NOCTI
Partner Credential Blueprint

case learning
CURRICULUM FOR AGRICULTURAL SCIENCE EDUCATION

Introduction to Agriculture, Food, and Natural Resources End-of-Course (AFNR EoC)

Test Code: 9861/9211 / Version: 01

General Assessment Information

Blueprint Contents

Test Type: The CASE Introduction to Agriculture, Food, and Natural Resources (AFNR) End-of-Course Assessment is based on CASE Introduction to Agriculture, Food, and Natural Resources course concepts and is aligned with the National Agriculture, Food, and Natural Resources Content Standards developed by the National Council for Agricultural Education. Eligible participants can earn certification and an accompanying digital badge.

CASE 4 Learning is an initiative of the National Council for Agricultural Education. The end-of-course (EoC) assessments were developed by CASE to align with CASE concepts and National AFNR Standards. The assessments are available through NOCTI, serving as the CASE partner for third-party delivery. EoC assessments serve as a measurement of student success that is statewide, valid, and reliable, and comparable across the state these end-of-course assessments meet Perkins V requirements.

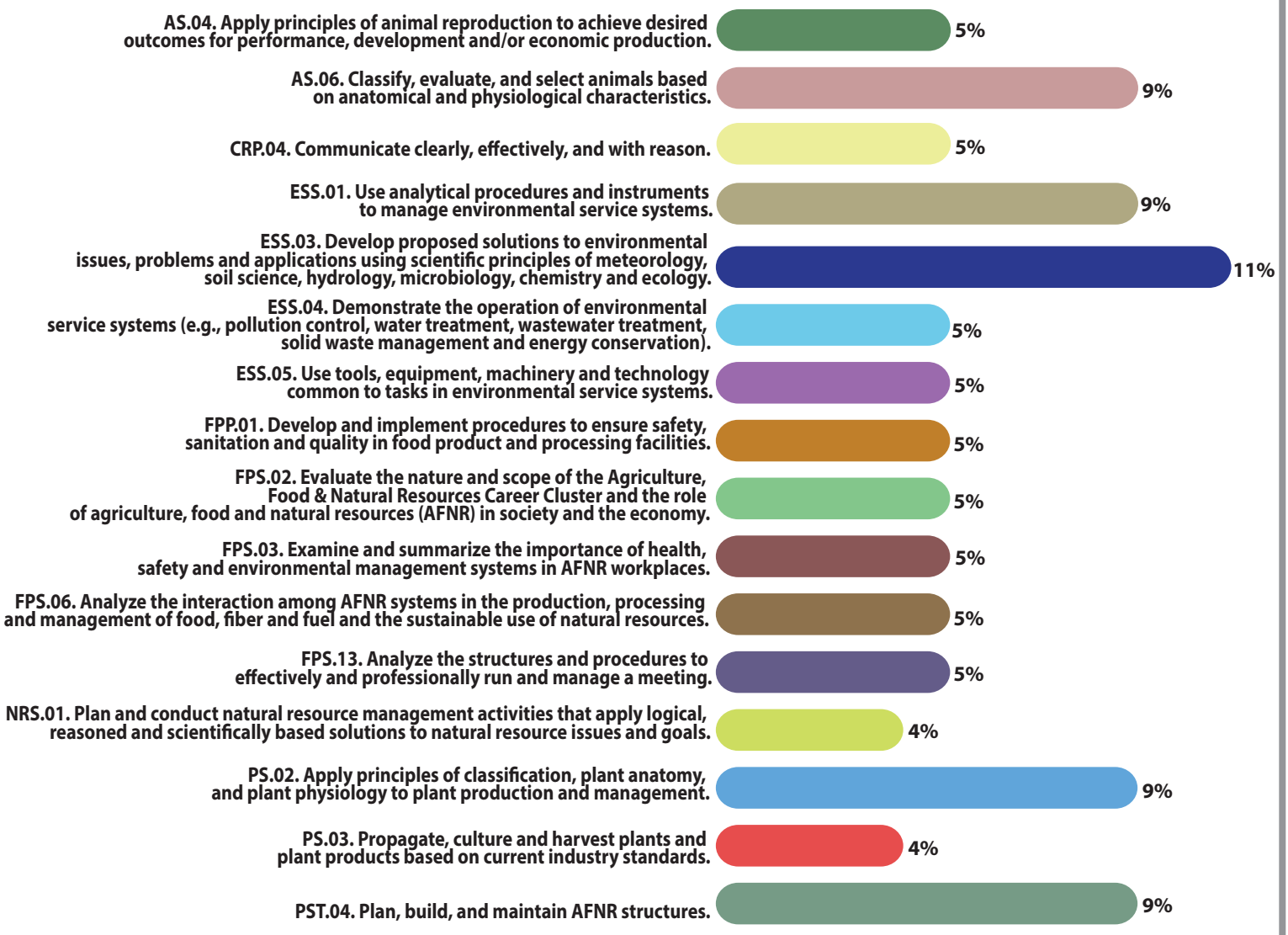
To prepare your students for the assessment, please review the Intro to AFNR End-of-Course Assessment Blueprint on the CASE 4 Learning website. This blueprint identifies the Essential CASE Concepts and Performance Objectives that are assessed. Before taking the exam, students should have completed the CASE Activities, Projects, and Problems aligned to these Essential Concepts and Performance Objectives.

