

CVM educational opportunities in Agricultural Animal Health

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Although career interest isn't reported as part of entering class statistics (<http://www.vetmed.wsu.edu/prospectiveStudents/ClassStats.aspx>), in informal surveys 30 to 45 percent of entering students indicate an interest in agricultural animal or mixed animal practice.

AAVET (Agricultural Animal Veterinary Education Team) goals include:

- Empowering, guiding and motivating students to become self-directed, lifelong learners;
- Identification and solicitation of individuals who obtain and maintain excellence in the pathway of their veterinary interests;
- Providing excellent whole-career pathway mentoring to each student from before matriculation to after graduation and in professional practice;
- Establishing and maintaining systems for active stakeholder communication, maintaining transparency, and soliciting input and feedback from all parties;

Units contributing to agricultural animal program:

- WSU CVM Departments and units:
 - VCAPP – Veterinary Comparative Anatomy, Pharmacology and Physiology - <http://www.vetmed.wsu.edu/depts-vcapp/>
 - Worthman Anatomy Museum (<http://www.vetmed.wsu.edu/academic/resources.aspx>)
 - VCS – Veterinary Clinical Sciences - <http://www.vetmed.wsu.edu/depts-vcs/>
 - VTH – Veterinary Teaching Hospital - <http://www.vetmed.wsu.edu/depts-vth/>
 - FDIU- Field Disease Investigation Unit - <http://www.vetmed.wsu.edu/depts-fdiu/>
 - VMP – Veterinary Microbiology and Pathology - <http://www.vetmed.wsu.edu/depts-vmp/>
 - WADDL – Washington Animal Disease Diagnostic Laboratory - http://www.vetmed.wsu.edu/depts_waddl/
- U Idaho College of Agriculture and Life Sciences (<http://www.ag.uidaho.edu/index.htm>)
 - Animal and Veterinary Sciences Department (<http://www.avsc.uidaho.edu/>)
 - Caine Center (<http://www.cainecenter.uidaho.edu/>)- devoted to addressing the needs of regional agricultural animal industries and offers multiple elective clinical rotations.
 - Nancy M. Cummings Research, Extension and Education Center, Salmon, ID (<http://www.cals.uidaho.edu/nancycummings/>)
- USDA Animal Disease Research Unit at WSU- bovine, ovine, caprine, equine research
- WSU College of Agriculture, Human and Natural Resource Sciences – Department of Animal Sciences (<http://www.ansci.wsu.edu/>)
- Unique clinical programs at other veterinary schools (Cornell and Wisconsin dairy rotations, Kansas and Nebraska beef rotations)

Faculty with primary responsibility in the Agricultural Animal Teaching Program and unit affiliation:

Andrew Allen (VCS)	Dale Moore (VCS)
Wayne Ayers (Caine)	Steve Parish (VCS)
George Barrington (VCS)	Chris Schneider (Moscow)
Jim England (Caine)	Ahmed Tibary (VCS)
John Gay (VCS)	John Wenz (VCS)
Ram Kasimanickam (VCS)	

- VCS faculty webpages accessible here - <http://www.vetmed.wsu.edu/people-vcs/>
- U of Idaho faculty webpages accessible here - <http://www.avsc.uidaho.edu/people.htm>

Organized Experiential “Hands-on” Opportunities:

- During semesters:
 - Laboratory sessions of specific classes
 - Clinic round attendance, student schedule permitting
 - Elective weekday and weekend trips to agricultural animal operations- open to all 1st – 3rd year students, student schedule allowing
 - Scheduled activities organized by student organizations (see list below)
- Summer of 1st year
 - 5 three-week clinical rotations providing “hands-on” clinical experience with cattle, sheep, goats, llamas, alpacas (Dr’s George Barrington, Steve Parish)
 - NW-BVEP Program (Northwest Bovine Veterinary Experience Program) - formal 6 week or more rotations at large dairy, cow-calf and feedlot operations, or rotations with agricultural animal veterinarians serving these (Dr’s Wayne Ayers, Chris Schneider, <http://www.cainecenter.uidaho.edu/ibvep.htm>)
 - Mentor facilitated experiences in agriculture production or veterinary medicine
- Summer of 2nd year
 - NW-BVEP Program (continued)
 - formal rotations with agricultural animal veterinarians
 - Mentor facilitated experiences with food supply and rural mixed practice veterinarians
- Clinical Rotations- 4th year
 - WSU Preceptor program
 - WSU SIPE program
 - Elective opportunities at the Caine Center

