

**Florida Department of Education
CURRICULUM FRAMEWORK**

Program Title: Animal Science and Services
Occupational Area: Agriscience and Natural Resources

Secondary

Program Numbers **8106200**
CIP Number 0101.030210
Grade Level 9-12, 30, 31
Length 6 credits
Facility Code 203
CTSO FFA
Coop Method Yes
Apprenticeship No

Certification VOC AGRI @4
 AGRI @4
 AGRICULTUR 1 @2
 AG PROD #7

Program SOC Code - 45-1011.08 - First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers

- I. **PURPOSE:** The purpose of this program is to prepare students for employment or advanced training in the animal science industry. The program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the animal science industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety and environmental issues.

Listed below are the courses that comprise this program when offered at the secondary level:

OCCUPATIONAL COMPLETION POINT - DATA CODE A

Farmworkers, Farm and Ranch Animals - SOC Code 45-2093.00

8106810 Agriscience Foundations 1 - 1 secondary credit
8106210 Animal Science and Services 2 - 1 secondary credit
8106220 Animal Science and Services 3 - 1 secondary credit

OCCUPATIONAL COMPLETION POINT - DATA CODE B

First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers - SOC Code - 45-1011.08

8106230 Animal Science and Services 4 - 1 secondary credit
8106240 Animal Science and Services 5 - 1 secondary credit

OCCUPATIONAL COMPLETION POINT - DATA CODE C

First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers - SOC Code - 45-1011.08

8106250 Animal Science and Services 6 - 1 secondary credit

- II. **LABORATORY ACTIVITIES:** Classroom, shop, and animal laboratory activities are an integral part of this program, including the safe use and care of

animal health-care instruments, animal grooming equipment, basic tools, animal restraining equipment, and field equipment.

- III. **SPECIAL NOTE:** FFA (for secondary) is the appropriate Career Student Organizations for providing leadership training and for reinforcing specific vocational skills. Career Student Organizations, when provided, shall be an integral part of the vocational instructional program, and the activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.064, FAC.

Planned and supervised instructional activities must be provided through one or more of the following: (1) directed laboratory experience, (2) student projects, (3) placement for experience, (4) cooperative experience.

Because of the production and marketing cycle of the animal industry, this program requires individual instruction and supervision of students for the entire period beyond the 180-day school year.

The cooperative method of instruction is appropriate for this program. Whenever the cooperative method is offered, the following are required for each student: a training plan that is signed by the student, teacher, and employer, including instructional objectives and a list of on-the-job and in-school learning experiences and a workstation that reflects the equipment, skills, and tasks that are relevant to the occupation that the student has chosen as a career goal. The student must be paid for work performed.

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Adult students with disabilities must self-identify and request such services. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

SCANS Competencies: Instructional strategies for this program must include methods that require students to identify, organize, and use resources appropriately; to work with each other cooperatively and productively; to acquire and use information; to understand social, organizational, and technological systems; and to work with a variety of tools and equipment. Instructional strategies must also incorporate the methods to improve students' personal qualities and high-order thinking skills.

July 2007

Florida Department of Education
INTENDED OUTCOMES

Program Title: Animal Science and Services Program

INTENDED OUTCOMES: After successfully completing appropriate course(s) for each occupational completion point of this program, the student will be able to perform the following:

OCCUPATIONAL COMPLETION POINT - DATA CODE A

Farmworkers, Farm and Ranch Animals - SOC Code 45-2093.00

- 01.0 Describe the history of agriculture and its influence on the global economy.
- 02.0 Practice agriscience safety skills and procedures.
- 03.0 Apply scientific and technological principles to agriscience issues.
- 04.0 Apply environmental principles to the agricultural industry.
- 05.0 Investigate and utilize basic scientific skills and principles in plant science.
- 06.0 Investigate and utilize basic scientific skills and principles in animal science.
- 07.0 Demonstrate the use of agriscience tools, equipment, and instruments.
- 08.0 Demonstrate agribusiness, employability & human relation skills.
- 09.0 Apply leadership and citizenship skills.
- 10.0 Describe animal science and the role of animals in society.
- 11.0 Identify careers in the animal industry.
- 12.0 Practice animal and laboratory safety.
- 13.0 Demonstrate basic first aid for humans.
- 14.0 Identify parts and functions of various systems of selected animals.
- 15.0 Recognize normal and abnormal animal behaviors.
- 16.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.
- 17.0 Explain the reproductive system and breeding of selected animals.
- 18.0 Demonstrate knowledge of preventive medicine and disease control.
- 19.0 Describe the internal and external parasites and the control methods.
- 20.0 Differentiate between animal welfare and animal rights.
- 21.0 Demonstrate knowledge of animal control and humane societies.
- 22.0 Discuss animal marketing techniques.
- 23.0 Demonstrate employability and interpersonal skills.
- 24.0 Maintain and analyze records.

OCCUPATIONAL COMPLETION POINT - DATA CODE B

First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers - SOC Code - 45-1011.08

- 25.0 Apply approved nutritional practices.
- 26.0 Groom, exhibit, and market animals.
- 27.0 Maintain equipment and facilities.
- 28.0 Operate, maintain, and repair machinery and equipment.
- 29.0 Maintain and analyze records.
- 30.0 Apply animal health practices.
- 31.0 Perform emergency first aid on animals.

OCCUPATIONAL COMPLETION POINT - DATA CODE C

First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers - SOC Code - 45-1011.08

- 32.0 Identify, select, and breed food-producing animals.

- 33.0 Plan routine management of food-producing animals and facilities.
- 34.0 Grow and maintain pasture and forage crops.
- 35.0 Identify and interpret rules and regulations affecting the livestock industry.

**Florida Department of Education
STUDENT PERFORMANCE STANDARDS**

Program Title: Animal Science and Services
Secondary Number: 8106200
Program SOC Code: 452093 - FARMWORKERS, FARM AND RANCH ANIMALS

OCCUPATIONAL COMPLETION POINT - DATA CODE A

Farmworkers, Farm and Ranch Animals - SOC Code 45-2093.00

- 01.0 Describe the history of agriculture and its influence on the global economy--The student will be able to:
- 01.01 Investigate the history of agriculture and its relationship to science and technology.
 - 01.02 Analyze the impact of agriculture on the local, state, national and global economy.
 - 01.03 Identify significant career patterns/shifts in the history of the agricultural industry.
 - 01.04 Examine the role of the agricultural industry in the interaction of population, food, energy, and the environment.
- 02.0 Practice agriscience safety skills and procedures --The student will be able to:
- 02.01 List the common causes of accidents in agriscience operations.
 - 02.02 Demonstrate proper safety precautions and use of personal protective equipment.
 - 02.03 Extract and utilize pertinent information from a container label and/or Material Safety Data Sheet (MSDS) following Environmental Protection Agency (EPA), Worker Protection Standard, and Occupational Safety and Health Agency (OSHA) regulations.
 - 02.04 Identify proper disposal of hazardous waste materials and biohazards.
 - 02.05 Describe emergency procedures.
- 03.0 Apply scientific and technological principles to agriscience issues--The student will be able to:
- 03.01 Employ scientific measurement skills.
 - 03.02 Demonstrate safe and effective use of common laboratory equipment.
 - 03.03 Identify the parts and functions of plant and animal cells.
 - 03.04 Describe the phases of cell reproduction.
 - 03.05 Implement the scientific method and science process skills through the design and completion of an agriscience research project.
 - 03.06 Interpret, analyze, and report data.
 - 03.07 Investigate DNA and genetics applications in agriscience including the theory of probability.
 - 03.08 Evaluate advances in biotechnology that impact agriculture (e.g. transgenic crops, biological controls, etc.).
- 04.0 Apply environmental principles to the agricultural industry --The student will be able to:
- 04.01 Determine how different climactic and geological activity influences agriculture.