Written Assessment

This written assessment consists of questions to measure an individual's factual theoretical knowledge.

Administration Time: 1 hour
Number of Questions: 64
Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Competencies and Skills Tested in this Assessment

AS.04. Apply principles of animal reproduction to achieve desired outcomes for performance, development and/or economic production.

- AS.04.03. Apply scientific principles to animal breeding.

AS.06. Classify, evaluate, and select animals based on anatomical and physiological characteristics.

- AS.06.02. Apply principles of comparative anatomy and physiology to uses within various animal systems.

CRP.04. Communicate clearly, effectively, and with reason.

- CRP.04.01. Communicate using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.

ESS.01. Use analytical procedures and instruments to manage environmental service systems.

- ESS.01.01. Analyze and interpret laboratory and field cases in environmental sustainability systems.

ESS.03. Develop proposed solutions to environmental issues, problems and applications using scientific principles of meteorology, soil science, hydrology, microbiology, chemistry and ecology.

- ESS.03.01. Apply meteorology principles to environmental sustainability systems.
- ESS.03.02. Apply soil science and hydrology principles to environmental sustainability systems.

ESS.04. Demonstrate the operation of environmental service systems (e.g., pollution control, water treatment, wastewater treatment, solid waste management and energy conservation).

- ESS.04.04. Compare and contrast the impact of conventional and alternative energy sources on the environment and operation of environmental sustainability systems.

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Specific Standards and Competencies (continued)

ESS.05. Use tools, equipment, machinery and technology common to tasks in environmental service systems.

- ESS.05.02. Perform assessments of environmental conditions using equipment, machinery, and technology.

FPP.01. Develop and implement procedures to ensure safety, sanitation and quality in food product and processing facilities.

- FPP 01.02. Apply food safety and quality assurance procedures in the harvesting, handling and processing of food products.

FPS.02. Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster and the role of agriculture, food and natural resources (AFNR) in society and the economy.

- FPS.02.02. Examine the impact of AFNR on the local, state, national, and global society and economy.

FPS.03. Examine and summarize the importance of health, safety and environmental management systems in AFNR workplaces.

- FPS.03.04. Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.

FPS.06. Analyze the interaction among AFNR systems in the production, processing and management of food, fiber and fuel and the sustainable use of natural resources.

- FPS.06.01. Examine and explain foundational cycles and systems of AFNR.

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Specific Standards and Competencies (continued)

FPS.13. Analyze the structures and procedures to effectively and professionally run and manage a meeting.

- FPS.13.01. Utilize parliamentary resources to solve problems of organizational management and operations.

NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.

- NRS.01.01. Examine natural resource availability and ecosystem function in a particular region.

PS.02. Apply principles of classification, plant anatomy, and plant physiology to plant production and management.

- PS.02.02. Apply knowledge of plant anatomy and the functions of plant structures to activities associated with plant systems.
- PS.02.03. Apply knowledge of plant physiology and energy conversion to plant systems.

PS.03. Propagate, culture and harvest plants and plant products based on current industry standards.

- PS.03.02. Develop and implement a management plan for plant production.

PST.04. Plan, build, and maintain AFNR structures.

- PST.04.02. Determine structural requirements, specifications, customer needs, and estimate costs for AFNR structures.
- PST.04.04. Follow architectural and mechanical plans to construct, maintain and/or repair AFNR structures (e.g., material selection, site preparation and/or layout, surveying, electrical, plumbing, concrete/masonry, etc.).

Sample Questions

The three basic needs of humans are

A. food, clothing, companionship
B. food, companionship, shelter
C. food, clothing, shelter
D. food, clothing, money

There are four types of communication. Two of the four are verbal and non-verbal. What are the other two forms of communication?

A. visual and contemporary
B. visual and written
C. written and contemporary
D. audio and visual

In which of the following situations should a beaker be used?

A. to measure an approximate amount of liquid
B. to measure an exact amount of liquid
C. to determine the mass of a liquid
D. to calculate density of a liquid

Soil and land formation are more disorganized at the _____ of a hill and more organized at the _____ of a hill.

A. bottom, top
B. top, bottom
C. middle, top
D. middle, bottom

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Sample Questions (continued)

Which type of cell contains chloroplasts filled with green pigment chlorophyll?

A. plant and animal cells
B. only plant cells
C. only animal cells
D. neither plant nor animal cells

Fertile soil is needed to grow crops and raise animals, but in areas with poor climate what limits sustainable agrarian practices?

A. sunlight
B. clean air
C. water
D. farmers