Certificate and certification programs that students may elect to complete:

- BQA (Beef Quality Assurance), <http://www.bqa.wsu.edu/>
- FEMA ICS (Incident Command System) Certification, <http://training.fema.gov/EMIWeb/IS/ICSResource/index.htm>
- USDA National Veterinary Accreditation Program, http://www.aphis.usda.gov/animal_health/vet_accreditation/
- VBMA Certificate Program (Veterinary Business Management), <http://www.vetmed.wsu.edu/clubs/VBMA/index.aspx>

Other local academic and experiential opportunities:

- WSU and UI Animal Science Departments-Professional students who have not yet received a bachelor’s degree prior to admission are eligible to participate in the WSU and UI Dairy teams for the North American Intercollegiate Dairy Challenge program. <http://www.dairychallenge.org/>
- Students may complete Master’s Degrees with WSU Department of Animal Science or the University of Idaho Animal and Veterinary Sciences Department, particularly if they begin their graduate coursework before enrolling in the veterinary curriculum
- Several students have authored scientific papers and presented posters and papers at national meetings that were based on research associated with their summer experiences

Financial support:

- WSU CVM has 12 donor-sponsored annual scholarships (\$34,000 total) that support students whose selection is based on their interests in agricultural animal medicine.
- Summer research experiences involving food supply veterinary medicine on dairy and beef operations
- IBVEP – WSU CVM, University of Idaho Animal and Veterinary Sciences Department, livestock producer groups and allied industry funding supports a summer 6 week on-premise experience program for students interested in food supply veterinary medicine (2009 - 15 students at \$3,250 total program cost per student - <http://sharepoint.cals.uidaho.edu/IBVEP/default.aspx>).
- WSU students compete successfully for AAPB (American Association of Bovine Practitioners - <http://www.aabp.org/>), AASV (American Association of Swine Veterinarians - <http://www.aasv.org/>) and ARV (Academy of Rural Veterinarians - <http://www.ruralvets.com/>) student externship grants for sponsored experiences in rural practices and are encourage by faculty to do so.

- WSU students compete successfully for industry-sponsored summer internships, such as those provided by Ag Health Labs, AgriBeef Co, Beef Northwest and Columbia River Dairies, sponsored experiences in rural practices and are encourage by faculty to do so.

Student Organizations - <http://www.vetmed.wsu.edu/clubs/>

WSU CVM student organizations are very active, arranging speakers, additional “hands-on” opportunities and field trips many weeks during the year. These activities are supported by student fundraising and donations from professional organizations

- Agricultural Animal Club - <http://www.vetmed.wsu.edu/clubs/agricultural/index.aspx>

The following are selected recent academic year activities arranged by students:

- 27 VSMART presentations by Ag Animal Club members during the 2008-09 academic year
 - 4 DairyComp 305 training sessions (7 students, Dr. Wenz)
 - 2 Columbia River Dairies trips (7 and 10 students)
 - 2 Feedlot trips (5 and 8 students, Dr. Szasz)
 - 2008 AABP Conference (3 students, North Carolina)
 - 2009 AABP Conference (10 students, Omaha)
 - 2010 AABP Conference
 - Antibiotic resistance in dairy calves (10 students, Drs. Moore and Sischo)
 - ARV lecture (15 students, Dr. Fred Muller)
 - Beef Quality Assurance Certification (25 students, Dr. Moore)
 - Biotracking lecture (20 students, BioPRYN)
 - Cow-calf herd notebook lecture (27 students, Dr. Moore)
 - Dairy nutrition short course (48 students, Dr. Scott Waltner)
 - Feedlot nutrition short course (10 students, Dr. Josh Szasz)
 - Heifer vaginal spaying lecture (40 Students, Dr. Dick Cunningham)
 - Hoof trimming lab (8 students, WSU Knott’s Dairy Center)
 - Swine castration lab (10 students, WSU Swine Center)
 - Swine reproduction lab (10 students, WSU Swine Center)
 - AASV classic swine fever presentation (20 students)
 - AASV swine short course (25 students)
 - SAVMA - <http://www.vetmed.wsu.edu/clubs/scavma/index.aspx>
 - SAVMA Annual Educational Symposium participation <http://www.avma.org/savma/>
 - Small Ruminant Club - <http://www.vetmed.wsu.edu/clubs/SmRuminant/index.aspx>
 - Theriogenology Club - <http://www.vetmed.wsu.edu/clubs/therio/index.aspx>
- The following are selected recent academic year ag-related activities arranged by students:
- Bovine transrectal palpation lab (30 students, Dr. Rodriguez)
 - Bovine embryo collection lecture and labs (30 students, Dr. Tibary)
 - Bovine artificial insemination lab (20 students, Dr. Rodriguez)
 - WSU Department of Animal Science’s Cooperative University Dairy Students program (CUDS: Where the Text Meets the Bucket); Students assume complete responsibility for the ownership and day-to-day management of a small herd of dairy cattle housed at the WSU Knott’s Dairy Center.
 - WSU Department of Animal Science’s Cougar Cattle Feeders program

