating these interactive elements into their coursework worthwhile.”