- 04.02 Describe various ecosystems as they relate to the agriculture industry.
 - 04.03 Describe the environmental resources (soil, water, air) necessary for agriculture production.
 - 04.04 Identify regulatory agencies that impact agricultural practices.
 - 04.05 Apply Best Management Practices that enhance the natural environment.
 - 04.06 Identify conservation practices related to natural resources.
- 05.0 Investigate and utilize basic scientific skills and principles in plant science --The student will be able to:
- 05.01 Identify and describe the specializations within the plant science industry.
 - 05.02 Categorize plants based on specific characteristics according to industry and scientific standards.
 - 05.03 Examine the processes of plant growth including photosynthesis and respiration.
 - 05.04 Identify the nutrients required for plant growth from the periodic table and explain their functions.
 - 05.05 Analyze information from a fertilizer label.
 - 05.06 Propagate and grow plants through sexual and/or asexual reproduction.
 - 05.07 Investigate the impacts of various pests and propose solutions for their control.
 - 05.08 Investigate the nature and properties of food, fiber, and by-products from plants.
 - 05.09 Explore career opportunities in plant science.
- 06.0 Investigate and utilize basic scientific skills and principles in animal science --The student will be able to:
- 06.01 Investigate the origin, history, and domestication of animals.
 - 06.02 Explain the economic importance of animals and the products obtained from animals.
 - 06.03 Categorize animals according to use, type, breed, and scientific classification.
 - 06.04 Employ correct terminologies for animal species and conditions (e.g. age, sex, etc.) within those species.
 - 06.05 Compare basic internal & external anatomy of animals.
 - 06.06 Demonstrate approved practices in the management, health, safety, and technology of the animal industry.
 - 06.07 Discuss animal welfare issues.
 - 06.08 Investigate the nature and properties of food, fiber, and by-products from animals.
 - 06.09 Explore career opportunities in animal science.
- 07.0 Demonstrate the use of agriscience tools, equipment, and instruments --
The student will be able to:
- 07.01 Select and demonstrate the use of agriscience tools, equipment, and instruments.
 - 07.02 Describe various physical science principles as applied in selected mechanical applications (e.g. levers, pulleys, hydraulics, and internal combustion).
 - 07.03 Solve time, distance, area, volume, ratio, proportion, and percentage problems in agriscience.
 - 07.04 Service and maintain agriscience equipment, instruments, facilities, and supplies.

- 08.0 Demonstrate agribusiness, employability & human relation skills --The student will be able to:
- 08.01 Develop, implement, and maintain work based learning through Supervised Agricultural Experiences (SAE).
 - 08.02 Utilize a record keeping system to collect, interpret, and analyze data.
 - 08.03 Enhance oral communications through telephone, interview and presentation skills.
 - 08.04 Enhance written communication by developing resumes and business letters.
 - 08.05 Demonstrate interpersonal (nonverbal) communication skills.
 - 08.06 Demonstrate good listening skills.
- 09.0 Apply leadership and citizenship skills --The student will be able to:
- 09.01 Identify and describe leadership characteristics.
 - 09.02 Identify opportunities to apply acquired leadership skills.
 - 09.03 Identify and demonstrate ways to be an active citizen.
 - 09.04 Participate in community based learning activities.
 - 09.05 Demonstrate the ability to work cooperatively.
 - 09.06 Conduct formal and informal meetings using correct parliamentary procedure skills. Identify the opportunities for leadership development available through the National FFA Organization and/or professional organizations.
- 10.0 DESCRIBE ANIMAL SCIENCE AND THE ROLE OF ANIMALS IN SOCIETY--The student will be able to:
- 10.01 Describe animal science.
 - 10.02 Describe the role of animals in society.
 - 10.03 Locate and obtain informational materials on animal-related topics or issues.
- 11.0 IDENTIFY CAREERS IN THE ANIMAL INDUSTRY--The student will be able to:
- 11.01 Locate and obtain information on animal-industry careers and career opportunities.
 - 11.02 Describe various careers in the animal industry.
 - 11.03 Describe training requirements for entry and advancement in animal-industry careers.
 - 11.04 Identify professional organizations and trade journals in the animal industry.
- 12.0 PRACTICE ANIMAL AND LABORATORY SAFETY--The student will be able to:
- 12.01 Practice safe procedures when working with animal-related equipment and in laboratory settings.
 - 12.02 Practice safety precautions around animals.
 - 12.03 Discuss the impact of unsafe procedures.
 - 12.04 Define zoonosis.
 - 12.05 Describe selected zoonotic diseases.
 - 12.06 Discuss OHSA as it relates to the animal industry.
- 13.0 DEMONSTRATE BASIC FIRST AID FOR HUMANS--The student will be able to:
- 13.01 Locate and use a first aid kit.
 - 13.02 Recognize allergic reactions.
 - 13.03 Describe proper use of eye wash solution.
 - 13.04 Control minor hemorrhage and/or trauma.

- 13.05 Practice emergency procedures.
- 14.0 IDENTIFY PARTS AND FUNCTIONS OF VARIOUS SYSTEMS OF SELECTED ANIMALS--The student will be able to:
- 14.01 Identify parts of the skeletal system of selected animals.
 - 14.02 Compare human skeletal system to that of other animals.
 - 14.03 Identify parts and functions of the following systems of selected animals:
 - respiratory system
 - urinary system
 - digestive system
 - cardiovascular system
 - reproductive system
 - nervous system
 - 14.04 Employ correct terminologies for the variety of animal species and conditions within those species.
- 15.0 RECOGNIZE NORMAL AND ABNORMAL ANIMAL BEHAVIORS--The student will be able to:
- 15.01 Distinguish between instinctive and learned behaviors.
 - 15.02 Recognize normal and abnormal behavioral characteristics of animals through observations.
 - 15.03 Recognize signs of aggressive animal behaviors.
 - 15.04 Identify behavioral problems.
- 16.0 IDENTIFY THE DIFFERENT DIGESTIVE SYSTEMS OF ANIMALS AND THE NUTRITIONAL REQUIREMENTS OF SELECTED SPECIES--The student will be able to:
- 16.01 Differentiate between ruminants and non-ruminants.
 - 16.02 Differentiate between omnivorous, carnivores, and herbivores.
 - 16.03 Describe the basic nutritional requirements of selected species.
 - 16.04 Analyze different food labels.
 - 16.05 Formulate animal food products.
 - 16.06 Schedule feeding times for selected animals.
- 17.0 EXPLAIN THE REPRODUCTIVE SYSTEM AND BREEDING OF SELECTED ANIMALS--The student will be able to:
- 17.01 Describe the male and female reproductive systems.
 - 17.02 Determine sex of animals.
 - 17.03 Determine appropriate age for breeding.
 - 17.04 Identify gestation length.
 - 17.05 Describe estrous cycle.
 - 17.06 Describe breeding techniques.
 - 17.07 Select male and female for breeding.
 - 17.08 Care for breeding stock.
 - 17.09 Care for newborn.
 - 17.10 Explain the differences and similarities between reproduction in animal species.
- 18.0 DEMONSTRATE KNOWLEDGE OF PREVENTIVE MEDICINE AND DISEASE CONTROL--The student will be able to:
- 18.01 Describe the importance of preventive medicine for animal health.
 - 18.02 Recognize healthy animals.
 - 18.03 Describe common diseases of animals.