Supportive academic and recruitment programs:

- A full-time student recruiter
 - Recruitment program for the Annual State FFA convention
- Cougar Quest academic summer camp for students entering grades 7-12
- Honors Early Admit Pre-veterinary Program
- 27 VSMART presentations by Ag Animal Club members during a recent academic year

DVM Curriculum Information: <http://www.vetmed.wsu.edu/prospectiveStudents/Curriculum.aspx>

- The official WSU catalog version of the DVM program requirements, including short descriptions are on-line at <http://www.catalog.wsu.edu/Pullman/Academics/FullInfo/60>
 - DVM professional curriculum required course listing - <http://www.catalog.wsu.edu/Pullman/Academics/DegreeProgram/1104>
 - Short descriptions of the professional program required and elective courses are on-line at http://www.catalog.wsu.edu/Pullman/Academics/Courses/V_M

- Deciphering the course listings requires understanding the following. At least 151 semester hours are required for graduation with one lecture hour or 3 lab hours per week for the 15 week semester being one “semester hour”. The lecture and lab hour distribution for each course are listed on the short descriptions. For example, 4(3-3) is a 4 credit class meeting for 3 lecture hours and 1 3 hour lab per week. For the clinic rotations, 1 week of clinics is equivalent to one semester hour of credit.
- PDF versions of the prior WSU course catalogs are located at <http://www.catalog.wsu.edu/Pullman/PriorCatalogs>

Courses with content relevant to Agricultural Animals:

(courses spread across multiple semesters, such as Introduction to Clinics, appear on the official course listing in the semester when they are graded)

Year 1

- Animal Handling and Agricultural Animal Orientation
- Animals, Society and the Veterinarian - practicum
- Basic Nutrition
- Introduction to Clinics
- Introduction to Veterinary Neurology
- Principles of Surgery
- Veterinary Anatomy I and II
- Veterinary Cell Physiology
- Veterinary Immunology
- Veterinary Microscopic Anatomy
- Veterinary Pathology I
- Veterinary Physiology

Year 2

- Animals, Society and the Veterinarian (continued)
- Clinical Anesthesiology
- Clinical Pathology
- Clinical Specialty Practice
- Epidemiology
- Fundamentals of Pharmacology
- Introduction to Clinics (continued)
- Pathology II
- Radiology
- Veterinary Bacteriology
- Veterinary Medicine and Human Health (public health)
- Veterinary Parasitology
- Veterinary Toxicology
- Veterinary Virology

Year 3

- Agricultural Animal Medicine I and II
- Animals, Society and the Veterinarian (continued)
- Clinical Veterinary Pharmacology
- Foreign Animal Diseases and Regulatory Issues
- Introduction to Clinics (continued)
- Large Animal Surgery (lecture)
- Theriogenology (most labs are large animal)
- Veterinary Clinical Nutrition

Years 1-3 Supplemental Core and Electives

- Advanced Dairy Herd Management
- Applied Reproductive Physiology
- Herd Production Medicine
- International Veterinary Medicine

- Large Animal Surgery
- Large Animal Surgery and Applied Anatomy (labs)
- Small Ruminant Medicine and Surgery
- Spanish for Veterinarians

Year 4 (at least 43 weeks / 44 credits required)

(from current Goals Book <http://courses.vetmed.wsu.edu/blocks/GoalsBook2011.pdf> - may not be accessible from outside WSU)

