

Classroom, shop, and laboratory activities are an integral part of this program. These activities include instruction in the use of the safety procedures, tools, equipment, materials, and processes found in the industry. Equipment and supplies should be provided to enhance hands-on experiences for students in their chosen occupation. A generic equipment list is available for this program.

This program may be offered in postsecondary adult vocational (PSAV) courses. Vocational credit shall be awarded to the student on a transcript in accordance with F.S. 1001.44.

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

In accordance with Rule 6A-10.040, FAC, the minimum basic-skills grade levels required for postsecondary adult vocational students to exit the program are listed before the intended outcomes for the program. These grade-level numbers correspond to grade-equivalent scores obtained on one of the state-designated basic-skills examinations. If a student does not meet the basic-skills level required for completion of the program, remediation should be provided concurrently in Vocational Instructional Preparation (VIP). Please refer to the Rule for exemptions.

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: To accomplish the Secretary's Commission on Achieving Necessary Skills (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 methods to improve students' personal qualities and higher-order thinking skills.

IV. INTENDED OUTCOMES: After successfully completing the appropriate outcomes for this program, the student will be able to:

OCCUPATIONAL COMPLETION POINT - DATA CODE A

Purchasing Agents and Buyers, Farm Products -
SOC Code - 13-1021.00

- 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 Demonstrate an understanding of the basic concepts of agribusiness.
- 11.0 Operate and maintain equipment and maintain the facilities.
- 12.0 Handle merchandise.
- 13.0 Demonstrate positive customer-relations skills.
- 14.0 Demonstrate employability skills.
- 15.0 Demonstrate knowledge of the general principles of agribusiness.
- 16.0 Perform agricultural business activities.
- 17.0 Merchandise and sell agricultural products and services.
- 18.0 Perform promotional activities.
- 19.0 Observe local, state, and federal rules and regulations.

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Program Title: Agricultural Sales and Services
Secondary Number: 8116000
Postsecondary Number: A010501
Program SOC Code: 131021 - Purchasing Agents and Buyers,
 Farm Products

OCCUPATIONAL COMPLETION POINT - DATA CODE A

Purchasing Agents and Buyers, Farm Products - SOC Code - 13-1021.00

- 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.
 - 09.07 Identify the opportunities for leadership development available through the National FFA Organization and/or professional organizations.
- 10.0 DEMONSTRATE AN UNDERSTANDING OF THE BASIC CONCEPTS OF AGRIBUSINESS--The student will be able to:
 - 10.01 Explain the following concepts:
 - a. business cycle
 - b. profit
 - c. competition
 - 10.02 Describe relevant ethical issues in agribusiness.
- 11.0 OPERATE AND MAINTAIN EQUIPMENT AND MAINTAIN THE FACILITIES--The student will be able to:
 - 11.01 Operate and maintain the equipment appropriate to an agribusiness.
 - 11.02 Maintain grounds, walkways, and facilities.
 - 11.03 Assemble tools and equipment, using manufacturers' manuals.
 - 11.04 Perform routine maintenance on agricultural equipment, using manufacturers' manuals.
 - 11.05 Construct and repair structures, observing safety precautions.
 - 11.06 Follow safety precautions when working with equipment.
 - 11.07 Maintain maintenance and repair records, using the computer-application program where applicable.
- 12.0 HANDLE MERCHANDISE--The student will be able to:
 - 12.01 Load and unload delivery vehicles.
 - 12.02 Process incoming merchandise, including checking against the invoice and returning unusable merchandise.
 - 12.03 Store received agricultural products according to the manufacturer's specifications.

- 12.04 Prepare agricultural products for shipment.
 - 12.05 Safely store flammable liquids and agricultural chemicals.
 - 12.06 Conduct an inventory and utilize a computerized inventory-control system.
 - 12.07 Rotate the inventory.
- 13.0 DEMONSTRATE POSITIVE CUSTOMER-RELATIONS SKILLS--The student will be able to:
- 13.01 Maintain a customer file system.
 - 13.02 Exercise self-control.
 - 13.03 Identify and demonstrate appropriate responses to criticism and praise.
 - 13.04 Explain the effects of positive human relations on success in the business.
 - 13.05 Demonstrate respect for the customer's desires and property.
 - 13.06 Demonstrate effective telephone skills to enhance customer relations.
- 14.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:
- 14.01 Conduct a job search and identify advanced-training opportunities and their requirements.
 - 14.02 Calculate the employer's investment cost for an employee.
 - 14.03 Secure information about a job, including employee benefits.
 - 14.04 Write a resume.
 - 14.05 Evaluate a job offer, considering various factors such as career advancement, job satisfaction, employee benefits, etc.
 - 14.06 Demonstrate ethical and responsible practices.
 - 14.07 Exhibit pride in the quality of work performed.
 - 14.08 Describe the advantages of a good driving record and the ramifications of a poor driving record on employability opportunities.
 - 14.09 Describe Florida's "Right-to-Know" Law.
 - 14.10 Explain the importance of confidentiality in the workplace.
 - 14.11 Demonstrate appropriate responses to performance evaluations from the employer, the supervisor, and other persons in the workplace.
- 15.0 DEMONSTRATE KNOWLEDGE OF THE GENERAL PRINCIPLES OF AGRIBUSINESS--The student will be able to:
- 15.01 Explain the different types of record-keeping systems used in agribusiness.
 - 15.02 Explain and differentiate variable and fixed costs.
 - 15.03 Identify the various types and sources of credit.
 - 15.04 Calculate the time value of money.
 - 15.05 Describe the decision-making process involved in purchasing capital and sales products.
- 16.0 PERFORM AGRICULTURAL BUSINESS ACTIVITIES--The student will be able to:
- 16.01 Open and close the store or facility.
 - 16.02 Operate sales counter equipment.
 - 16.03 Maintain business records.
 - 16.04 Order supplies and equipment through various methods, including catalogs and tele- and electronic-communication devices.
 - 16.05 Calculate margins and discounts for agricultural supplies and products (e.g., cash, bulk, quantity, early season, etc.).

