Texas CTE

Livestock and Poultry Production (One Credit) (2024)

Implementation. A

1 **The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.** A.1

2 **School districts shall implement the employability skills student expectations listed in §127.15(d)(2) of this chapter (relating to Career and Technical Education Employability Skills) as an integral part of this course.** A.2

General requirements. This course is recommended for students in Grades 10-12. Prerequisite: at least one course from the Agriculture, Food, and Natural Resources Career Cluster. Recommended prerequisite: Principles of Agriculture, Food, and Natural Resources. Students shall be awarded one credit for successful completion of this course. B

b **General requirements. This course is recommended for students in Grades 10-12. Prerequisite: at least one course from the Agriculture, Food, and Natural Resources Career Cluster. Recommended prerequisite: Principles of Agriculture, Food, and Natural Resources. Students shall be awarded one credit for successful completion of this course.** B

Introduction. C

1 **Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.** C.1

2 **The Agriculture, Food, and Natural Resources Career Cluster focuses on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.** C.2

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3 **In Livestock and Poultry Production, students acquire knowledge and skills related to the livestock and poultry production industry. Livestock and Poultry Production may address topics related to beef cattle, dairy cattle, swine, sheep, goats, and poultry. To prepare for careers in the field of animal science, students must attain academic knowledge and skills, acquire knowledge and skills related to livestock and poultry systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.** C.3

4 **Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.** C.4

5 **Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.** C.5

Knowledge and skills. D

1 **The student develops a supervised agricultural experience program. The student is expected to:** D.1

- A plan, propose, conduct, document, and evaluate a supervised agricultural experience program as an experiential learning activity; and D.1.A
- B use appropriate record-keeping skills as they relate to the supervised agricultural experience program. D.1.B

2 **The student develops leadership skills through participation in an agricultural youth organization. The student is expected to:** D.2

- A participate in youth agricultural leadership opportunities; D.2.A
- B review and participate in a local program of activities; and D.2.B
- C create or update documentation of relevant agricultural experience such as community service, professional, or classroom experiences. D.2.C

3 **The student analyzes the history, domestication, and selection of livestock and poultry. The student is expected to:** D.3

- A research and describe the history, domestication, and evolution of livestock and poultry species; D.3.A
- B describe the impacts other industries such as entertainment, recreation and leisure, and exhibition of animals have on the livestock and poultry industry; and D.3.B
- C evaluate and select livestock and poultry breeds based on purpose and conformation. D.3.C

4 **The student explains the anatomy and physiology of livestock and poultry species. The student is expected to:** D.4

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A identify and explain the skeletal, muscular, respiratory, and circulatory systems of livestock and poultry; D.4.A

B identify and interpret ranges for healthy livestock and poultry vital signs; and D.4.B

C compare normal and abnormal behavior of livestock and poultry. D.4.C

5 The student determines nutritional requirements of livestock and poultry. The student is expected to: D.5

A describe and compare the digestive systems of ruminant and non-ruminant animals; D.5.A

B identify sources of nutrients and classes of feed for livestock and poultry; D.5.B

C identify vitamins, minerals, and feed additives for livestock and poultry; D.5.C

D formulate feed rations based on nutritional needs and economic factors for livestock and poultry; D.5.D

E research and discuss feeding practices and feed quality issues for livestock and poultry; D.5.E

F identify forage plants used for livestock grazing; and D.5.F

G research and explain livestock and poultry grazing practices such as rotational grazing and deferred grazing. D.5.G

6 The student explains livestock and poultry genetics and reproduction. The student is expected to: D.6

A describe and compare the reproductive systems of various livestock and poultry; D.6.A

B identify and explain livestock and poultry breeding systems such as grading up, crossbreeding, linebreeding, and inbreeding; D.6.B

C use Expected Progeny Differences (EPDs) to evaluate livestock production; D.6.C

D research and explain current and emerging technologies in livestock and poultry reproduction such as cloning, embryo transfer, in vitro fertilization, and artificial insemination; D.6.D

E use Punnett squares to predict phenotypes and genotypes of livestock offspring; and D.6.E

F explain the relationship between body condition scores and reproductive efficiency for livestock and poultry. D.6.F

7 The student understands how livestock and poultry are affected by pests and diseases. The student is expected to: D.7

A identify and describe how bacteria, fungi, viruses, genetics, and nutrition affect livestock and poultry health; D.7.A

B identify signs, symptoms, and prevention of livestock and poultry diseases; D.7.B

C identify parasites and explain the signs, symptoms, treatment, and prevention of livestock and poultry parasites; and D.7.C

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D calculate dosage and identify administration methods of livestock and poultry medications. D.7.D

8 The student analyzes the management skills needed for livestock and poultry production. The student is expected to: D.8

A identify tools and equipment for safe handling and restraining of livestock and poultry and select the appropriate tools or equipment for such tasks and purposes; D.8.A

B identify types and essential features of facilities for livestock and poultry such as housing, veterinary, and reproduction facilities; D.8.B

C evaluate and describe industry practices such as dehorning, castrating, docking, and vaccinating and sire, dam, and newborn care to maximize the efficiency of livestock and poultry; D.8.C

D explain and demonstrate methods of identifying ownership of livestock and poultry such as branding, ear tagging, ear notching, wing bands, and tattooing; and D.8.D

E explain the use of technology such as aircraft, robotics, and smart irrigation in modern livestock and poultry production. D.8.E

9 The student examines the interrelationship of the factors impacting livestock and poultry production operations. The student is expected to: D.9

A research and explain livestock and poultry biosecurity and waste management practices; D.9.A

B create an effective financial management plan for a livestock and poultry production operation; D.9.B

C analyze and discuss environmental regulations, governmental regulations, and animal welfare policies related to livestock and poultry production; D.9.C

D analyze the United States Department of Agriculture (USDA) standards and guidelines for organic livestock and poultry production; D.9.D

E analyze and describe the interrelationship between grain markets and the livestock and poultry industry; D.9.E

F assess the impact of the United States livestock and poultry industry on world commodity markets; D.9.F

G use charts, tables, data, or graphs to evaluate the efficiency of livestock and poultry production; and D.9.G

H develop and present a livestock or poultry operation plan that includes health, reproduction, nutrition, and management practices necessary for maximum efficiency. D.9.H