MEAT PRODUCTION

COURSE INFORMATION:

Title: Meat Production

Department/Number: HLRM 160 Credits: 2

Prerequisites: None

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

Meeting Dates/Time: Spring 2009, 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:**

Meat science terminology and common techniques for desired products, including value-added processing from domesticated ungulates in Alaska. A review of the current state regulations for field slaughtering, slaughterhouses, and product transport. Examine variables and processing techniques that affect meat quality. Hands-on methods will be introduced on proper field slaughtering, preparation, meat handling and storage.

**COURSE GOALS:**

General Description of Goals: The overall goal of this course is for students to be knowledgeable in the science, production, and regulation of Alaskan meat from farm/field to fork.

Student Learning Outcomes/Objectives (Provide Examples):

Knowledge and comprehension outcomes/objectives:
- Explain meat science terminology
- Describe the physiology and biochemistry of muscle as a food
- Discuss factors affecting meat quality in high latitude regions
- Review meat production in Alaska and Scandinavia
- Explain state and federal slaughterhouse regulations

Analysis and application outcomes/objectives:
- Examine a slaughterhouse, the equipment, proper procedures
- Compare and contrast meat production in Alaska and Scandinavia
- Discriminate between cuts and quality of meat during butchering
- Illustrate knowledge of proper meat handling, wrapping, storing and various preparation techniques – traditional and non-traditional
- Interpret factors affecting animal production for meat
- Categorize desirable meat products and by-products
- Demonstrate knowledge of factors that determine meat quality
• Compare treatments for improving meat quality

Synthesis and evaluation outcomes/objectives:
• Assess results of meat taste test panels
• Evaluate state of Alaska and USDA regulations for meat transport and sales
• Formulate an economic and marketing plan for meat in Alaska
• Evaluate carcass treatments and predict results for quality
• Assemble equipment needed for field dressing, butchering, meat wrapping and preservation

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: Meat Science

- Meat science terminology
- Physiology and Biochemistry of muscle as a food
- What pH values of meat tell us (shelf life, tenderness, color, water holding capacity)
- Why you are what you eat – the difference in chemical composition of meat from free-range and grain-fed ungulates

Class 2: Meat Production in High Latitudes

- Factors affecting animal production for meat in the high latitude regions (ownership and management, species, climate, nutrition/range, regulations, economics, other resource uses)
- Meat production in Alaska – species, history, current products and demand
- Meat production in Scandinavia – species, current products and demand
Class 3: Slaughtering

- Proper handling of animals pre-slaughter
- Slaughtering techniques – field vs. slaughterhouse
- Slaughterhouse design – structure, machinery, equipment and personal needed
- State of Alaska and USDA slaughterhouse regulations, including timeframes for vaccination and other treatment administration in meat animals
- QUIZ

Class 4: Meat Quality

- The safety/toxicology quality – meat is safe to eat, free from toxins or added substances such as hormones and antibiotics
- The nutritional quality – content of protein, fat, vitamins, minerals
- The technological quality – determining functional properties of meat (smoking, drying, sausage manufacturing)
- The sensory quality – how the meat looks, smells, tastes
- The ethical quality – questions from consumers about production, feeding and slaughtering methods
- Treatments for improved meat quality from range/farm to fork – such as aging, chilling, pelvic suspension, and electrical stimulation of carcasses

Class 5: Meat Products and By-products

- Desirable meat products
- Meat wrapping and storage
- Meat preparation and cooking techniques for various cuts
- Traditional cooking methods
- Cured and smoked meats
- Use of by-products

Class 6: Marketing/Regulations

- Taste panels – what and how they are used in meat production
- Value-added products
- Economics - selling the final products
- State of Alaska and USDA regulations for meat transport and sales
- QUIZ
Three-day Intensive in Nome (with course instructors and guest presenters):

Day 1: Evening, 6:00 PM – 9:00 PM
  o Traditional knowledge in slaughtering, field dressing, butchering, meat products and uses

Day 2: All day, 9:00 AM – 5:00 PM
  o Tour of a Nome area slaughterhouse – equipment, procedures, regulations
  o Field dressing demonstration – proper procedures
  o Butchering demonstration
  o Meat anatomy and cut identification
  o Carcass treatments and value-added
  o Meat handling/wrapping/storage demonstrations
  o Meat canning demonstration

Day 3: Morning, 9:00 AM – 1:00 PM
  o Lab practical EXAM
  o Course evaluations
  o Meat taste testing

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), and a lab-style practical exam (40%). 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.