- 18.04 Describe vaccinations available for disease prevention and vaccination procedures.
 - 18.05 Evaluate and report health conditions of animals.
 - 18.06 Collect urine and feces samples for analysis.
 - 18.07 Describe the process for collecting blood samples for analysis.
 - 18.08 Administer prescribed oral medications.
 - 18.09 Describe the process for administering medications by injection.
 - 18.10 Describe the procedure for safe disposal of medications.
 - 18.11 Discuss the term immunology and active and passive immunity.
 - 18.12 Describe procedures for periodic health check-up.
- 19.0 DESCRIBE INTERNAL AND EXTERNAL PARASITES AND CONTROL METHODS--The student will be able to:
- 19.01 Describe the internal and external parasites of selected animals.
 - 19.02 Describe the methods of parasite prevention.
 - 19.03 Describe the methods of parasite control.
 - 19.04 Use a microscope for selected practices.
 - 19.05 Describe the process for fecal sample collection, slide preparation, and examination.
- 20.0 DIFFERENTIATE BETWEEN ANIMAL WELFARE AND ANIMAL RIGHTS--The student will be able to:
- 20.01 Define animal welfare and animal rights.
 - 20.02 Explain the differences between animal welfare and animal rights.
 - 20.03 Identify animal welfare and animal rights advocate groups.
 - 20.04 Debate current events concerning animal welfare and animal rights.
 - 20.05 Describe animal cruelty and the consequences of cruel treatment of animals.
- 21.0 DEMONSTRATE KNOWLEDGE OF ANIMAL CONTROL AND HUMANE SOCIETIES--The student will be able to:
- 21.01 Differentiate between animal control agencies and humane societies.
 - 21.02 Describe the responsibilities and goals of animal control agencies and humane societies.
 - 21.03 Explain the laws governing each organization.
 - 21.04 Identify and locate local animal control agencies and humane societies.
- 22.0 DISCUSS ANIMAL MARKETING TECHNIQUES--The student will be able to:
- 22.01 Demonstrate procedures for preparing, maintaining, and exhibiting animals.
 - 22.02 Collect and interpret market reports and identify market outlets for companion and food-producing animals.
- 23.0 DEMONSTRATE EMPLOYABILITY AND INTERPERSONAL SKILLS--The student will be able to:
- 23.01 Demonstrate acceptable employee hygiene habits.
 - 23.02 Demonstrate appropriate responses to criticisms from employer, supervisor, and peers.
 - 23.03 Complete pertinent forms for employment, such as resume, job applications, W-4 forms.

- 23.04 Demonstrate job interview techniques.
 - 23.05 Explain the "Right-to-Know" law.
- 24.0 MAINTAIN AND ANALYZE RECORDS--The student will be able to:
- 24.01 Maintain and analyze animal records.
 - 24.02 Discuss the legal requirements of maintaining animal health records, and maintain and analyze animal health records.
 - 24.03 Maintain and analyze basic business records (inventory, depreciation, receipts, and expenses) using computer applications.
 - 24.04 Maintain supervised agricultural experience (SAE) records.
- OCCUPATIONAL COMPLETION POINT - DATA CODE B**
 First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers - SOC Code - 45-1011.08
- 25.0 APPLY APPROVED NUTRITIONAL PRACTICES--The student will be able to:
- 25.01 Evaluate animal feed and feeding systems
 - 25.02 Measure and add medication to feed as prescribed.
 - 25.03 Determine amount to feed individual animals.
 - 25.04 Balance a feed ration.
- 26.0 GROOM, EXHIBIT AND MARKET ANIMALS--The student will be able to:
- 26.01 Groom selected animals for exhibition.
 - 26.02 Train animals for show and/or exhibition.
 - 26.03 Show and exhibit animals.
 - 26.04 Demonstrate knowledge required to train selected animals to halter.
 - 26.05 Weigh animals.
 - 26.06 Prepare animals for transport.
 - 26.07 Identify market outlets.
 - 26.08 Describe methods of restraining, loading, handling, and transporting animals safely.
 - 26.09 Collect and interpret market reports.
 - 26.10 Determine market grades of animals and animal products.
 - 26.11 Analyze shipping and health certificates.
- 27.0 MAINTAIN EQUIPMENT AND FACILITIES--The student will be able to:
- 27.01 Clean and disinfect pens, cages, feeders, waterers, trailers and other equipment.
 - 27.02 Dispose of animal residue and waste.
 - 27.03 Clean and maintain equipment and instruments.
 - 27.04 Repair and maintain pens, cages and other facilities and structures.
 - 27.05 Perform maintenance and minor repair of electrical and plumbing fixtures and equipment.
 - 27.06 Maintain a clean, sanitary and healthy environment for animals.
- 28.0 OPERATE, MAINTAIN, AND REPAIR MACHINERY AND EQUIPMENT--The student will be able to:
- 28.01 Use equipment-operator and repair manuals.
 - 28.02 Service and maintain small gasoline engines.
 - 28.03 Operate, service, and maintain tractors and equipment.
 - 28.04 Maintain records of equipment maintenance and repair.
 - 28.05 Prepare equipment for storage.

- 28.06 Demonstrate proper use of shop and lab equipment.
 - 28.07 Demonstrate safety practices in operating machinery and equipment.
- 29.0 MAINTAIN AND ANALYZE RECORDS--The student will be able to:
- 29.01 Maintain and analyze production, performance and breeding records, using computer applications.
 - 29.02 Identify major sources of credit.
 - 29.03 Evaluate leasing and renting agreements.
 - 29.04 Evaluate need for liability and other insurance.
 - 29.05 Analyze records to determine efficiency of operation.
 - 29.06 Maintain machinery, equipment and facilities inventory records.
 - 29.07 Maintain breeding records.
 - 29.08 Prepare an annual budget.
 - 29.09 Maintain and analyze basic business records (inventory, depreciation, receipts, and expenses) using computer applications.
 - 29.10 Plan a work schedule.
 - 29.11 Maintain personnel and labor records.
 - 29.12 Maintain supervised agricultural experience records.
 - 29.13 Discuss the legal requirements of maintaining animal health records, and maintain and analyze health records.
 - 29.14 Maintain chemical-use and water-use records, etc.
- 30.0 APPLY ANIMAL HEALTH PRACTICES--The student will be able to:
- 30.01 Evaluate and report common ailments of animals (diseases, disorders associated with feeding, stress, internal and external parasites).
 - 30.02 Administer prescribed oral medications (under supervision).
 - 30.03 Administer prescribed injections (under supervision).
 - 30.04 Locate injection points of selected animals (under supervision).
 - 30.05 Sterilize instruments and supplies.
 - 30.06 Interpret and follow directions on medications and animal health aids, including withholding milk from cows on medication and the control of mastitis.
 - 30.07 Dip, spray, or dust animals for external parasites (under supervision).
 - 30.08 Dispose of empty chemical and medical containers as prescribed.
 - 30.09 Dispose of deceased animals as prescribed.
 - 30.10 Store medications and chemicals safely and securely.
 - 30.11 Select and administer growth stimulants and implants (under supervision).
 - 30.12 Discuss castration, dehorning, docking, and debeaking.
 - 30.13 Dispose of biomedical waste and by products (needles, scalpel blades, medicines, etc.)
- 31.0 PERFORM EMERGENCY FIRST AID ON ANIMALS--The student will be able to:
- 31.01 Evaluate the health status of the animals.
 - 31.02 Isolate injured animals.
 - 31.03 Cleanse wounds.
 - 31.04 Apply antiseptic.
 - 31.05 Immobilize fractured limbs.
 - 31.06 Identify and stop external bleeding.
 - 31.07 Seek additional medical attention for animals when required.

