

Course Description:

In this course, students will explore the various components of agriscience careers and agricultural living. Beginning with career exploration, students will become familiar with the vast array of opportunities that exist in agriscience. They will discover what is necessary for the proper care and management of livestock from keeping living quarters clean to caring for newborn animals. Students will understand the ways in which plants, crops, and vegetation thrive in varying conditions. They will explore the fundamentals of running a successful agriscience operation as well as how agriscience affects and is affected by global economic conditions.

Module	Objectives
<i>Module 1: The Agriscience Industry, Health, and Nutrition</i>	• Investigate career opportunities in agriscience industries.
	• Describe training requirements for entry and advancement in agriscience careers.
	• Demonstrate proper methods to clean and disinfect animal equipment and facilities.
	• Explain proper disposal of animal waste with regards to sanitation, economics, and environmental implications.
	• Describe a livestock animal's digestive system.
	• Describe nutritional requirements of animals.

Module 2: Livestock Reproduction	• Investigate career opportunities in agriscience industries.
	• Describe training requirements for entry and advancement in agriscience careers.
	• Demonstrate proper methods to clean and disinfect animal equipment and facilities.
	• Explain proper disposal of animal waste with regards to sanitation, economics, and environmental implications. ○ Describe a livestock animal's digestive system. ○ Describe nutritional requirements of animals.

Module 3: Livestock Management	• Describe methods of animal identification.
	• Describe methods of restraining, loading, handling, and transporting animals safely
	• Develop procedures for exhibiting animals. The student will be able to: ○ Demonstrate the procedures for preparing, maintaining, and handling livestock
	• Develop procedures for exhibiting animals. The student will be able to: ○ Compare and contrast appropriate livestock evaluation criteri
	• Develop procedures for exhibiting animals
	• Prepare appropriate registrations, shipping, and health certificates required for exhibiting or marketing animals
	• Develop procedures for exhibiting animals
	• Demonstrate appropriate grooming and showmanship skills

Module 4: Plant Production Systems Part I	• Compare different plant production systems (seed, cutting, air layer, and tissue culture).
	• Propagate, transplant, and grow plants.
	• Select and prepare a site and/or a seedbed for planting.
	• Identify methods of pruning plants to achieve desired growth and to maintain health.
	• Identify types of hydroponic systems; identify methods used in hydroponic systems.

***Module 5: Plant
Production
Systems
Part II***

- Investigate proper methods to fertilize plants and crops. The student will be able to:
 - Interpret information on a fertilizer label
 - Compare sources and forms of nutrients
 - Determine methods of applying fertilizer materials
 - Collect soil samples to determine nutrient levels
 - Test soil for pH and soluble salts

Module 6: Agribusiness	• Use and maintain hand tools and power equipment (e.g., power saws, welders).
	• Describe the maintenance and service of small engines.
	• Introduce science principles as applied in selected mechanical applications (e.g. hydraulics, and internal combustion).
	• Apply principles of agribusiness finance. The student will be able to: ○ Identify components of balance sheets and income statements ○ Identify major sources of credit for agribusiness ○ Complete a business loan application ○ Maintain and interpret agribusiness financial records including depreciation, inventory, and budgets

Module 7: Global Economy Part I	• Assess the agricultural impact on the US gross national product and the total global economy.
	• Investigate local, state, and national regulatory laws, industry regulations, and legislation for agricultural businesses.
	• Identify and describe the primary government agencies involved with agriculture.
	• Research new and emerging technologies and their impact on agribusiness and the economy.

Module 8: Global Economy Part II	• Describe the value of the food and agribusiness industry.
	• Examine the scope of career opportunities in agriculture and the importance of the agriculture industry to the economy.
	• Define and explore agriculture and agribusinesses and their role in the economy.
	• Evaluate and explore the agribusiness career opportunities in agriculture.
	• Compare how key organizational structures and processes affect organizational performance and the quality of products and services.