

Colorado State University
COLLEGE OF VETERINARY MEDICINE AND BIOMEDICAL SCIENCES
COLLEGE OF AGRICULTURAL SCIENCES

Food Animal Veterinary Career Incentive Program

Overview

In recent years, new veterinary graduates have shown a declining interest in food supply veterinary medicine in both private and public practice. There are many vacancies and numerous career opportunities in all sectors of private food animal practice including mixed animal practice, and specialty practices in dairy cattle, beef cow-calf, beef feedlots, sheep, and swine. Opportunities in public practice include food safety and inspection, communicable disease management, and regulatory veterinary medicine. There has been a growing shortage of new graduates with expertise in food animal species entering research and teaching careers, and in diagnostic laboratory practice. In addition, many practitioners and producers have found it difficult to recruit new graduates into food animal practice, especially in rural communities.

Reduced veterinary participation in food supply veterinary medicine may contribute to increased vulnerability of livestock industries to emerging infectious diseases, exotic and zoonotic diseases, public health risks from food safety and quality problems, lowered public confidence in animal agricultural products, as well as threats to the national economy. A shortage of veterinarians to serve these sectors may lead to a loss of veterinary expertise and skills necessary to educate future generations and to advance scientific discovery necessary to future agricultural production improvements and responsiveness to veterinary and economic challenges.

The overarching goal of the FAVCIP program is to create a sustainable source of future veterinarians for underserved disciplines and geographic regions central to the future of safe and successful food animal production. It should be noted that this Program is not a guaranteed route for entry into the Professional Veterinary Medical Program.

Program Objectives

1. To provide an incentive and a clear academic pathway for students desiring a veterinary career in food supply veterinary medicine.
2. To admit up to five candidates per year based on their experiences and interests in pursuing a career in food supply veterinary medicine.
3. To devise a plan of academic work, experience, and mentoring that encompasses undergraduate and veterinary medical education and meets specific needs of animal agriculture. Completion of this program at Colorado State University (CSU) will result in certification as a FAVCIP applicant.

4. To provide a continuous supply of new veterinary graduates with skills, experience and expertise in food animal medicine and management. These new graduates will immediately be able to provide valuable service to modern animal agriculture and will be prepared to continually grow and improve as health professionals.

Examples of professional veterinary service to animal agriculture include private food animal practitioners, mixed animal private practitioners (with at least half of the practice being with food animals/animal agriculture), veterinarians working in corporate agribusiness, technical service veterinarians working with animal health industries, pathologists working in diagnostic laboratories, food animal veterinarians on university faculties, and veterinarians in public practice such as veterinary medical officers employed by state or federal governments.

Eligibility

Candidates must be FAVCIP-certified by meeting the program requirements established by the Colleges of Agricultural Sciences and Veterinary Medicine and Biomedical Sciences (CVMBS) at Colorado State University.

Colorado State University (CSU) undergraduate students who have a strong interest in pursuing veterinary careers in a food animal discipline will be encouraged to follow the FAVCIP curriculum and program requirements as they complete their Bachelor of Science degree in Animal Sciences at CSU. Students should develop an externship/internship plan with their designated adviser in the Department of Animal Sciences no later than end of the second year in the program. When the first externship/internship is satisfactorily completed, those students will qualify for advanced advising and mentoring in the FAVCIP.

Students who qualify for participation in this program will be advised by the CVMBS preveterinary Adviser and a designated adviser in the Department of Animal Sciences. This specialized academic and career advising will facilitate enrollment in required FAVCIP courses, all necessary Professional Veterinary Medical Program admissions pre-requisite courses, and additional courses essential to their special interests, as well as participation in extra-curricular activities and externship opportunities that will enhance their abilities in food animal husbandry.

Students who successfully complete all aspects of the FAVCIP program will become “Certified” FAVCIP candidates for admission to the veterinary program.