OCCUPATIONAL COMPLETION POINT - DATA CODE C

First-Line Supervisors/Managers of Animal Husbandry and Animal Care
Workers - SOC Code - 45-1011.08

- 32.0 IDENTIFY, SELECT, AND BREED FOOD-PRODUCING ANIMALS--The student will be able to:
- 32.01 Appraise animal conformation and desirable characteristics and breeds.
 - 32.02 Determine age to breed selected animals.
 - 32.03 Describe estrous cycle of food-producing animals.
 - 32.04 Describe breeding techniques, including artificial insemination.
 - 32.05 Cull offspring.
 - 32.06 Describe basic animal genetics.
 - 32.07 Identify signs of parturition.
 - 32.08 Identify common disorders of parturition.
 - 32.09 Prepare animals and facilities for parturition.
 - 32.10 Assist in the delivery of newborn animals.
- 33.0 PLAN ROUTINE MANAGEMENT OF FOOD-PRODUCING ANIMALS AND FACILITIES--The student will be able to:
- 33.01 Schedule feeding and care of animals.
 - 33.02 Order supplies and animal feeds.
 - 33.03 Develop training and exercise schedule for animal.
 - 33.04 Plan for routine maintenance of equipment and facilities.
 - 33.05 Assist in the planning of a routine animal health and preventative medication program.
 - 33.06 Implement and maintain sanitary conditions for animals, including young.
 - 33.07 Separate non-compatible animals.
 - 33.08 Observe animals on a regular basis for problems or stress.
 - 33.09 Develop a calendar of operations for a selected animal operation.
- 34.0 GROW AND MAINTAIN PASTURE AND FORAGE CROPS--The student will be able to:
- 34.01 Compare pasture, forage and feed crop production and harvesting systems.
 - 34.02 Assist in determining pasture and forage needs.
 - 34.03 Take a soil sample and interpret results.
 - 34.04 Describe soil and water conservation practices.
 - 34.05 Determine range and pasture quality.
 - 34.06 Prepare soil for feed, pasture and forage crops.
 - 34.07 Plant and grow feed, pasture and forage crops.
 - 34.08 Fertilize feed, pasture and forage crops.
 - 34.09 Control noxious weeds and pests in crops.
 - 34.10 Harvest forage and feed crops.
 - 34.11 Store harvested feed and forage crops.
 - 34.12 Assist in the development of a plan for the rotation of fields, pens and pastures.
- 35.0 IDENTIFY AND INTERPRET RULES AND REGULATIONS AFFECTING THE LIVESTOCK INDUSTRY--The student will be able to:
- 35.01 Maintain a file of current livestock rules and regulations.
 - 35.02 Secure professional services and information.
 - 35.03 Observe EPA pesticide use regulations.
 - 35.04 Identify the procedures and requirements for obtaining a restricted use pesticide applicator's license.

- 35.05 Observe regulations regarding the use of medications and growth stimulants.
- 35.06 Observe state and federal regulations regarding brucellosis testing/eradication programs and other programs.
- 35.07 Identify applicable land-use and zoning regulations.
- 35.08 Identify agencies affecting land and wildlife utilization (e.g., DNR, DEP, EPA)
- 35.09 Identify agencies regulating employee/employer relations (e.g., OSHA).

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8106810
Course Title: Agriscience Foundations I
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to develop competencies in the areas of agricultural history and the global impact of agriculture; career opportunities; scientific and research concepts; biological and physical science principles; environmental principles; agriscience safety; principles of leadership; and agribusiness, employability, and human relations skills in agriscience. Laboratory-based activities are an integral part of this course. These include the safe use and application of appropriate technology, scientific testing and observation equipment.

01.0 Describe the history of agriculture and its influence on the global economy--The student will be able to:

- 01.01 Investigate the history of agriculture and its relationship to science and technology. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SS.A.1.4.1, 4; SS.A.2.4.1, 2; SS.A.3.4.1, 5, 8; SS.A.3.4.9; SS.A.5.4.1; SS.B.1.4.1, 4; SC.H.3.4.2, 3, 5, 6; SC.D.1.4.3, 4
- 01.02 Analyze the impact of agriculture on the local, state, national and global economy. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; MA.A.2.4.1, 2; MA.A.3.4.1, 3; MA.E.1.4.1, 2; SS.A.3.4.3, 8, 10; SS.A.4.4.1, 6; SS.A.5.4.3, 5; SS.B.2.4.1, 4; SC.H.3.4.2, 3, 5, 6; SC.B.1.4.5; SC.D.1.4.1, 3; SC.D.2.4.1
- 01.03 Identify significant career patterns/shifts in the history of the agricultural industry. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SS.A.1.4.1; SS.A.3.4.5; SS.A.5.4.2; SS.B.2.4.4; SC.H.3.4.2, 3, 5, 6; SC.B.1.4.5; SC.D.1.4.1, 3; SC.D.1.4.4; SC.H.1.4.2
- 01.04 Examine the role of the agricultural industry in the interaction of population, food, energy, and the environment. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; MA.D.1.4.1; MA.D.2.4.1; MA.E.1.4.1; SS.A.4.4.1, 2; SS.A.5.4.1, 2; SS.B.1.4.4; SS.B.2.4.1; SS.B.2.4.2, 4, 6; SS.D.1.4.1; SC.H.3.4.2, 3, 5, 6; SC.B.1.4.5; SC.D.1.4.1, 3, 4; SC.D.2.4.1; SC.G.2.4.6

02.0 Practice agriscience safety skills and procedures --The student will be able to:

- 02.01 Identify the common causes of accidents in agriscience operations. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1
- 02.02 Demonstrate proper safety precautions and use of personal protective equipment.
- 02.03 Extract and utilize pertinent information from a container label and/or Material Safety Data Sheet (MSDS) following Environmental Protection Agency (EPA), Worker Protection Standard, and Occupational Safety and Health Agency (OSHA) regulations. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3;

