

Principles of Agriculture, Food, and Natural Resources, Semester A

Course Overview

This one-semester course is intended to help you familiarize yourself with various aspects of the agriculture, food science, and natural resources industries. This course covers basic concepts in the field of agriculture, food science, and natural resources. It also covers career opportunities in these fields and the academic skills and knowledge required for a successful career in agriscience.

Course Goals

This course will help you meet the following goals:

- Recall organizations, programs, terms, processes, and fields of science related to the agriculture, food, and natural resources (AFN) industry in the United States.
- Identify positive work ethics, integrity, and self-representation skills needed in the agriculture industry.
- Recall the various aspects of soil systems.
- Identify the structures of plant and crops grown in the United States.
- State safety skills and precautions to be taken in the agriculture industry.
- Identify reading and writing skills, speaking and listening skills, creativity, resourcefulness, and teamwork skills essential in the workplace.

Prerequisite Skills

Principles of Agriculture, Food, and Natural Resources, Semester A has the following prerequisites:

- interest in the field of agriculture, food, and natural resources
- familiarity with the writing process and following guidelines

General Skills

To participate in this course, you should be able to do the following:

- perform basic operations on a computer
- perform online research using various search engines and library databases
- communicate through email and participate in discussion boards

For a complete list of the general skills required for participation in online courses, refer to the Prerequisites section of the Student Orientation document, found at the beginning of this course.

Credit Value

Principles of Agriculture, Food, and Natural Resources, Semester A is a 0.5-credit course.

Course Materials

- notebook
- computer with an Internet connection and speakers or headphones
- Microsoft Word or equivalent
- Microsoft Excel or equivalent
- Microsoft PowerPoint or equivalent

Course Pacing Guide

This course description and pacing guide is intended to help you stay on schedule with your work. Note that your course instructor may modify the schedule to meet the specific needs of your class.

Unit 1: Introduction to Agriscience

Summary

In this unit, you will become familiar with the concepts of agriscience and sustainability. You will recall the major agricultural milestones in history, identify the major challenges in agriculture, and state ways to tackle these challenges. You will also identify natural resources and the impact of global warming and climate change on food production. Finally, you will define and identify work ethics, integrity, and self-representation skills necessary in the agricultural industry.

Day	Activity/Objective	Type
1 day: 1	Syllabus and Student Orientation <i>Review the Student Orientation and Course Syllabus at the beginning of this course.</i>	Course Orientation
5 days: 2–6	Introduction to Agricultural Science <i>Recall organizations, programs, terms, processes, and fields of science related to the agriculture, food, and natural resources (AFN) industry in the United States.</i>	Lesson
4 days: 7–10	Positive Work Ethics <i>Define positive work ethics and identify situations that demonstrate work ethics.</i>	Lesson
5 days: 11–15	Integrity <i>Define integrity and ethics, and recall laws and policies that ensure fair treatment of employees and a safe workplace.</i>	Lesson
4 days: 16–19	Self-Representation <i>Identify positive self-representation and interpersonal skills.</i>	Lesson
5 days: 20–24	Agriculture and Sustainability <i>State the impact of the agriculture, food, and natural resources (AFN) industry on safety, health, and the environment, and define sustainability and natural resource conservation in the AFN industry.</i>	Lesson

Day	Activity/Objective	Type
1 day: 25	Para Jumble	Game
5 days: 26–30	Unit Activity/Threaded Discussion—Unit 1	Unit Activity
1 day: 31	Post-test—Unit 1	Assessment

Unit 2: Soil and Plant Science

Summary

In this unit, you will recall the process of soil formation and name the characteristics of soils. You will explain the classification of soils, state common soil tests, and identify soil improvement methods. You will define soil erosion and soil conservation. You will also identify career options in the field of soil science. In addition, you will classify plants, identify plant parts and their functions, and state plant propagation techniques. You will also recall various aspects of crop science such as the nutrient requirement of crops, the germination process, and crop diseases. In addition, you will identify critical hazards and state safety policies, procedures, and equipment. You will explain professional, ethical, and legal responsibilities in the AFN industry. Finally, you will identify teamwork and leadership skills essential for a successful career in the field of agriscience.

Day	Activity/Objective	Type
4 days: 32–35	Soil Systems <i>Recall the process of soil formation, soil classification, soil improvement, and soil conservation.</i>	Lesson
4 days: 36–39	Plant Science <i>Identify plant structure, physiology, and reproduction.</i>	Lesson
4 days: 40–43	Crop Science <i>Recall the processes of germination, growth, and development in plants, and various classes of crops grown in the United States.</i>	Lesson
4 days: 44–47	Safety and Regulations <i>State safety hazards and safety precautions and procedures related to the agriculture, food, and natural resources (AFN) industry.</i>	Lesson

Day	Activity/Objective	Type
4 days: 48–51	Teamwork <i>Name teamwork skills and leadership skills.</i>	Lesson
1 day: 52	Space Jumble	Game
5 days: 53–57	Unit Activity/Threaded Discussion—Unit 2	Unit Activity
1 day: 58	Post-test—Unit 2	Assessment

Unit 3: World Trade and Communication

Summary

In this unit, you will name reading strategies for understanding the purpose and content of a workplace document. You will also identify the methods of planning and structuring content for written documents and explain guidelines for reviewing written documents. You will define communication, differentiate between verbal and non-verbal cues, define active listening, and state strategies to become an effective listener. In addition, you will recall essential qualities and skills such as creativity, resourcefulness, and problem-solving and conflict-resolution skills. Finally, you will identify the different types of markets and trends in agricultural marketing, name various agricultural practices, and define the importance of world trade.

Day	Activity/Objective	Type
4 days: 59–62	Reading and Writing <i>Name effective reading and writing skills and strategies.</i>	Lesson
4 days: 63–66	Speaking and Listening <i>Name effective speaking, listening, and nonverbal communication skills.</i>	Lesson
5 days: 67–71	Creative Resourcefulness <i>Recall steps for problem solving and methods to improve creativity and resourcefulness.</i>	Lesson
5 days: 72–76	World Trade and Agriculture <i>Identify agricultural practices and marketing, and the importance of world trade.</i>	Lesson

Day	Activity/Objective	Type
5 days: 77–81	Conflict Resolution <i>State conflict-resolution skills.</i>	Lesson
1 day: 82	Thwack-A-Mole	Game
5 days: 83–87	Unit Activity/Threaded Discussion—Unit 3	Unit Activity
1 day: 88	Post-test—Unit 3	Assessment
1 day: 89	Semester Review	
1 day: 90	End-of-Semester Test	Assessment