Application and Admission to the DVM Program

1. All certified FAVCIP applicants must apply to the DVM program through the regular admissions process and will be expected to meet all regular preveterinary and application requirements. In addition, certified FAVCIP applicants will need to fill out the special FAVCIP section on the Colorado supplemental application. Criteria for admission will be the same as for all other candidates; however, special consideration will be given to applicants’ commitment and potential to contribute to the field of food supply veterinary medicine.

2. Admitted CSU-certified candidates will receive provisional offers based on successful completion of undergraduate FAVCIP requirements.
3. Non-Colorado resident students enrolled at CSU as undergraduates in FAVCIP may be eligible to convert their domicile to Colorado prior to applying to the DVM program. Applicants who are domiciled (not the same as "residency") in Colorado for one year or more prior to the date of matriculation in the veterinary program are eligible to be included in the Colorado pool, and if qualified, will have their obligation to pay a support fee funded by the State of Colorado. For information about establishing domicile, go to the tuition classification website (<http://sfs.colostate.edu/I29000.cfm>). Questions concerning eligibility for Colorado support should be directed to the Colorado State University Office of Student Financial Services, 103 Administration Annex (970)491-6321, (<http://sfs.colostate.edu/>). Please specify that you are applying to the DVM program.

Summary of Key Points of the FAVCIP Program

- **Purpose:** To increase the number of admitted veterinary students who may pursue careers in the food animal industry.
- **Eligibility:**
 - **CSU-Certified Candidates** - complete the requirements of the FAVCIP program at Colorado State University
- **Application:**
 - Submit VMCAS and Colorado Supplemental Applications (same as regular applicants)
 - Fill out the special section for FAVCIP applicants on the Colorado Supplemental Application

Program Requirements for Certification at CSU

1. Successful completion of the undergraduate curriculum outlined below, resulting in award of the Bachelor of Science degree in Animal Sciences at Colorado State University.
2. Students must achieve a GPA of 3.0 or better upon completion of the Program, with a minimum of 24 GPA credits earned for each academic year, as well as a grade of at least 2.0 in any DVM pre-requisite course, in order to remain part of the FAVCIP Undergraduate Program and to qualify for preferred admission to the DVM Program.
3. Completion of at least two food animal experience externships, to be tracked and verified by the Department of Animal Sciences.

4. Letters of recommendation required for the DVM Admissions process must include at least one from a practicing food and fiber production animal veterinarian with whom the FAVCIP student has worked.

DVM Program Requirements for FAVCIP-Accepted Students

1. FAVCIP students will be required to attend a half-day orientation program in August prior to matriculation in the DVM program.
2. Each FAVCIP student will be assigned a mentor and must meet with the mentor a minimum of once per semester. It is the FAVCIP student's responsibility to initiate this meeting.
3. FAVCIP students must attend a group meeting once/semester (as announced).

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Food Animal Veterinary Career Incentive Program Curriculum

	<i>Minimum Semester Credits</i>
BIOLOGICAL SCIENCES	
Laboratory associated with a biological sciences course (LIFE102)	1
Genetics (SOCR330, BZ350, or MIP450)	3
PHYSICAL SCIENCES	
Laboratory associated with a chemistry class	1
Biochemistry (BC351 or BC401)	3
Physics with laboratory (PH121 or PH141)	5
MATH	
Statistics (upper division course preferred - STAT301 or STAT/ERHS307)	3
ARTS & HUMANITIES/BEHAVIORAL & SOCIAL SCIENCES	
Successful completion of the Colorado State University All University Core Curriculum (AUCC), as verified by the Preveterinary and Animal Sciences Advisers. [Note: some courses specified in other parts of this table may be used to meet a portion of the AUCC requirements]	See University Core Curriculum (AUCC)
AGRICULTURAL ECONOMICS AND BUSINESS	
Accounting, finance, management, marketing, or business law – reviewed and approved by FAVCIP Animal Sciences Adviser	12
ANIMAL SCIENCES	
Specialized courses to enhance their technical, practical, and business skills in topics related to various aspects of production, marketing, handling, and processing of livestock and their products – reviewed and approved by FAVCIP Animal Sciences Adviser.	40-45

Additional courses which are not required, but are highly recommended include: microbiology, cell biology, developmental biology, computer sciences, anatomy, physiology, histology, nutrition, and other advanced sciences. Given the demands of practice of veterinary medicine in numerous areas of the United States, students may find capability in Spanish to be extremely useful. While it is impossible to require sufficient credits in the curriculum to assure this capability, pursuit of foreign language training, especially in Spanish, is highly encouraged.