- LA.C.1.4.1; LA.C.2.4.1; MA.A.1.4.1; MA.A.3.4.1; MA.B.1.4.1, 2;
MA.B.2.4.2; MA.B.3.4.1; MA.B.4.4.1, 2; MA.E.1.4.1
- 02.04 Identify proper disposal of hazardous waste materials and biohazards. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1
- 02.05 Describe emergency procedures. LA.C.3.4.1; LA.C.3.4.2; LA.C.3.4.3
- 03.0 Apply scientific and technological principles to agriscience issues--The student will be able to:
- 03.01 Employ scientific measurement skills. MA.A.1.4.1; MA.A.2.4.2; MA.B.2.4.1, 2; MA.B.4.4.1; SC.B.1.4.3; SC.H.1.4.1
- 03.02 Demonstrate safe and effective use of common laboratory equipment. SC.H.1.4.1
- 03.03 Identify the parts and functions of plant and animal cells. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2; SC.F.1.4.1, 2, 3, 7, 8; SC.F.2.4.1
- 03.04 Describe the phases of cell reproduction. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2; SC.F.1.4.1, 2, 3, 7, 8; SC.F.2.4.1; SC.G.1.4.1
- 03.05 Implement the scientific method and science process skills through the design and completion of an agriscience research project. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; MA.E.3.4.1, 2; SC.H.1.4.1, 2, 3; SC.H.2.4.1, 2
- 03.06 Interpret, analyze, and report data. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; MA.E.1.4.1, 2, 3; MA.E.2.4.1, 2; SC.B.1.4.3, SC.H.1.4.1, 2, 3, 4, 7
- 03.07 Investigate DNA and genetics applications in agriscience including the theory of probability. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; MA.E.2.4.1, 2; SC.F.2.4.2, 3; SC.G.2.4.3
- 03.08 Evaluate advances in biotechnology that impact agriculture (e.g. transgenic crops, biological controls, etc.). LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.F.2.4.2, 3; SC.G.2.4.3
- 04.0 Apply environmental principles to the agricultural industry --The student will be able to:
- 04.01 Determine how different climactic and geological activity influences agriculture. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SS.B.1.4.1; SS.B.2.4.4; SC.B.1.4.5; SC.D.1.4.1, 2, 3; SC.D.2.4.1; SC.G.1.4.1
- 04.02 Describe various ecosystems as they relate to the agriculture industry. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2; SC.D.1.4.1, 2, 3; SC.D.2.4.1; SC.G.1.4.1; SC.G.2.4.2, 4; SC.G.2.4.5, 6
- 04.03 Describe the environmental resources (soil, water, air) necessary for agriculture production. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SS.B.2.4.1, 6; SC.B.1.4.1, 2, 5; SC.D.1.4.1, 2, 3; SC.D.2.4.1; SC.G.1.4.1; SC.G.2.4.2, 4, 5, 6
- 04.04 Identify regulatory agencies that impact agricultural practices. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.5; SC.D.1.4.1, 2, 3; SC.D.2.4.1; SC.G.1.4.1; SC.G.2.4.2, 4; SC.G.2.4.5, 6
- 04.05 Apply Best Management Practices that enhance the natural environment. SC.B.1.4.5; SC.D.1.4.1, 2, 3; SC.D.2.4.1; SC.G.1.4.1; SC.G.2.4.2, 4, 5, 6
- 04.06 Identify conservation practices related to natural resources. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3;

LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2, 5; SC.D.1.4.1, 2, 3; SC.D.2.4.1;
SC.G.1.4.1; SC.G.2.4.2, 3, 4, 5, 6

05.0 Investigate and utilize basic scientific skills and principles in plant science --The student will be able to:

- 05.01 Identify and describe the specializations within the plant science industry. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1
- 05.02 Categorize plants based on specific characteristics according to industry and scientific standards. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.G.1.4.1
- 05.03 Examine the processes of plant growth including photosynthesis and respiration. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2; SC.D.1.4.1; SC.F.1.4.1, 2, 3, 7, 8; SC.G.2.4.2
- 05.04 Identify the nutrients required for plant growth from the periodic table and explain their functions. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.D.1.4.1, 2; SC.F.1.4.1, 2, 3, 7, 8; SC.G.2.4.2
- 05.05 Analyze information from a fertilizer label. MA.E.1.4.1; MA.B.1.4.1, 2; MA.B.2.4.1, 2; MA.B.3.4.1; MA.B.4.4.1, 2; SC.A.2.4.5
- 05.06 Propagate and grow plants through sexual and/or asexual reproduction. SC.B.1.4.1, 2; SC.D.1.4.1, 2; SC.F.1.4.1, 2, 3, 7, 8; SC.F.2.4.1, 3; SC.G.2.4.3
- 05.07 Investigate the impacts of various pests and propose solutions for their control. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2; SC.D.1.4.1; SC.F.1.4.1, 2, 3, 7, 8; SC.G.1.4.1; SC.G.2.4.2
- 05.08 Investigate the nature and properties of food, fiber, and by-products from plants. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2, 3; SC.F.1.4.1, 2, 3, 7, 8; SC.G.1.4.1
- 05.09 Explore career opportunities in plant science. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1

06.0 Investigate and utilize basic scientific skills and principles in animal science --The student will be able to:

- 06.01 Investigate the origin, history, and domestication of animals. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.D.1.4.3, 4; SC.G.1.4.1
- 06.02 Explain the economic importance of animals and the products obtained from animals. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; MA.D.1.4.1; MA.E.1.4.1; MA.A.1.4.1, 2, 3, 4; MA.A.2.4.2; SC.D.1.4.1; SC.G.1.4.1
- 06.03 Categorize animals according to use, type, breed, and scientific classification. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.G.1.4.1
- 06.04 Employ correct terminologies for animal species and conditions (e.g. age, sex, etc.) within those species. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1
- 06.05 Compare basic internal & external anatomy of animals. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.F.1.4.1, 2, 3, 7, 8; SC.F.2.4.1
- 06.06 Demonstrate approved practices in the management, health, safety, and technology of the animal industry. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2; SC.D.1.4.1; SC.F.1.4.1, 2, 3, 7, 8; SC.F.2.4.1, 3; SC.G.1.4.1; SC.G.2.4.2, 3