- 16.06 Label and price merchandise, considering the factors involved in pricing agricultural products and services.
 - 16.07 Update prices on merchandise.
 - 16.08 Code and date merchandise.
 - 16.09 Maintain a ledger of accounts, including the calculation of interest.
 - 16.10 Use a computer, demonstrating word-processing skills and the ability to maintain a database, produce a spreadsheet, and access an electronic network.
- 17.0 MERCHANDISE AND SELL AGRICULTURAL PRODUCTS AND SERVICES--The student will be able to:
- 17.01 Analyze marketing and pricing alternatives.
 - 17.02 Differentiate marketing, pricing, value, and grading standards for different agricultural products.
 - 17.03 Merchandise/display agricultural products.
 - 17.04 Explain the purpose, benefit, and quality of the products sold.
 - 17.05 Determine customer needs and wants.
 - 17.06 Recommend products and services that meet the customer's needs or wants.
 - 17.07 Demonstrate effective sales principles and techniques.
 - 17.08 Take and fill customer orders by various means, including electronic communications.
 - 17.09 Perform sales counter activities (e.g., processing sales transactions, completing a purchase order and an invoice, calculating state sales tax, etc.).
 - 17.10 Follow up to ensure the quality of services provided to customers.
 - 17.11 Provide technical assistance to customers.
 - 17.12 Process customer complaints.
- 18.0 PERFORM PROMOTIONAL ACTIVITIES--The student will be able to:
- 18.01 Identify potential customers.
 - 18.02 Collect and analyze market information.
 - 18.03 Develop a plan for advertising an agricultural product or service.
 - 18.04 Identify and participate in appropriate trade shows and demonstrations.
 - 18.05 Make an oral presentation in a promotional meeting, utilizing visual aids.
- 19.0 OBSERVE LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS--The student will be able to:
- 19.01 Identify current basic government agricultural programs.
 - 19.02 Maintain licensing, inspection, and government-record requirements.
 - 19.03 Maintain state and federal tax records.
 - 19.04 Identify the governmental and regulatory agencies related to agribusiness and explain their impact on agribusiness.
 - 19.05 Identify the sources of technical assistance available from private and government agencies.

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

09.07 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: 8116010
Course Title: Agricultural Sales and Services 2
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to develop competencies in the basic concepts of agribusiness; the operation and maintenance of equipment and maintenance of facilities; handling merchandise; demonstration of positive customer-relations and employability skills.

10.0 DEMONSTRATE AN UNDERSTANDING OF THE BASIC CONCEPTS OF AGRIBUSINESS--The student will be able to:

- 10.01 Explain the following concepts:
 - a. business cycle
 - b. profit
 - c. competition
- 10.02 Describe relevant ethical issues in agribusiness.

11.0 OPERATE AND MAINTAIN EQUIPMENT AND MAINTAIN THE FACILITIES--The student will be able to:

- 11.01 Operate and maintain the equipment appropriate to an agribusiness.
- 11.02 Maintain grounds, walkways, and facilities.
- 11.03 Assemble tools and equipment, using manufacturers' manuals.
- 11.04 Perform routine maintenance on agricultural equipment, using manufacturers' manuals.
- 11.05 Construct and repair structures, observing safety precautions.
- 11.06 Follow safety precautions when working with equipment.
- 11.07 Maintain maintenance and repair records, using the computer-application program where applicable.

