Clinical Sciences-VS (VS)

Courses

VS 313 **Prevention and Control of Livestock Diseases**  Credits: 3 (3-0-0)
Also Offered As: ANEQ 313.
Course Description: Common ailments of livestock; sanitation and disease prevention and control.
Prerequisites: (ANEQ 230 or BMS 330 or ANEQ 305) and (ANEQ 310, may be taken concurrently and ANEQ 320, may be taken concurrently).
Registration Information: Junior or senior standing. Credit not allowed for both VS 313 and ANEQ 313.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

VS 331 **Histology**  Credits: 4 (3-2-0)
Course Description: Analysis of animal cells, tissues, and organs emphasizing light microscopy.
Prerequisite: BMS 300.
Registration Information: Must register for lecture and laboratory. Credit not allowed for both VS 331 and BMS 330. Sections may be offered: Online.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

VS 333 **Domestic Animal Anatomy**  Credits: 4 (3-3-0)
Course Description: Comparative functional anatomy of the dog, horse, and cow.
Prerequisite: BZ 110 or LIFE 102.
Registration Information: Must register for lecture and laboratory. Credit not allowed for both VS 333 and BMS 305. Sections may be offered: Online.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

VS 479 **Biology and Behavior of Dogs**  Credits: 3 (3-0-0)
Also Offered As: BZ 479.
Course Description: Interactions of physiology, neurobiology, and genetics on behavior of domestic dogs, and how evolution and domestication influence behavioral traits.
Prerequisite: LIFE 103 or BZ 110.
Registration Information: Credit not allowed for both VS 479 and BZ 479. Sections may be offered: Online.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

VS 495 **Independent Study**  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

VS 533 **Epidemiology of Infectious Diseases/Zoonoses**  Credits: 3 (2-0-1)
Also Offered As: MIP 533.
Course Description: Epidemiologic features of infectious and parasitic diseases that have a major impact on community medicine.
Prerequisite: MIP 300.
Registration Information: Must register for lecture and recitation. Credit not allowed for both VS 533 and MIP 533.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

VS 562 **Applied Data Analysis**  Credits: 3 (3-0-0)
Course Description: Data management, application and interpretation of statistical analysis, and reporting of results for students in health science fields.
Prerequisite: STAT 301 or STAT 307.
Registration Information: Credit not allowed for VS 562, EDRM 606 and PBHL 560.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

VS 570 **Issues in Animal Agriculture**  Credits: 2 (2-0-0)
Also Offered As: AGRI 570.
Course Description: Issues that have a major impact on the direction of changes in animal agriculture.
Prerequisite: None.
Registration Information: Credit not allowed for both VS 570 and AGRI 570.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Course Fee: No.

VS 579 **Animal Behavior in Captive Populations**  Credits: 3 (3-0-0)
Also Offered As: NSCI 579.
Course Description: How animals learn, perceive their world and behave, and how all of those intersect to alter behavior in captive settings.
Prerequisite: BZ 300.
Registration Information: Enrollment in the M.P.N.S., Zoo, Aquarium, and Shelter Management specialization can substitute for BZ 300.
Credit not allowed for both VS 579 and NSCI 579.
Term Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

VS 602 **Critical Evaluation of Scientific Literature**  Credits: 2 (1-0-1)
Course Description: Method of evaluating scientific literature. Students present critiques of papers they have chosen.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Must register for lecture and recitation.
Term Offered: Fall.
Grade Mode: S/U Sat/Unsat Only.
Special Course Fee: No.

VS 605 **Comparative Anesthesiology**  Credits: 2 (2-0-0)
Course Description: Techniques in anesthesia for large and small animals.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring (every third year).
Grade Mode: Traditional.
Special Course Fee: No.
VS 606 Comparative Anesthesiology Laboratory Credit: 1 (0-3-0)
Course Description: Techniques in anesthesia for large and small animals.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Concurrent registration in VS 605.
Term Offered: Spring (every third year).
Grade Mode: Traditional.
Special Course Fee: No.