- 06.07 Discuss animal welfare issues. LA.C.3.4.1; LA.C.3.4.2; LA.C.3.4.3; SC.D.1.4.1
- 06.08 Investigate the nature and properties of food, fiber, and by-products from animals. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.B.1.4.1, 2; SC.B.1.4.3; SC.F.1.4.1, 2, 3, 7, 8; SC.G.1.4.1
- 06.09 Explore career opportunities in animal science. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1
- 07.0 Demonstrate the use of agriscience tools, equipment, and instruments --
The student will be able to:
- 07.01 Select and demonstrate the use of agriscience tools, equipment, and instruments. MA.A.1.4.1, 4; MA.B.1.4.1, 2, 3; MA.B.2.4.1; MA.B.1.4.2; MA.B.4.4.1, 2; SC.B.1.4.1, 2
- 07.02 Describe various physical science principles as applied in selected mechanical applications (e.g. levers, pulleys, hydraulics, and internal combustion). LA.A.1.4.1; LA.A.1.4.2; LA.A.1.4.3; LA.A.1.4.4; MA.B.1.4.1, 2, 3; MA.B.2.4.1, 2; MA.B.3.4.1; MA.B.4.4.1, 2; SC.B.1.4.1, 2, 3; SC.C.2.4.6
- 07.03 Solve time, distance, area, volume, ratio, proportion, and percentage problems in agriscience. SC.B.1.4.1, 2, 3
- 07.04 Service and maintain agriscience equipment, instruments, facilities, and supplies. LA.A.1.4.1; LA.A.1.4.2; LA.A.1.4.3; LA.A.1.4.4; SC.B.1.4.1, 2
- 08.0 Demonstrate agribusiness, employability & human relation skills --The student will be able to:
- 08.01 Develop, implement, and maintain work based learning through Supervised Agricultural Experiences (SAE). LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1
- 08.02 Utilize a record keeping system to collect, interpret, and analyze data. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; MA.B.2.4.1; MA.B.3.4.1; MA.B.4.4.2; MA.E.1.4.1; SC SC.H.1.4.7, SC.H.3.4.3
- 08.03 Enhance oral communications through telephone, interview and presentation skills. LA.C.1.4.3; LA.C.3.4.1; LA.C.3.4.2; LA.C.3.4.3; LA.C.3.4.4; LA.C.3.4.5; SC.H.1.4.7
- 08.04 Enhance written communication by developing resumes and business letters. LA.B.1.4.1; LA.B.1.4.2; LA.B.1.4.3; LA.B.2.4.1; LA.B.2.4.2; LA.B.2.4.3; SC.H.1.4.7
- 08.05 Demonstrate interpersonal (nonverbal) communication skills. LA.C.3.4.1; LA.C.3.4.2; LA.C.3.4.3; LA.C.3.4.4; LA.C.3.4.5
- 08.06 Demonstrate good listening skills. LA.C.1.4.1; LA.C.1.4.2; LA.C.1.4.3; LA.C.1.4.4
- 09.0 Apply leadership and citizenship skills --The student will be able to:
- 09.01 Identify and describe leadership characteristics. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1
- 09.02 Identify opportunities to apply acquired leadership skills. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1
- 09.03 Identify and demonstrate ways to be an active citizen. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SC.H.1.4.7
- 09.04 Participate in community based learning activities. SC.H.1.4.7
- 09.05 Demonstrate the ability to work cooperatively. SC.H.1.4.4

09.06 Conduct formal and informal meetings using correct parliamentary procedure skills. LA.C.3.4.1; LA.C.3.4.2; LA.C.3.4.3; SC.H.1.4.7
Identify the opportunities for leadership development available through the National FFA Organization and/or professional organizations.
LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1

**Florida Department of Education
STUDENT PERFORMANCE STANDARDS**

Course Number: 8106210
Course Title: Animal Science and Services 2
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to develop competencies in the areas of safety; animal behavior; animal welfare; animal control; and employability skills.

- 10.0 DESCRIBE ANIMAL SCIENCE AND THE ROLE OF ANIMALS IN SOCIETY--The student will be able to:
- 10.01 Describe animal science. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4 SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 1.4, 2.4, 3.4; SSA 2.4, 3.4, 4.4, 5.4; SSB 1.4, 2.4; SSC 1.4, 2.4; SS.D 1.4, 2.4
 - 10.02 Describe the role of animals in society. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4; SCF.2.4; SCG 1.4, 2.4; SCH 1.4, 2.4, 3.4; SSA 1.4, 2.4; SSA.3.4, 4.4, 5.4; SSB 1.4, 2.4; SSC 1.4, 2.4; SS.D 1.4; SS.D.2.4
 - 10.03 Locate and obtain informational materials on animal-related topics or issues. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4; LAC 2.4, 3.4; LAD 1.4, 2.4; SCF 2.4; SCG 1.4, 2.4; SCH 1.4, 2.4, 3.4; SSA 2.4, 3.4, 4.4, 5.4; SSB 1.4, 2.4; SSC 1.4, 2.4; SS.D 1.4, 2.4
- 11.0 IDENTIFY CAREERS IN THE ANIMAL INDUSTRY--The student will be able to:
- 11.01 Locate and obtain information on animal-industry careers and career opportunities. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4; LAC 2.4, 3.4; LAD 1.4, 2.4
 - 11.02 Describe various careers in the animal industry. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4
 - 11.03 Describe training requirements for entry and advancement in animal-industry careers. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4
 - 11.04 Identify professional organizations and trade journals in the animal industry. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4
- 12.0 PRACTICE ANIMAL AND LABORATORY SAFETY--The student will be able to:
- 12.01 Practice safe procedures when working with animal-related equipment and in laboratory settings. LAA 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCC 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 1.4, 2.4, 3.4; SSC 1.4, 2.4
 - 12.02 Practice safety precautions around animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCC 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 1.4, 2.4, 3.4; SSC 1.4, 2.4
 - 12.03 Discuss the impact of unsafe procedures. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCC 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 1.4, 2.4, 3.4; SSC 1.4, 2.4
 - 12.04 Define zoonosis. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCH 1.4, 2.4, 3.4; SSC 1.4, 2.4
 - 12.05 Describe selected zoonotic diseases. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCH 1.4, 2.4, 3.4; SSC 1.4, 2.4

- 12.06 Discuss OSHA as it relates to the animal industry. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SSC 1.4, 2.4
- 13.0 DEMONSTRATE BASIC FIRST AID FOR HUMANS--The student will be able to:
- 13.01 Locate and use a first aid kit. LAA 1.4, 2.4; LAC 1.4; 2.4; SCF 1.4; HEA 1.4, 2.4; HEB 1.4
- 13.02 Recognize allergic reactions. LAA 1.4, 2.4; LAC 1.4, 2.4; SCF 1.4; HEA 1.4, 2.4; HEB 1.4
- 13.03 Describe proper use of eye wash solution. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4; HEA 1.4, 2.4; HEB 1.4
- 13.04 Control minor hemorrhage and/or trauma. SCF 1.4; HEA 1.4, 2.4; HEB 1.4
- 13.05 Practice emergency procedures. SCF 1.4; HEA 1.4, 2.4; HEB 1.4
- 14.0 IDENTIFY PARTS AND FUNCTIONS OF VARIOUS SYSTEMS OF SELECTED ANIMALS--The student will be able to:
- 14.01 Identify parts of the skeletal system of selected animals. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4
- 14.02 Compare human skeletal system to that of other animals. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4
- 14.03 Identify parts and functions of the following systems of selected animals:
- respiratory system
 - urinary system
 - digestive system
 - cardiovascular system
 - reproductive system
 - nervous system
- LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4
- 14.04 Employ correct terminologies for the variety of animal species and conditions within those species. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4
- 15.0 RECOGNIZE NORMAL AND ABNORMAL ANIMAL BEHAVIORS--The student will be able to:
- 15.01 Distinguish between instinctive and learned behaviors. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4
- 15.02 Recognize normal and abnormal behavioral characteristics of animals through observations. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4
- 15.03 Recognize signs of aggressive animal behaviors. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4
- 15.04 Identify behavioral problems. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4
- 20.0 DIFFERENTIATE BETWEEN ANIMAL WELFARE AND ANIMAL RIGHTS--The student will be able to:
- 20.01 Define animal welfare and animal rights. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCG 1.4, 2.4; SSC 1.4, 2.4
- 20.02 Explain the differences between animal welfare and animal rights. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCG 1.4, 2.4; SCH 2.3; SSC 1.4, 2.4
- 20.03 Identify animal welfare and animal rights advocate groups. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCG 1.4, 2.4; SCH 2.3; SSC 1.4, 2.4

