

Department:

Agriculture

Course Description:

This course will cover the basic husbandry practices used in modern beef production. The course will focus on the latest advancements in technology as they apply to cattle production. Special emphasis will be placed on genetics, physiology of reproduction, beef nutrition, health programs, management methods, use of electronic ID systems, ID databases, and marketing methods.

Course Competencies:

Upon completion of the course, the student should be able to:

1. Differentiate between cow-calf, stocker, feeder, or feedlot management in terms of variable and total cost requirements.
2. Explain the importance of the beef industry to the United States and Kansas.
3. Design a genetic program for a commercial or purebred beef herd using software provided, create heredity estimates for a cow herd by using EPDs and a herd record keeping system, and create a sample database for animal IDs using radio frequency ear tags and a database.
4. Describe the supervision practices for both a spring and fall calving program.
5. Balance rations for the following: 4 phases of cow production, calf creep ration, backgrounding rations for feeder calves, and two feedlot rations, one a high concentrate diet and the other a high roughage diet.
6. Diagram a vaccination program for a cow herd, a feeder calf being backgrounded, and a group of calves arriving in a feedlot.
7. Identify which health management practices would be best for less cost and maximum effectiveness.
8. Compare marketing a group of calves by auction, direct marketing, and yield and grade basis.

Course Content:

- A. History and Importance of the Beef Industry in the United States and Kansas
- B. Beef Genetics
 1. Beef cattle selection
 2. Purebred cattle enterprise
 3. Commercial cattle operations and considerations
 4. Adjusted weaning weights, yearling weights, frame scores
 5. Beef cross breeding systems
 6. Positive animal ID, RFI ear tags, wedge software

- C. Beef Reproductive Physiology
 1. Matching cow productivity and resources
 2. Physiology and anatomy of the bovine
 3. The four phases of a cow's estrus cycle
 4. Management practices for a successful fall or spring calving scheme
 5. Care of the cow during gestation, parturition, and care of the postnatal calf
- D. Beef Nutrition
 1. Comparison of various feedstuffs used in beef rations
 2. Procedures for balancing beef rations
 3. Ration formulation for 4 phases of production for the cow, creep calf rations, backgrounding rations for stockers and feeder calves, feedlot rations for weights from 600-1000 pounds
- E. Beef Health Program
 1. Basic steps for a successful beef health program
 2. Vaccination programs for cow herds and calves
 3. Control methods for ectoparasites and endoparasites
- F. Cattle Handling Facilities and Equipment
 1. Minimum equipment required to start in the cattle business
 2. How and where to obtain equipment as a smart shopper
 3. How to calculate cost of buildings, fences, corrals, etc.

Learning Assessments:

Course competencies will be assessed by use of regular quizzes or exams, class assignments, and a final exam.

Instructional Materials:

Beef Production and Management Decisions, Field, Taylor, 5th Ed., 2007

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students **must** complete the "Disabilities Self-Identification Form" at this link:

<https://highlandcc.edu/pages/disability-services>.

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.