VS 612 Plastic and Reconstructive Surgery Credits: 2 (2-0-0)
Course Description: Advances in surgical patient care, surgical instrumentation, and reconstruction.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: DVM degree or equivalent professional medicine degree.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

VS 613 Plastic and Reconstructive Surgery Laboratory Credit: 1 (0-3-0)
Course Description: Advances in surgical patient care, surgical instrumentation, and reconstruction.
Prerequisite: VM 786B.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

VS 626 Infertility and Genital Disease Credits: 2 (2-0-0)
Course Description: Infectious and noninfectious causes of reproductive failure in food animals.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall (every third year).
Grade Mode: Traditional.
Special Course Fee: No.

VS 628 Physiology and Pathophysiology Credits: 3 (3-0-0)
Course Description: Overview of the normal physiology and pathophysiology of disease states of mammalian organ systems.
Prerequisites: BMS 500 and BMS 501.
Restriction: Must be a: Graduate, Professional.
Registration Information: DVM degree or equivalent professional medicine degree can substitute for BMS 500; BMS 501.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

VS 630 Orthopedic Surgery Credits: 3 (3-0-0)
Course Description: Techniques, devices, and prosthetic materials in rehabilitating musculoskeletal problems.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall (every third year).
Grade Mode: Traditional.
Special Course Fee: No.

VS 631 Orthopedic Surgery Laboratory Credit: 1 (0-3-0)
Course Description: Procedures applied to skeletal preparations and living animals.
Prerequisites: (VM 786A or VM 786B) and (VS 630, may be taken concurrently).
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall (every third year).
Grade Mode: Traditional.
Special Course Fee: No.

VS 642 Ophthalmology Credits: 5 (4-2-0)
Course Description: Instrumentation, ocular therapeutics, and clinical ophthalmology.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Must register for lecture and laboratory.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

VS 645 Surgery of the Eye Credits: 3 (2-3-0)
Course Description: Techniques, indications, and complications.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Must register for lecture and laboratory.
Term Offered: Spring (every third year).
Grade Mode: Traditional.
Special Course Fee: No.

VS 647 Food Animal Production and Food Safety Credits: 2 (2-0-0)
Course Description: Basic orientation to food animal production units, herd health concepts, and issues of food safety from preharvest through processing and distribution.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Enrollment in Food Science/Safety Graduate Interdisciplinary Studies program required. Credit not allowed for both VS 647 and VM 648.
Term Offered: Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

VS 650 Comparative Abdominal Surgery Credits: 3 (3-0-0)
Course Description: New techniques in surgery of abdominal viscera.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall (every third year).
Grade Mode: Traditional.
Special Course Fee: No.

VS 651 Comparative Abdominal Surgery Laboratory Credit: 1 (0-3-0)
Course Description: Reparative and reconstructive abdominal surgical procedures.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: DVM degree or equivalent professional medicine degree.
Term Offered: Fall (every third year).
Grade Mode: Traditional.
Special Course Fee: No.
VS 655  Echocardiography in Veterinary Medicine  Credits: 3 (2-3-0)  
**Course Description:** Technical proficiency in obtaining echocardiographic images; fundamental understanding of diagnostic criteria for common cardiac disease in dogs and cats.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Registration Information:** DVM degree or equivalent professional medicine degree required. Must register for lecture and laboratory.  
**Term Offered:** Spring (odd years).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 660  Neurology and Neurosurgery Credits: 3 (3-0-0)  
**Course Description:** Diagnostic and surgical techniques for the nervous system.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Spring (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 661  Neurology and Neurosurgery Laboratory Credit: 1 (0-3-0)  
**Course Description:** Production and correction of surgically amenable lesions in central and peripheral nervous system; electrodiagnosis.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Spring (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 664  Thoracic and Cardiovascular Surgery Credits: 3 (3-0-0)  
**Course Description:** Surgical approaches to the thorax and the central and peripheral cardiovascular system.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Registration Information:** DVM degree or equivalent professional medicine degree required.  
**Term Offered:** Spring (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 673  Thoracic and Cardiovascular Surgery Laboratory Credit: 1 (0-3-0)  
**Course Description:** Surgical procedures applied to the chest, heart, and vessels.  
**Prerequisites:** (VM 786A or VM 786B) and (VS 673, may be taken concurrently).  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Fall (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 674  Thoracic and Cardiovascular Surgery Laboratory Credit: 1 (0-3-0)  
**Course Description:** Surgical procedures applied to the chest, heart, and vessels.  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Fall (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 699  Thesis Credits: Var[1-18]  
**Course Description:**  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Terms Offered:** Fall, Spring, Summer.  
**Grade Mode:** Instructor Option.  
**Special Course Fee:** No.  

