

New Degrees Increase Veterinary Career Options



Tom Thompson

By Karen Templeton

The demand for veterinary technicians, veterinarians trained in public health, and research veterinarians is increasing both nationally and internationally. The College of Veterinary Medicine has risen to the challenge by creating three new degree programs. MSU now offers a 4-year undergraduate veterinary technology program, a cooperative master's in public health with University of Southern Mississippi that emphasizes veterinary public health and a research program in which students can earn their Ph.D. and DVM degrees simultaneously.

These degree programs offer unique opportunities for students desiring a career in animal health.

Four-Year Bachelor of Science Degree in Veterinary Technology

The 4-year undergraduate program leading to a Bachelor of Science degree in veterinary technology will begin in the fall of 2009. This program provides an alternative for those who want a career in animal health but do not want to pursue a Doctorate of Veterinary Medicine.

"We are committed to providing a flexible curriculum that is responsive to the educational needs of students, the changing requirements of the veterinary profession and the diverse biological needs of the animal kingdom," said Dr. Kent Hoblet, CVM dean.

The veterinary technology program is the first undergraduate degree the college has offered. Currently the college awards a Doctor of Veterinary Medicine degree, a Master of Science degree and a Doctor of Philosophy degree. The college also provides clinical education experiences for students pursuing a 2-year associate's degree in the veterinary technician program at Hinds Community College in Raymond.

"Many higher learning institutions and medical research facilities need veterinary technologists who have had the training and education provided through a bachelor's degree program," said Dr. Mikell Davis, director of the new veterinary technology program. "The career opportunities available to such graduates are unlimited, and the contributions they can make to the profession of veterinary medicine are significant."

Students must complete all university core curriculum coursework and have a grade-point average of 2.5 or higher to be eligible as juniors for the 24 available slots of each class.

Students at other institutions are eligible to apply for admittance, but they also must meet MSU's prerequisites.

Juniors who begin the veterinary technology program will study basic care and handling of animals, principles of normal and abnormal life processes, and routine laboratory and clinical procedures. They will spend their senior year in clinical rotations in the Animal Health Center.

The MSU College of Veterinary Medicine is only the third veterinary college in the United States to offer a Bachelor of Science degree in veterinary technology. The veterinary medical colleges at Michigan State University and Purdue University are the other two.

Pet owners, agricultural producers and the general public expect veterinarians to provide the same state-of-the-art health care for animals that humans have. The Mississippi Veterinary Medical Association and all other state associations that comprise the American Veterinary Medical Association cite a serious shortage of veterinary technologists.

In the "Letters to the Editor" section of the Oct. 1 issue of the "Journal of the American Veterinary Medical Association," Massachusetts Veterinary Medical Association president David Schwarz wrote that more than 20,000 new veterinary technologists are needed each year just to maintain services provided by 58,000 veterinarians in clinical practice.

"Most practices need at least two technicians per veterinarian," Schwarz wrote.

Veterinary technologists are trained to administer both routine and specialized procedures so a veterinarian can concentrate on diagnosis, prescription and surgery. An individual with such training can choose to work for a private practice, a public health or regulatory agency, an animal management facility, the

Ryan Detwiler, left, a veterinary technologist at the College of Veterinary Medicine, calms a patient while veterinary medical student Trey Chapman and veterinary technologist Leslie Reed administer a treatment.

pharmaceutical industry, a food manufacturer or a biomedical research institution.

"We are confident that our new program will have a dynamic impact upon the profession of veterinary medicine and help meet the need for qualified technologists so very necessary to ensure the highest quality of health care for animals," Davis said. "This option can allow students who want to work in the animal health-care field to enjoy a rewarding and satisfactory career."

Master's in Public Health

In a partnership that was made official just a few months ago, the College and the University of Southern Mississippi began offering a master's in public health program with an emphasis in veterinary public health beginning this fall.

Southern Miss has an accredited MPH program that has historically offered three emphasis areas: epidemiology and biostatistics, health education, and health policy and administration.

The veterinary public health emphasis will add "a focus on animal-human health, food safety, and biosecurity, from natural and intentional threats," said Dr. William Epperson, head of the Department of Pathobiology and Population Medicine. "These are the areas we are bringing to the Southern Miss program."

CVM faculty will teach most of the courses, but they will do so as adjunct Southern Miss faculty.

Classes will be a mixture of distance and on-site learning. Some classes will be online only, while others will be online and meet on campus two or three times during the semester.

"When we began looking around, we realized Southern would be a good collaborator because it is in-state, accredited, and experienced with distance education," explained Epperson.

The distance learning aspect of the program sets it apart from similar programs offered nationwide.

Potential students must hold a bachelor's degree from an accredited institution with a GPA of 3.0 or higher and complete an application, including GRE scores, with Southern Miss.

The program is open to veterinarians and others. Likely candidates include practicing veterinarians who want to retool, students who applied to CVM but were not accepted, or anyone interested in the field. Veterinary students currently enrolled in the DVM program could complete the MPH program concurrently by taking advantage of breaks and courses required for both degrees.

The MPH program will equip graduates to fill the increasing need for such specialists locally, nationally, and worldwide.

Because of this situation and other pressing issues related to public health such as bioterrorism, federal legislation called the Veterinary Public Health Workforce Expansion Act seeks to increase the number of veterinarians working in the public health field. This legislation emphasizes the need for workers who have been trained in veterinary public health.

Graduates would be candidates for jobs in both the private and public sectors. For example, potential employers include the

U.S. Department of Agriculture, the Food and Agriculture Organization of the United Nations, the Pan American Health Organization, and the World Animal Health Organization. A major potential employer is the Centers for Disease Control and Prevention, including its newly created branch, the National Center for Zoonotic, Vector-Borne, and Enteric Disease.

Program for Research Veterinarians

CVM is establishing a program in which students can earn Ph.D. and DVM degrees simultaneously. Students begin the program by working on the Ph.D. portion of their studies for 2 years. They then slow their Ph.D. pace and complete the DVM in the typical 4 years. After earning the DVM, students can take advantage of an additional year to finish the Ph.D.

"The program allows students to complete both courses of study in about seven years instead of the usual 9," said Dr. Mark Lawrence, associate professor in the Department of Basic Sciences.

"This sequencing is different from the programs that have been tried at other colleges of veterinary medicine," Lawrence said. The format at those schools has been 2 years of DVM work followed by completion of the Ph.D. and then completion of the DVM.

"Those programs have had about a 50 percent success rate," Lawrence said. One of the reasons so many have failed is that students drop out of the Ph.D. portion to pursue the DVM—almost never the other way around.

After developing the new sequencing, Lawrence and others at CVM discovered that two other veterinary schools have developed a similar structure for their Ph.D./DVM programs. All three schools developed the format independently.

"It's always encouraging to see that other schools have come up with similar solutions to the same problem," Lawrence said.

Students interested in the program must complete two separate interview processes—one for entry into the DVM program and one for entry into the Ph.D./DVM program.

"Students must be admitted to the veterinary curriculum first, and they get no special treatment," Lawrence said. "In fact, the admissions committee for CVM does not even know if a student is also applying for the Ph.D. program."

While working solely on the Ph.D., students receive a graduate student stipend and tuition. While working on the DVM, students get a tuition break of \$10,000 per year.

"They are committing to a very long course of study," Lawrence said. "Our goal is to reduce the time and debt burden they face."

Research veterinarians may work in a university or industry setting or in human or animal pharmaceutical research. Perhaps less obviously, the National Institutes of Health seeks out research veterinarians to help pursue its goal of improving human medicine and health.