HEALTH ISSUES IN DOMESTICATED HERDS

COURSE INFORMATION:

Title: Health Issues in Domesticated Herds

Department/Number: HLRM 170 Credits: 2

Prerequisites: None

Location: Northwest Campus and distance delivered via Blackboard and E-Live

Meeting Dates/Time: Fall 2008, 2 hours/week for the first 6 weeks of the semester with the seventh week consisting of a three-day intensive in Nome instead of the regular 2 hour meeting time.

INSTRUCTOR INFORMATION:

HLRM FACULTY
UAF Northwest Campus
Pouch 400
Nome, AK 99762

LOCAL CONTACT INFO:
UAF Northwest Campus
Pouch 400
Nome, AK 99762
907-443-2201
800-478-2202

COURSE READINGS/MATERIALS:

Course Textbook:

Author: Publisher:

Supplementary Readings (Indicate whether required or recommended):

Students will be provided with a booklet of reading materials prior to the start of the course.
Any Supplies Required: Access to a computer that supports the UAF Blackboard and E-Live course delivery system. For the 3-day intensive portion of the course, students should bring appropriate clothing, footwear, and a daypack for performing work outdoors in possible inclement weather. A detailed list will be mailed to students a few months prior to the course.

COURSE DESCRIPTION:

Ruminant anatomy and physiology specific to high latitude ungulates. Overall health issues and problem solving techniques for domesticated ungulates, including a review of indicators for disease or parasite infections. Vaccinations and Rx treatments; including use in food animals. Field necropsy techniques and blood, and tissue collection procedures. State monitoring and identification.

COURSE GOALS:

General Description of Goals: The overall goal of this course is for students to gain knowledge and develop technical skills in health issues related to domesticated ungulates, both farmed and free-ranging, in Alaska.

Student Learning Outcomes/Objectives (Provide Examples):

Knowledge and comprehension outcomes/objectives:
- Identify features of ungulate anatomy and physiology that are beneficial for living in the arctic
- Label the organs and bones of ungulates
- Describe antler growth and tooth wear
- Explain the benefits of preventative medicine for a domesticated herd
- Recognize signs and symptoms of common injuries and/or diseases
- Identify indicators of disease or parasite infections
- Identify farmed herd needs for basic medical treatments such as, castration, fawn care, hoof care, broken antlers
- Describe body response to bacteria, viruses and vaccinations
- Discuss traditional knowledge of domesticated ungulate health

Analysis and application outcomes/objectives:
- Differentiate between the transmission, diagnosis and control of diseases and parasites common to or potentially problematic to Alaskan ungulates
Examine vaccination types and other treatments used to treat ungulates, including dosage, timing of administration, and use in meat animals

Employ a herd health monitoring program to a real domesticated herd

Interpret results from the field necropsy demonstration to determine animal condition

Analyze state of Alaska and federal disease certification and animal monitoring programs on the impact on the domesticated ungulate industry

Synthesis and evaluation outcomes/objectives:

• Design a herd health management program
• Collect tissue, blood and fecal samples for contaminants, health and genetics monitoring
• Evaluate health factors in a herd and choose necessary treatments

INSTRUCTIONAL METHODS:

This course will be taught via distance delivery using Blackboard and E-Live during six 2-hour class meetings. During the 3-day intensive period, classroom face-to-face lecture, outdoor field lecture, demonstrations, and data collection will be used. In addition to the regular course instructors, guest presenters will be scheduled throughout the intensive portion of the course to enhance course topics and broaden student perspective.