VS 701  Postgraduate Medicine I Credits: Var[1-3]  
**Course Description:** Comprehensive review, update of immunology, emergency medicine, dermatology, and endocrinology.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Fall (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 702  Postgraduate Medicine II Credits: Var[1-3]  
**Course Description:** Comprehensive review, update of neurology, gastroenterology, and ophthalmology.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Spring (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 703  Postgraduate Medicine III Credits: Var[1-3]  
**Course Description:** Comprehensive review, update of oncology, cardiology, reproduction, ophthalmology, and radiology.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Spring (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 704  Postgraduate Medicine IV Credits: Var[1-3]  
**Course Description:** Comprehensive review, update of hematology, nephrology, urology, respiratory, hepatic, and pancreatic.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Spring (every third year).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 716  Advanced Studies in Reproduction Credits: 2 (2-0-0)  
**Course Description:** Biochemical and physiological basis for problems in reproduction.  
**Prerequisite:** None.  
**Restriction:** Must be a: Graduate, Professional.  
**Term Offered:** Spring.  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 718  Cancer Biology Clinical Practicum Credits: 2 (0-0-4)  
**Course Description:** Exposes graduate students engaged in laboratory cancer research to cancer from a clinical perspective, through VTH clinical rotations.  
**Prerequisite:** ERHS 510.  
**Term Offered:** Summer.  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.  

VS 733  Advanced Veterinary Epidemiology Credits: 4 (4-0-0)  
**Course Description:** Advanced epidemiological and statistical techniques for the design and analysis of research projects.  
**Prerequisites:** (ERHS 532) and (ERHS 542 or ERHS 544 or STAT 511 or STAT 512 or VS 662).  
**Term Offered:** Spring (odd years).  
**Grade Mode:** Traditional.  
**Special Course Fee:** No.
Clinical Sciences-VS (VS)

VS 750 Clinical and Applied Pharmacology Credits: 2 (2-0-0)
Course Description: Factors involved in drug dosing and variability of drug response. Applications in veterinary and human medicine. 
Prerequisite: BMS 450. 
Registration Information: DVM degree or equivalent professional medicine degree can substitute for BMS 450. 
Term Offered: Spring (even years).  
Grade Mode: Traditional. 
Special Course Fee: No. 

VS 784 Supervised College Teaching Credits: Var[1-18]
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 792 Seminar Credits: Var[1-18] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795A Independent Study: Small Animal Medicine Credits: Var[1-5]
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795B Independent Study: Large Animal Medicine Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795C Independent Study: Small Animal Surgery Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795D Independent Study: Equine Surgery Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795E Independent Study: Ophthalmology Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795F Independent Study: Dermatology Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795G Independent Study: Equine Orthopedics Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795H Independent Study: Large Animal Reproduction Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795I Independent Study: Cardiology Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795J Independent Study: Neurology Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795K Independent Study: Neurology Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795L Independent Study: Dermatology Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No. 

VS 795M Independent Study: Ophthalmology Credits: Var[1-5] 
Course Description: 
Prerequisite: None. 
Restriction: Must be a: Graduate, Professional. 
Registration Information: Maximum of 5 credits allowed in course. 
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option. 
Special Course Fee: No.
VS 795O  Independent Study: Herd Health Management  Credits: Var[1-5]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Maximum of 5 credits allowed in course.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

VS 795P  Independent Study: Equine Lameness  Credits: Var[1-5]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Maximum of 5 credits allowed in course.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

VS 795S  Independent Study: Epidemiology  Credits: Var[1-5]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Maximum of 5 credits allowed in course.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

VS 795T  Independent Study: Human-Animal Bond  Credits: Var[1-5]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Maximum of 5 credits allowed in course.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

VS 796  Group Study-Medicine  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

VS 798  Research  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

VS 799  Dissertation  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.