- 20.04 Debate current events concerning animal welfare and animal rights. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCG 1.4, 2.4; SCH 2.3; SSC 1.4, 2.4
 - 20.05 Describe animal cruelty and the consequences of cruel treatment of animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCG 1.4, 2.4; SCH 2.3; SSC 1.4, 2.4
- 21.0 DEMONSTRATE KNOWLEDGE OF ANIMAL CONTROL AND HUMANE SOCIETIES--The student will be able to:
- 21.01 Differentiate between animal control agencies and humane societies. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SSC 1.4, 2.4
 - 21.02 Describe the responsibilities and goals of animal control agencies and humane societies. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SSC 1.4, 2.4
 - 21.03 Explain the laws governing each organization. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SSC 1.4, 2.4
 - 21.04 Identify and locate local animal control agencies and humane societies. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SSC 1.4, 2.4
- 23.0 DEMONSTRATE EMPLOYABILITY AND INTERPERSONAL SKILLS--The student will be able to:
- 23.01 Demonstrate acceptable employee hygiene habits. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; HEA 1.4, 2.4; HEC 1.4, 2.4
 - 23.02 Demonstrate appropriate responses to criticisms from employer, supervisor, and peers. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; HEB 3.4
 - 23.03 Complete pertinent forms for employment, such as resume, job applications, W-4 forms. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; SSC 1.4, 2.4
 - 23.04 Demonstrate job interview techniques. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; HEB 3.4
 - 23.05 Explain the "Right-to-Know" law. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SSC 1.4, 2.4

**Florida Department of Education
STUDENT PERFORMANCE STANDARDS**

Course Number: 8106220
Course Title: Animal Science and Services 3
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to develop competencies in the areas of animal digestive systems; animal breeding; preventive medicine and disease control; control of parasites; animal marketing; and analyzing records.

16.0 IDENTIFY THE DIFFERENT DIGESTIVE SYSTEMS OF ANIMALS AND THE NUTRITIONAL REQUIREMENTS OF SELECTED SPECIES--The student will be able to:

- 16.01 Differentiate between ruminants and non-ruminants. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH.3.4
- 16.02 Differentiate between omnivorous, carnivores, and herbivores. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 3.4
- 16.03 Describe the basic nutritional requirements of selected species. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAE 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 3.4
- 16.04 Analyze different food labels. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAE 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 3.4
- 16.05 Formulate animal food products. LAA 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAE 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 3.4
- 16.06 Schedule feeding times for selected animals. LAA 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 3.4

17.0 EXPLAIN THE REPRODUCTIVE SYSTEM AND BREEDING OF SELECTED ANIMALS--The student will be able to:

- 17.01 Describe the male and female reproductive systems. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4
- 17.02 Determine sex of animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4
- 17.03 Determine appropriate age for breeding. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4
- 17.04 Identify gestation length. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4
- 17.05 Describe estrous cycle. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4; SCF 1.4, 2.4
- 17.06 Describe breeding techniques. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4
- 17.07 Select male and female for breeding. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4

- 17.08 Care for breeding stock. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4,3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAC 1.4, 2.4, 3.4; MAD 1.4, 2.4; MAE 1.4, 2.4, 3.4 SCF 1.4, 2.4
- 17.09 Care for newborn. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAC 2.4, 3.4; MAD 1.4, 2.4; MAE 1.4, 2.4, 3.4; SCF 1.4, 2.4
- 17.10 Explain the differences and similarities between reproduction in animal species. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4
- 18.0 DEMONSTRATE KNOWLEDGE OF PREVENTIVE MEDICINE AND DISEASE CONTROL--The student will be able to:
- 18.01 Describe the importance of preventive medicine for animal health. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH.2.4, 3.4; SSC 1.4, 2.4
- 18.02 Recognize healthy animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH.2.4, 3.4; SSC 1.4, 2.4; LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH.2.4, 3.4; SSC 1.4, 2.4
- 18.03 Describe common diseases of animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH.2.4, 3.4; SSC 1.4, 2.4
- 18.04 Describe vaccinations available for disease prevention and vaccination procedures. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH.2.4, 3.4; SSC 1.4, 2.4
- 18.05 Evaluate and report health conditions of animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAE 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 18.06 Collect urine and feces samples for analysis. SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 18.07 Describe the process for collecting blood samples for analysis. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 18.08 Administer prescribed oral medications. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 18.09 Describe the process for administering medications by injection. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 18.10 Describe the procedure for safe disposal of medications. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 18.11 Discuss the term immunology and active and passive immunity. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 18.12 Describe procedures for periodic health check-up. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 19.0 DESCRIBE INTERNAL AND EXTERNAL PARASITES AND CONTROL METHODS--The student will be able to:

- 19.01 Describe the internal and external parasites of selected animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 19.02 Describe the methods of parasite prevention. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 19.03 Describe the methods of parasite control. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 19.04 Use a microscope for selected practices. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4
- 19.05 Describe the process for fecal sample collection, slide preparation, and examination. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SCF 1.4, 2.4; SCG 1.4, 2.4; SCH 2.4, 3.4; SSC 1.4, 2.4
- 22.0 DISCUSS ANIMAL MARKETING TECHNIQUES--The student will be able to:
- 22.01 Demonstrate procedures for preparing, maintaining, and exhibiting animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4
- 22.02 Collect and interpret market reports and identify market outlets for companion and food-producing animals. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; SSD 1.4, 2.4
- 24.0 MAINTAIN AND ANALYZE RECORDS--The student will be able to:
- 24.01 Maintain and analyze animal records. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAE 1.4, 2.4, 3.4
- 24.02 Discuss the legal requirements of maintaining animal health records, and maintain and analyze animal health records. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAE 1.4, 2.4, 3.4; SSC 1.4, 2.4
- 24.03 Maintain and analyze basic business records (inventory, depreciation, receipts, and expenses) using computer applications. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAE 1.4, 2.4, 3.4; SSD 1.4, 2.4
- 24.04 Maintain supervised agricultural experience (SAE) records. LAA 1.4, 2.4; LAB 1.4, 2.4; LAC 1.4, 2.4, 3.4; LAD 1.4, 2.4; MAA 1.4, 2.4, 3.4, 4.4, 5.4; MAB 1.4, 2.4, 3.4, 4.4; MAE 1.4, 2.4, 3.4; SSD 1.4, 2.4

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8106230
Course Title: Animal Science and Services 4
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to develop competencies in the areas of nutrition; grooming, exhibiting and marketing animals; operation, maintenance and repair of equipment.

25.0 APPLY APPROVED NUTRITIONAL PRACTICES--The student will be able to:

- 25.01 Evaluate animal feed and feeding systems
- 25.02 Measure and add medication to feed as prescribed.
- 25.03 Determine amount to feed individual animals.
- 25.04 Balance a feed ration.