**SAMPLE COURSE DESCRIPTIONS
AT COLORADO STATE UNIVERSITY**

GENETICS: ONE OF THE FOLLOWING:

SOCR330 - 3 semester credits - Principles of Genetics

Prerequisite: BZ110 or BZ120 or LIFE102

Transmission, population, and molecular genetics; practical applications.

MIP450 - 3 semester credits - Microbial Genetics

Prerequisite: MIP300 (General Microbiology); BC351 or BC401 or concurrent registration.

Principles of genetics at molecular level: mutation, recombination, complementation, suppression, control of gene expression, & recombinant DNA.

BZ350 - 4 semester credits - Molecular and General Genetics

Prerequisite: LIFE102; one course in statistics. Primarily for students in biological sciences.

Mendelian, molecular, and population genetics emphasizing the molecular basis of genetics.

BIOCHEMISTRY: ONE OF THE FOLLOWING:

BC351 - 4 semester credits - Principles of Biochemistry

Prerequisite: BZ110 or BZ120 or LIFE102; CHEM245 or CHEM346 or concurrent registration in CHEM343 (Organic Chemistry). For majors in biological sciences, engineering, and preprofessional students in the health sciences.

Structure and function of biological molecules; biocatalysis; metabolism and energy transduction; gene expression.

BC401 - 3 semester credits - Comprehensive Biochemistry I

Prerequisite: CHEM245 or CHEM345 or concurrent registration in CHEM345; MATH155 or MATH160.

Macromolecular structure and dynamics; membranes; enzymes; bioenergetics.

PHYSICS: ONE OF THE FOLLOWING:

PH121 - 5 semester credits - General Physics I

Corequisite: MATH125 (Numerical Trigonometry)

Concepts of force, torque, energy, momentum, work used to cover fluids, waves, sound, temperature, heat; biological, physical examples (noncalculus).

PH141 - 5 semester credits - Physics for Scientists and Engineers I

Prerequisite: MATH126; MATH155 or MATH160. (Calculus). Students who have had high school physics may enroll in MATH155 or MATH160 concurrently. Credit not allowed for both PH141 and PH121.

Forces, energy, momentum, angular momentum, oscillations, waves, heat, thermodynamics (calculus based).

STATISTICS: ONE OF THE FOLLOWING:

STAT301 - 3 semester credits - Introduction to Statistical Methods

Prerequisite: MATH118 (College Algebra).

Techniques in statistical inference; confidence intervals, hypothesis tests, correlation and regression, analysis of variance, chi-square tests.

STAT307/ERHS307 - 3 semester credits - Introduction to Biostatistics

Prerequisite: MCC118 (College Algebra). Credit allowed for only one course: STAT301, STAT307, ERHS307, STAT309, STAT311.

Biostatistical methods; confidence intervals, hypothesis tests, simple correlation and regression, one-way analysis of variance.

NOTE: 200-level Statistics courses that meet All University Core Curriculum requirements may be approved to meet FAVCIP requirement in statistics for this category.

AGRICULTURAL ECONOMICS OR BUSINESS: FROM THE FOLLOWING:

Total of 12 credits in this category that meet the below criteria and are reviewed and approved by FAVCIP Animal Sciences Adviser.

Any one or more AREC or ECON courses (in addition to AREC202 and ECON202) from the Colorado State University Catalog (Note: some AREC and ECON courses do not allow credit for both). Plus any one or more Business courses, Animal Science majors have special access to ACT205, FIN305, BUS205, MGT305, or MKT305.

ANIMAL SCIENCES:

Students must complete the requisite courses from each category of the approved Animal Science Checksheet that includes University Core.

DESIGNATED ADVISERS:

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