12.0 HANDLE MERCHANDISE--The student will be able to:

- 12.01 Load and unload delivery vehicles.
- 12.02 Process incoming merchandise, including checking against the invoice and returning unusable merchandise.
- 12.03 Store received agricultural products according to the manufacturer's specifications.
- 12.04 Prepare agricultural products for shipment.
- 12.05 Safely store flammable liquids and agricultural chemicals.
- 12.06 Conduct an inventory and utilize a computerized inventory-control system.
- 12.07 Rotate the inventory.

13.0 DEMONSTRATE POSITIVE CUSTOMER-RELATIONS SKILLS--The student will be able to:

- 13.01 Maintain a customer file system.
- 13.02 Exercise self-control.
- 13.03 Identify and demonstrate appropriate responses to criticism and praise.

- 13.04 Explain the effects of positive human relations on success in the business.
 - 13.05 Demonstrate respect for the customer's desires and property.
 - 13.06 Demonstrate effective telephone skills to enhance customer relations.
- 14.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:
- 14.01 Conduct a job search and identify advanced-training opportunities and their requirements.
 - 14.02 Calculate the employer's investment cost for an employee.
 - 14.03 Secure information about a job, including employee benefits.
 - 14.04 Write a resume.
 - 14.05 Evaluate a job offer, considering various factors such as career advancement, job satisfaction, employee benefits, etc.
 - 14.06 Demonstrate ethical and responsible practices.
 - 14.07 Exhibit pride in the quality of work performed.
 - 14.08 Describe the advantages of a good driving record and the ramifications of a poor driving record on employability opportunities.
 - 14.09 Describe Florida's "Right-to-Know" Law.
 - 14.10 Explain the importance of confidentiality in the workplace.
 - 14.11 Demonstrate appropriate responses to performance evaluations from the employer, the supervisor, and other persons in the workplace.

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8116020
Course Title: Agricultural Sales and Services 3
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to develop competencies in the general principles of agribusiness; performing agricultural business activities; merchandising and selling agricultural products and services; performing promotional activities and local, state, and federal rules and regulations.

15.0 DEMONSTRATE KNOWLEDGE OF THE GENERAL PRINCIPLES OF AGRIBUSINESS--The student will be able to:

- 15.01 Explain the different types of record-keeping systems used in agribusiness.
- 15.02 Explain and differentiate variable and fixed costs.
- 15.03 Identify the various types and sources of credit.
- 15.04 Calculate the time value of money.
- 15.05 Describe the decision-making process involved in purchasing capital and sales products.

16.0 PERFORM AGRICULTURAL BUSINESS ACTIVITIES--The student will be able to:

- 16.01 Open and close the store or facility.
- 16.02 Operate sales counter equipment.
- 16.03 Maintain business records.
- 16.04 Order supplies and equipment through various methods, including catalogs and tele- and electronic-communication devices.
- 16.05 Calculate margins and discounts for agricultural supplies and products (e.g., cash, bulk, quantity, early season, etc.).
- 16.06 Label and price merchandise, considering the factors involved in pricing agricultural products and services.
- 16.07 Update prices on merchandise.
- 16.08 Code and date merchandise.
- 16.09 Maintain a ledger of accounts, including the calculation of interest.
- 16.10 Use a computer, demonstrating word-processing skills and the ability to maintain a database, produce a spreadsheet, and access an electronic network.

17.0 MERCHANDISE AND SELL AGRICULTURAL PRODUCTS AND SERVICES--The student will be able to:

- 17.01 Analyze marketing and pricing alternatives.
- 17.02 Differentiate marketing, pricing, value, and grading standards for different agricultural products.
- 17.03 Merchandise/display agricultural products.
- 17.04 Explain the purpose, benefit, and quality of the products sold.
- 17.05 Determine customer needs and wants.
- 17.06 Recommend products and services that meet the customer's needs or wants.
- 17.07 Demonstrate effective sales principles and techniques.

- 17.08 Take and fill customer orders by various means, including electronic communications.
 - 17.09 Perform sales counter activities (e.g., processing sales transactions, completing a purchase order and an invoice, calculating state sales tax, etc.).
 - 17.10 Follow up to ensure the quality of services provided to customers.
 - 17.11 Provide technical assistance to customers.
 - 17.12 Process customer complaints.
- 18.0 PERFORM PROMOTIONAL ACTIVITIES--The student will be able to:
- 18.01 Identify potential customers.
 - 18.02 Collect and analyze market information.
 - 18.03 Develop a plan for advertising an agricultural product or service.
 - 18.04 Identify and participate in appropriate trade shows and demonstrations.
 - 18.05 Make an oral presentation in a promotional meeting, utilizing visual aids.
- 19.0 OBSERVE LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS--The student will be able to:
- 19.01 Identify current basic government agricultural programs.
 - 19.02 Maintain licensing, inspection, and government-record requirements.
 - 19.03 Maintain state and federal tax records.
 - 19.04 Identify the governmental and regulatory agencies related to agribusiness and explain their impact on agribusiness.
 - 19.05 Identify the sources of technical assistance available from private and government agencies.