

Agriculture: AFNR

Life Knowledge and Cluster Skills: CS.01-11

- 1 Premier Leadership: Acquire the skills necessary to positively influence others.** CS.01

- 2 Personal Growth: Develop a skill set to enhance the positive evolution of the whole person.** CS.02

- 3 Career Success: Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society.** CS.03

- 4 Systems: Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment.** CS.04

- 5 Systems: Identify how key organizational structures and processes affect organizational performance and the quality of products and services.** CS.05

- 6 Examine the importance of health, safety, and environmental management systems in organizations and their importance to performance and regulatory compliance.** CS.06

- 7 Safety, Health, and Environmental: Demonstrate appropriate health and safety procedures for AFNR occupations.** CS.07

- 8 Technical Skills: Use tools, equipment, machinery and technology appropriate to work within areas related to AFNR.** CS.08

- 9 Technical Skills: Compare and contrast issues affecting the AFNR industry.** CS.09

- 10 Technical Skills: Envision emerging technology and globalization to project its influence on widespread markets.** CS.10

- 11 Scientific Inquiry: Utilize scientific inquiry as an investigative method.** CS.11

Agribusiness Systems Career Pathway:

- 1 Utilize economic principles to establish and manage an AFNR enterprise.** ABS.01

- 2 Utilize appropriate management planning principles in AFNR business enterprises.** ABS.02

- 3 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations.** ABS.03

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- 4 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.** ABS.04
 - 5 Assess accomplishments of goals and objectives by an AFNR business.** ABS.05
 - 6 Use industry-accepted marketing principles to accomplish AFNR business objectives.** ABS.06
 - 7 Create a production system plan.** ABS.07
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Animal Systems Career Pathway:

- 1 Examine the components, historical development, global implications, and future trends of the animal systems industry.** AS.01
 - 2 Classify, evaluate, select, and manage animals based on anatomical and physiological characteristics.** AS.02
 - 3 Provide for the proper health care of animals.** AS.03
 - 4 Apply principles of animal nutrition to ensure the proper growth, development, reproduction, and economic production of animals.** AS.04
 - 5 Evaluate and select animals based on scientific principles of animal production.** AS.05
 - 6 Prepare and implement animal handling procedures for the safety of animals, producers, and consumers of animal products.** AS.06
 - 7 Select animal facilities and equipment that provide for the safe and efficient production, housing, and handling of animals.** AS.07
 - 8 Analyze environmental factors associated with animal production.** AS.08
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Biotechnology Systems Career Pathway:

- 1 Recognize the historical, social, cultural and potential applications of biotechnology.** BS.01
 - 2 Demonstrate laboratory skills as applied to biotechnology.** BS.02
 - 3 Demonstrate the application of biotechnology to Agriculture, Food, and Natural Resources (AFNR)** BS.03
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Environmental Service Systems Career Pathway:

- 1 Use analytical procedures to plan and evaluate environmental service systems.** ESS.01
- 2 Assess the impact of policies and regulations on environmental service systems.** ESS.02
- 3 Apply scientific principles to environmental service systems.** ESS.03
- 4 Operate environmental service systems to manage a facility environment.** ESS.04

5 Examine the relationships between energy sources and environmental service systems. [ESS.05](#)

6 Use tools, equipment, machinery and technology to accomplish tasks in environmental service systems. [ESS.06](#)

Food Products and Processing Systems Career Pathway:

1 Examine components of the food industry and historical development of food products and processing. [FPP.01](#)

2 Apply safety principles, recommended equipment and facility management techniques to the food products and processing industry. [FPP.02](#)

3 Apply principles of science to the food products and processing industry. [FPP.03](#)

4 Select and process food products for storage, distribution and consumption. [FPP.04](#)

Natural Resources Systems Career Pathway:

1 Explain interrelationships between natural resources and humans necessary to conduct management activities in natural environments. [NRS.01](#)

2 Apply scientific principles to natural resource management activities. [NRS.02](#)

3 Apply knowledge of natural resources to production and processing industries. [NRS.03](#)

4 Demonstrate techniques used to protect natural resources. [NRS.04](#)

5 Use effective methods and venues to communicate natural resource processes to the public. [NRS.05](#)

Plant Systems Career Pathway:

1 Apply knowledge of plant classification, plant anatomy and plant physiology to the production and management of plants. [PS.01](#)

2 Prepare and implement a plant management plan that addresses the influence of environmental factors, nutrients, and soil on plant growth. [PS.02](#)

3 Propagate, culture, and harvest plants. [PS.03](#)

4 Employ elements of design to enhance an environment. [PS.04](#)

Power, Structural and Technical Systems Career Pathway:

1 Use physical science principles and engineering applications with power, structural and technical systems to solve problems and improve performance. [PST.01](#)

2 Design, operate and maintain mechanical equipment, structures, biological systems, land treatment, power and technology. [PST.02](#)

3 Service and repair mechanical equipment and power systems. [PST.03](#)

4 Plan, build and maintain agricultural structures. PST.04

5 Apply technology principles in the use of agricultural technical systems. PST.05