SYLLABUS / COURSE CALENDAR:

Class 1: High Latitude Ruminant Anatomy and Physiology I

- The skeleton and muscles
- The organs
- Tooth eruption patterns and aging by wear
- Antler growth

Class 2: High Latitude Ruminant Anatomy and Physiology II

- Hair
- Role of fat in adults and brown fat in fawns
- Circulation - adaptations to the cold, body heat control
- Respiration – adaptations to the cold, body heat control
- Reproduction
Class 3: Herd Health Monitoring

- Benefits of preventative medicine
- Herd health check – what to look for, signs/symptoms of possible injury or disease/sickness, indicators for disease or parasite infections
- Common medical treatments: basic first aid for wounds, hoof care (trimming and infection), broken antlers
- Castration
- Aiding in fawning
- Orphan fawn care

Class 4: Biology of Disease

- Bacteria and Viruses
- Immunity to Disease
- Natural body responses to disease
- How vaccinations respond to disease
- Overwhelming infections

Class 5: Ungulate Diseases and Treatments

- The history, transmission, diagnosis, significance, and control of the following
  - Brucellosis
  - Chronic Wasting Disease
  - Bovine Spongiform Encephalopathy vs Chronic Wasting Disease
  - West Nile Virus
  - White-eye (Keratitis)
  - Tuberculosis
  - Which diseases are Zoonotic?

Class 6: Parasitology and Parasites

- How parasites work; description, transmission, incidence, life cycles, and treatment/control of the following
  - Ectoparasites
    - Warbles
    - Nasal bots
  - Endoparasites
    - Lungworms
    - Tapeworms (Echinococcus and Taenia)
Three-day Intensive in Nome (with course instructors and guest presenters):

Day 1: Evening, 6:00 PM – 9:00 PM
  o Traditional knowledge of ungulate health
  o State and federal disease certification and animal monitoring programs presented by the State of Alaska Veterinarian with a disease/parasite question and answer session

Day 2: All day, 9:00 AM – 5:00 PM
  o Field necropsy demonstration by a licensed veterinarian – equipment, techniques, procedures, proper handling and specimen preparation, storage of samples
  o Causative agents, tissue, blood, and fecal sample collection and background
  o Preparation of samples for genetics, contaminants, heavy metals, and disease information
  o Design of a Herd Health Management Program for a free-range and fenced herd

Day 3: Morning, 9:00 AM – 1:00 PM
  o Lab practical EXAM
  o Complete Herd Health Management Program
  o Course evaluations

COURSE POLICIES:

Students are expected to attend and participate in all class meetings and field trips. Students are expected to arrive on time. Class participation is encouraged and important for learning the techniques and methods covered throughout the course.

Students staying in the NACTEC dormitory are expected to follow all dorm rules and regulations. Failure to comply will be reflected in your final evaluation.
EVALUATION:

The grading system for the course will be: 90-100% = A, 80-89% = B, 70-79% = C, 60-69% = D, below 60% = F. The student’s grade will be based on completing assigned readings, 2 in-class quizzes (20% each), lab-style practical exam (20%), and the development of a herd health management plan (20%). In addition to the coursework, attendance (10%) and class participation (10%) will be used to determine the student’s final grade. Unexcused absences, excessive tardiness, and failure to complete course materials and participate may result in a failing grade.

SUPPORT SERVICES:

Barbara Oleson, Student Services Program Manager, 443-8402 or Bob Metcalf, Records & Registration, 443-8403.

DISABILITIES SERVICES:

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. State that you will work with the Office of Disabilities Services (203 WHIT-7043) to provide reasonable accommodation to students with disabilities:

DISABILITIES SERVICES TEXT FOR DISTANCE FACULTY SYLLABI
(Approved by Mary Matthews, UAF Disability Services, June 16, 2004)

UAF DISABILITY SERVICES FOR DISTANCE STUDENTS

UAF has a Disability Services office that operates in conjunction with the College of Rural Alaska's (CRA) campuses and UAF’s Center for Distance Education (CDE). Disability Services, a part of UAF’s Center for Health and Counseling, provides academic accommodations to enrolled students who are identified as being eligible for these services.

If you believe you are eligible, please visit http://www.uaf.edu/chc/disability.html on the web or contact a student affairs staff person at your nearest local campus. You can also contact Disability Services on the Fairbanks Campus at (907) 474-7043, fydso@uaf.edu.