

Discipline: Agriculture	Sub-discipline: Animal Science
General Course Title: Beef Cattle Science	Min. Units: 3 Semester
Proposed Suffix: L	
<p>Course Description: Study of the principles and practices of purebred and commercial beef cattle production throughout the World, United States and California; emphasis on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing and recordkeeping to ensure scientifically-based management decisions and consumer product acceptance as applied to beef cattle. Laboratory required.</p>	
Required Prerequisites or Co-Requisites ¹	
Advisories/Recommended Preparation ²	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> • Discuss the history and development of the beef industry. • Identify beef breeds and their adaptability to climatic conditions and type of operations. • Describe the common systems of beef production. • Explain the principles of genetics in terms of form and function in the beef industry. • Define the relationship between the consumer, packer, and retailer in the commercial beef industry. • Explain grading systems and marketing strategies. • Identify common diseases and parasites and the current methods of prevention and treatment. • Explain the principles involved with ruminant nutrition in beef production. • Demonstrate the use of computer management systems to efficiently manage beef cattle operations. • Discuss animal welfare issues, environmental concerns and the beef cattle quality assurance program. • Discuss career opportunities and requirements for successful employment. • Identify cultural influences on the beef industry. 	
<p>Course Content:</p> <ol style="list-style-type: none"> 1. The Beef Cattle Industry <ol style="list-style-type: none"> a. Origin and importance of beef cattle b. Breeds of cattle c. Ethnic contributions 2. Systems of Production <ol style="list-style-type: none"> a. Purebred enterprise b. Cow/calf operations c. Stocker operations d. Feedlot operations 3. Establishing the Beef Herd <ol style="list-style-type: none"> a. Selecting the breed and breeding system b. Selecting the foundation stock <ol style="list-style-type: none"> (1) Type and conformation (2) Pedigrees (3) Performance data <p>Beef Cattle Science (Content Continued)</p>	

¹ Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

² Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

4. Beef Cattle Management Practices
 - a. Care and management of the breeding herd
 - b. Beef animal preparation for seed stock sales
 - c. Buildings and equipment
5. Beef Cattle Genetics
 - a. Principles of beef cattle genetics
 - b. Percentage of heritability of beef traits
 - c. Economically important beef traits
6. Beef Cattle Nutrition
 - a. Digestion and utilization of feed
 - b. Nutrient requirements for beef cattle
 - c. Rations for beef cattle
 - d. Range management
7. Herd Health
 - a. Common diseases of cattle
 - b. Control of parasites
 - c. Poisonous plants that affect cattle
8. Marketing Beef Cattle
 - a. Marketing purebred and commercial cattle
 - b. USDA yield and quality grades
 - c. Beef cattle production cycles
9. Issues and Regulations in the Beef Cattle Industry
 - a. Animal/welfare issues
 - b. Quality assurance program
 - c. Environmental issues

Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.

Methods of Evaluation: Lecture Comprehensive Quizzes and Exams Written Critical Thinking Scenarios Problem Analysis and Solution Research and Term Papers	Methods of Evaluation: Laboratory Laboratory Skill Validation by Observation Laboratory Reports Laboratory Research Projects and Reports Laboratory Skill Practicum Exams
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Typical Textbooks, Manuals, or Other Support Materials
Beef Production and Management Decisions, 2nd ed., Taylor, Robert, MacMillan Publishers.
Cow-Calf Management. Cooperative Extension
Drovers Journal. (magazine)
Beef Cattle Science. Ensminger, M.E. The Interstate Publishers.

Statewide Articulation: Formally CAN AG 20 CPSLO-221, CPP-not articulated, CSUF-A SCI 21, CSUC-ANSC 171, other universities as lower division elective

FDRG Lead Signature: _____ Date: _____

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