



Articulated Credit
AG 107 Animal Science

NCMC Agriculture & Natural Resources Course

Date _____
High School _____
Instructor _____

High School – Junior & Senior Level Agriculture & Natural Resources Course(s)

Course 1 _____
Semester 2 Semesters

(If needed) Course 2 _____
Semester 2 Semesters

High School Evaluation
1 – Highly Comprehensive
2 – Moderately Comprehensive
3 – Introductory Coverage

Competency	High School Hours Spent	Degree of High School Comprehension
Animal Agriculture		
List significant events in the history and development of animal agriculture		
List significant events in the history of agricultural education and research		
Identify the significance of animal agriculture in the US and world economies		
Breeds and Life Cycles of Livestock and Poultry		
Summarize the development of livestock breeds		
Identify major breeds of livestock and poultry		
Outline the typical life cycle of beef, cattle, swine, sheep, goats, chickens, turkeys, dairy cattle, and layers		
Companion Animals		
Outline the history and domestication of dogs and cats		
Identify common breeds and characteristics of companion animals		

List the contributions of companion animals to humans		
Describe the care, training, feeding, and management of companion animals		
Horses		
Describe the characteristics and types of horses		
Describe the training, grooming, nutrition, and management of horses		
List common defects and unsoundness in horses		
Describe the control disease and parasites in horses		
Identify common coat colors and markings of horses		
Fundamental Principles of Genetics		
Explain the cell theory of inheritance		
Describe the purpose, number, sex determination and abnormalities associated with chromosomes		
Explain mitosis and meiosis		
Describe genes and gene functions		
Explain the phenotypic expression of genes with additive and nonadditive gene action		
Principles of Selecting and Mating Farm Animals		
Explain the causes of phenotypic variation in farm animals		
Describe methods of selection of superior breeding stock		
Predict the amount of progress possible through selection		
List examples of genetic correlations		
Describe national genetic evaluations		
Outline mating systems for livestock improvement		

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Anatomy and Physiology of Reproduction and Related Technologies in Farm Mammals		
Explain the function of the parts of the mammalian male reproductive tract		
Explain the function of the parts of the mammalian female reproductive tract		
Describe estrus and the estrous cycle		
List the function of male and female reproductive hormones		
Describe the following reproductive technologies: estrus synchronization, superovulation, in vitro fertilization, embryo transfer, sex selection, pregnancy diagnosis, cloning, and transgenics		
The Physiology of Digestion in Nutrition		
Outline the major feedstuffs required by animals, their function, and major sources		
Identify the types, parts, and functions of avian, ruminant, non-ruminant, and modified non-ruminant digestive systems		
Describe the processes of digestion and absorption of nutrients		
Animal Health		
Identify the causes of farm animal diseases		
Identify diseases by type and species affected		
Outline the different stages, types, and classes of parasites		
Identify control methods and chemicals used for prevention of parasites		