

Biomedical Sciences: master's, CIP Code: 51.2599

The College of Veterinary Medicine (CVM) supports the land-grant tradition of Kansas State University in teaching, research and public service. The KSU CVM is dedicated to scholarship through innovation and excellence in teaching, research, and service to promote animal and human health for the public good. Even though the primary objective of the CVM is to prepare professional students to meet the demands of veterinary careers, the College is committed to preparing students for graduate programs, internships and residencies. It is imperative that students who receive training in the CVM be prepared for careers in private practice, academia, government and industrial positions. A key component of the CVM mission is to conduct basic and applied research and train graduate students through interdisciplinary programs.

The Masters of Veterinary Biomedical Science was created in 2005 to replace the three existing master's degree programs within the CVM. The intent of this new degree program was to merge three separate master's degree programs into a single program with students selecting a concentration in one of the three disciplines within the CVM determined by their project and supervisory committee. This organizational structure is important due to the diversity of research programs in the CVM. The program facilitates interdisciplinary studies within the CVM and communication between faculty and graduate students.

By training Master of Veterinary Biomedical Science students in studies involving clinical sciences, pathobiology, diagnostic medicine, and physiology, this graduate program is central and key to the success of health professionals in the College, University, State and Nation. This program is the only graduate program on campus, or within the state that provides opportunities for interdisciplinary masters level graduate studies in veterinary pathobiology, clinical sciences, and physiology. The main purpose of this degree program is to provide selected masters-level students with a better understanding of research and prepare them for careers in academia or health and allied industries

Since 2005, Veterinary Biomedical Sciences Masters students have published over 30 articles in nationally and internationally respected scientific journals associated with physiology, clinical sciences, and diagnostic medicine/pathobiology. During this same time period the majority of master's students (28/32) have received scholarship, academic enhancement, research enhancement, travel, and/or national presentation awards. Students who have completed the Master of Veterinary Biomedical Science Program have typically entered doctoral programs, obtained entry-level industry and academic positions, or completed their veterinary degree.

Summarized Assessment of Student Learning – M.S.

Student Learning Outcomes (SLOs):

1) Ability to formulate research questions, design and conduct appropriate experiments, analyze and interpret data, and disseminate research outcomes; 2) Professional and technical expertise in chosen discipline; 3) Critical thinking and interpretation of information presented; 4) Effective use of oral and written communication skills. Measures used are a combination of direct (e.g., seminars presented, publications) and indirect (evaluation by Major Professor).

Results:

Veterinary Biomedical Science graduate students were evaluated on 53 outcomes (for the 4 SLOs) for a 2-year period (n = 8 master's students). The faculty developed a list of criteria to evaluate each SLO based on a scale of 4 (exemplary) to 1 (failed to meet expectations).

- For SLO-1, 8 of the 9 measures increased and 1 decreased when the 2006-2007 assessment data were compared to the 2005-2006 assessment results. The mean value for the 9 measures assessing SLO-1 was 2.30 in 2005-2006 and 2.61 in 2006-2007.
- For SLO-2, 7 of the 10 measures increased and 3 decreased when comparing 2006-2007 to the 2005-2006 assessment results. The mean value for the 10 measures assessing SLO-2 was 2.47 in 2005-2006 and 2.61 in 2006-2007.
- For SLO-3, 2 of the 7 measures increased, 4 decreased, and 1 remained unchanged. The mean value for the 7 measures assessing SLO-3 was 2.43 in 2005-2006 and 2.43 in 2006-2007.
- For SLO-4, 6 of the 9 measures increased, 2 decreased, and 1 remained unchanged. The mean value for the 9 measures assessing SLO-4 was 2.52 in 2005-2006 and 2.84 in 2006-2007.

- Overall, when comparing the measures comprising the four SLO assessments between the 2006-2007 and 2005-2006 evaluation periods, 23 increased, 10 decreased, and 2 remained unchanged.

Actions/Revisions:

Adjustments have been made to the data gathering process by revising the SLOs and the graduate student annual assessment evaluation forms. Faculty discussions have identified ways the data gathering process can be provided using on-line assessment forms. Faculty members are currently in the process of discussing focused changes (e.g., additional courses, changes in journal clubs, interactions with researchers from other departments and universities) that can be implemented to improve the students' proficiency in fundamental characteristics and behaviors of professional training.