- Required Clinical Core – 25 weeks (26 credits) required
 - equine, large animal ICU (6 weeks)
 - guided preceptorship (4 weeks): 12 mixed; 1 dairy available
 - anesthesia, holiday extension (4 weeks)
 - required SIPE - Student Initiated Professional Experience (2 weeks)- student's choice
 - Scientific Writing and Presentation (1 credit senior paper – topic student's choice)
 - small animal (9 weeks)
- Elective / Supplemental Clinical – at least 18 weeks (credits) required from the following
 - Caine Center Clinical Electives:
 - Advanced Reproduction Technology(bovine) (2-4 weeks),
 - Beef Calving (2 weeks)
 - Cow-calf Production Medicine (2 weeks – U of I Nancy M. Cummings REE Center at Salmon, ID <http://www.ag.uidaho.edu/nancycummings/>)
 - Dairy (2-4 weeks)
 - Feedlot (2 weeks)
 - General Food Animal (2-4 weeks)
 - Lambing Management (2 weeks)
 - Small Ruminant (2 weeks)
 - Special Project (1 -2 weeks)
 - WSU Clinical Electives (ag animal related):
 - Ag Animal Internal Medicine and Surgery (4 weeks)
 - Ag Animal introduction to clinics (2 weeks)
 - Bovine Theriogenology (2 weeks)
 - Clinical Pathology (2 weeks)
 - Diagnostics (WADDL - 4 weeks)
 - Epidemiology of Diseases (4 weeks)
 - General Large Animal Theriogenology (2 weeks)
 - Herd Problem Investigation (2 weeks)
 - Pharmacy and Therapeutics (1 week)
 - Research (4 weeks)
 - SIPE - Supplemental Student Initiated Professional Experience (1-2 weeks)- student's choice in addition to the required 2 weeks
 - Clinical rotations at other institutions (as arranged by student; up to 4 credits given if completed as SIPE)

Agricultural Animal Health Program: (<http://www.vetmed.wsu.edu/prog-AAHP/>)

- *Research:* Research under the AAHP (Agricultural Animal Health Program) umbrella includes major programs such as Food Safety and Zoonoses Program (ZRU - <http://www.vetmed.wsu.edu/orgWSU-ZRU/>), Transmissible Spongiform Encephalopathies (TSE's), Immunology and Vaccine Development, Vector-borne Diseases, and the Program in Genomics (http://www.vetmed.wsu.edu/research_vmp/program-in-genomics/). It includes both on-farm and laboratory research, and crosses departmental and unit lines. It includes scientists in the USDA ARS Animal Disease Research Unit, which is identified as a key adjunct unit in the AAHP. This flexible structure is intentionally easily modifiable in response to emerging needs. The WSU School for Global Animal Health is external to the AAHP but includes a significant focus on agricultural animals (<http://globalhealth.wsu.edu/>).
- *Outreach:* CVM outreach has several components, the primary one related to agricultural animals being Veterinary Extension (<http://vetextension.wsu.edu/>) led by Dr. Dale Moore. Faculty from two departments (VCS and VMP), FDIU, and WADDL are involved both formally and informally in agricultural animal outreach efforts.

- *Service:* The service components of the AAHP are both clinical (in-hospital - <http://www.vetmed.wsu.edu/depts-vth/Agsections.aspx>), and on-farm population/epidemiologically based outbreak investigations (FDIU - <http://www.vetmed.wsu.edu/depts-fdiu/>) and laboratory diagnostic efforts (WADDL - http://www.vetmed.wsu.edu/depts_waddl/). Faculty with clinical and diagnostic service assignments are from multiple units and departments.
- *Education:* Faculty members with significant teaching responsibilities comprise the agricultural animal health educational branch of the program. The major part of this component resides in the Department of Veterinary Clinical Sciences but faculty from other departments, particularly WADDL in the fourth year of the curriculum, contribute to this effort.

Other information:

WSU Prospective Veterinary Student Blog - <http://blogs.vetmed.wsu.edu/prospectivestudents/>
Living Large in Search of the elusive large animal veterinarian. *Washington State Magazine*, Summer 2009 <http://wsm.wsu.edu/s/index.php?id=253>
Recruiting Ag Animal Veterinarians. *WSU Extension Agricultural Animal Health Newsletter* 2(1).
<http://vetextension.wsu.edu/vmehome/newsletter/documents/Vol2Iss1.pdf>

Dean's Blog - <http://blogs.vetmed.wsu.edu/Dean/>

[Current version on-line location - <http://www.vetmed.wsu.edu/courses-jmgay/documents/WSUAgAnimSummary.pdf>]