26.0 GROOM, EXHIBIT AND MARKET ANIMALS--The student will be able to:

- 26.01 Groom selected animals for exhibition.
- 26.02 Train animals for show and/or exhibition.
- 26.03 Show and exhibit animals.
- 26.04 Demonstrate knowledge required to train selected animals to halter.
- 26.05 Weigh animals.
- 26.06 Prepare animals for transport.
- 26.07 Identify market outlets.
- 26.08 Describe methods of restraining, loading, handling, and transporting animals safely.
- 26.09 Collect and interpret market reports.
- 26.10 Determine market grades of animals and animal products.
- 26.11 Analyze shipping and health certificates.

27.0 MAINTAIN EQUIPMENT AND FACILITIES--The student will be able to:

- 27.01 Clean and disinfect pens, cages, feeders, waterers, trailers and other equipment.
- 27.02 Dispose of animal residue and waste.
- 27.03 Clean and maintain equipment and instruments.
- 27.04 Repair and maintain pens, cages and other facilities and structures.
- 27.05 Perform maintenance and minor repair of electrical and plumbing fixtures and equipment.
- 27.06 Maintain a clean, sanitary and healthy environment for animals.

28.0 OPERATE, MAINTAIN, AND REPAIR MACHINERY AND EQUIPMENT--The student will be able to:

- 28.01 Use equipment-operator and repair manuals.
- 28.02 Service and maintain small gasoline engines.
- 28.03 Operate, service, and maintain tractors and equipment.
- 28.04 Maintain records of equipment maintenance and repair.
- 28.05 Prepare equipment for storage.
- 28.06 Demonstrate proper use of shop and lab equipment.
- 28.07 Demonstrate safety practices in operating machinery and equipment.

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8106240
Course Title: Animal Science and Services 5
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to develop competencies in the areas of maintaining and analyzing records; animal health practices; and emergency first aid for animals.

29.0 MAINTAIN AND ANALYZE RECORDS--The student will be able to:

- 29.01 Maintain and analyze production, performance and breeding records, using computer applications.
- 29.02 Identify major sources of credit.
- 29.03 Evaluate leasing and renting agreements.
- 29.04 Evaluate need for liability and other insurance.
- 29.05 Analyze records to determine efficiency of operation.
- 29.06 Maintain machinery, equipment and facilities inventory records.
- 29.07 Maintain breeding records.
- 29.08 Prepare an annual budget.
- 29.09 Maintain and analyze basic business records (inventory, depreciation, receipts, and expenses) using computer applications.
- 29.10 Plan a work schedule.
- 29.11 Maintain personnel and labor records.
- 29.12 Maintain supervised agricultural experience records.
- 29.13 Discuss the legal requirements of maintaining animal health records, and maintain and analyze health records.
- 29.14 Maintain chemical-use and water-use records, etc.

30.0 APPLY ANIMAL HEALTH PRACTICES--The student will be able to:

- 30.01 Evaluate and report common ailments of animals (diseases, disorders associated with feeding, stress, internal and external parasites).
- 30.02 Administer prescribed oral medications (under supervision).
- 30.03 Administer prescribed injections (under supervision).
- 30.04 Locate injection points of selected animals (under supervision).
- 30.05 Sterilize instruments and supplies.
- 30.06 Interpret and follow directions on medications and animal health aids, including withholding milk from cows on medication and the control of mastitis.
- 30.07 Dip, spray, or dust animals for external parasites (under supervision).
- 30.08 Dispose of empty chemical and medical containers as prescribed.
- 30.09 Dispose of deceased animals as prescribed.
- 30.10 Store medications and chemicals safely and securely.
- 30.11 Select and administer growth stimulants and implants (under supervision).
- 30.12 Discuss castration, dehorning, docking, and debeaking.
- 30.13 Dispose of biomedical waste and by products (needles, scalpel blades, medicines, etc.)

31.0 PERFORM EMERGENCY FIRST AID ON ANIMALS--The student will be able to:

- 31.01 Evaluate the health status of the animals.
- 31.02 Isolate injured animals.
- 31.03 Cleanse wounds.
- 31.04 Apply antiseptic.
- 31.05 Immobilize fractured limbs.
- 31.06 Identify and stop external bleeding.
- 31.07 Seek additional medical attention for animals when required.

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8106250
Course Title: Animal Science and Services 6
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to develop competencies in the areas of identifying, selecting and breeding food-producing animals; management; growing and maintaining pasture and forage crops; and interpreting rules and regulations affecting the livestock industry.

32.0 IDENTIFY, SELECT, AND BREED FOOD-PRODUCING ANIMALS--The student will be able to:

- 32.01 Appraise animal conformation and desirable characteristics and breeds.
- 32.02 Determine age to breed selected animals.
- 32.03 Describe estrous cycle of food-producing animals.
- 32.04 Describe breeding techniques, including artificial insemination.
- 32.05 Cull offspring.
- 32.06 Describe basic animal genetics.
- 32.07 Identify signs of parturition.
- 32.08 Identify common disorders of parturition.
- 32.09 Prepare animals and facilities for parturition.
- 32.10 Assist in the delivery of newborn animals.

33.0 PLAN ROUTINE MANAGEMENT OF FOOD-PRODUCING ANIMALS AND FACILITIES--The student will be able to:

- 33.01 Schedule feeding and care of animals.
- 33.02 Order supplies and animal feeds.
- 33.03 Develop training and exercise schedule for animal.
- 33.04 Plan for routine maintenance of equipment and facilities.
- 33.05 Assist in the planning of a routine animal health and preventative medication program.
- 33.06 Implement and maintain sanitary conditions for animals, including young.
- 33.07 Separate non-compatible animals.
- 33.08 Observe animals on a regular basis for problems or stress.
- 33.09 Develop a calendar of operations for a selected animal operation.

34.0 GROW AND MAINTAIN PASTURE AND FORAGE CROPS--The student will be able to:

- 34.01 Compare pasture, forage and feed crop production and harvesting systems.
- 34.02 Assist in determining pasture and forage needs.
- 34.03 Take a soil sample and interpret results.
- 34.04 Describe soil and water conservation practices.
- 34.05 Determine range and pasture quality.
- 34.06 Prepare soil for feed, pasture and forage crops.
- 34.07 Plant and grow feed, pasture and forage crops.
- 34.08 Fertilize feed, pasture and forage crops.
- 34.09 Control noxious weeds and pests in crops.

- 34.10 Harvest forage and feed crops.
 - 34.11 Store harvested feed and forage crops.
 - 34.12 Assist in the development of a plan for the rotation of fields, pens and pastures.
- 35.0 IDENTIFY AND INTERPRET RULES AND REGULATIONS AFFECTING THE LIVESTOCK INDUSTRY--The student will be able to:
- 35.01 Maintain a file of current livestock rules and regulations.
 - 35.02 Secure professional services and information.
 - 35.03 Observe EPA pesticide use regulations.
 - 35.04 Identify the procedures and requirements for obtaining a restricted use pesticide applicator's license.
 - 35.05 Observe regulations regarding the use of medications and growth stimulants.
 - 35.06 Observe state and federal regulations regarding brucellosis testing/eradication programs and other programs.
 - 35.07 Identify applicable land-use and zoning regulations.
 - 35.08 Identify agencies affecting land and wildlife utilization (e.g., DNR, DEP, EPA)
 - 35.09 Identify agencies regulating employee/employer relations (e.g., OSHA).