



Ag Food Processing – 01.0401/CIP				
Content Area	Standard	Standard Title	Benchmark	Description
Animal Science	2	Safety	2.3	Safely handle animal products (health products, meat, milk, wastes)
Animal Science	4	Economics of Animal Science	4.1	Compare and contrast local and global marketing and distribution of animal use, products and related services
Animal Science	6	Industry Standards, Breed Improvement and Selection	6.1	Identify species, breeds and associated products and uses
Animal Science	6	Industry Standards, Breed Improvement and Selection	6.3	Analyze trends and the effect of industry standards on consumer preferences and vice versa
Animal Science	14	Animal Products and Processing (also see Food Science)	14.1	Identify by-products of animals and their uses
Animal Science	14	Animal Products and Processing (also see Food Science)	14.2	Explain animal product labeling and packaging
Animal Science	14	Animal Products and Processing (also see Food Science)	14.3	Describe the uses of animal products for human and animal consumption
Animal Science	15	Consumer Safety and Concerns	15.1	Research and describe current consumer food trends
Animal Science	15	Consumer Safety and Concerns	15.2	Identify the various animal welfare groups and describe their purposes
Animal Science	15	Consumer Safety and Concerns	15.3	Research the state and federal legislation which governs animal issues
Animal Science	15	Consumer Safety and Concerns	15.4	Explain local and global consumer concerns of animal agriculture over food safety and animal welfare
Animal Science	15	Consumer Safety and Concerns	15.5	Analyze the impact of bioterrorism on animal agriculture from both the consumer and producers perspective
Biotechnology	1	Impacts of Biotechnology	1.3	List the regulatory agencies, and describe the laws and attitudes about foods produced through biotechnology
Biotechnology	1	Impacts of Biotechnology	1.4	Survey and assess consumers knowledge and attitudes about foods produced through biotechnology
Biotechnology	2	Safety	2.1	Explain human safety issues related to genetically engineered foods and their impact on agricultural production
Biotechnology	2	Safety	2.2	Understand the laws and regulations regarding the use of bioengineered products
Biotechnology	2	Safety	2.3	Demonstrate proper lab procedures, including aseptic technique and use of all laboratory equipment

Ag Food Processing – 01.0401/CIP

Content Area	Standard	Standard Title	Benchmark	Description
Biotechnology	4	Basic Biotechnology Concepts	4.2	Demonstrate the steps in the scientific method
Biotechnology	4	Basic Biotechnology Concepts	4.3	Understand product modifications via biotechnology and their origins (i.e., wool, cotton, peanuts, mushrooms, etc.)
Biotechnology	8	Microbial Biotechnology in Agriculture	8.1	Describe the types of microorganisms used in biotechnology
Biotechnology	8	Microbial Biotechnology in Agriculture	8.2	Describe the purposes and steps of the fermentation process
Biotechnology	8	Microbial Biotechnology in Agriculture	8.3	Describe the types and components of fermentation systems
Biotechnology	8	Microbial Biotechnology in Agriculture	8.4	Identify the products of fermentation
Food Science	1	Trends in Food Science	1.1	Identify emerging technologies and their impact on food products and processing
Food Science	1	Trends in Food Science	1.2	Define trends in food production, world population and supply and demand for food products
Food Science	1	Trends in Food Science	1.3	Describe the historical development of food processing and preservation
Food Science	1	Trends in Food Science	1.4	Analyze steps required in food research for developing new food products, testing food products, food packaging, transportation and marketing of foods
Food Science	1	Trends in Food Science	1.5	Examine how food production, processing and packaging techniques affect the environment
Food Science	1	Trends in Food Science	1.6	Identify food safety issues and consumer concerns affecting food science
Food Science	2	Safety	2.1	Explain federal and state regulations and guidelines for food safety and inspection
Food Science	2	Safety	2.2	Analyze and demonstrate food handling safety
Food Science	2	Safety	2.3	Identify food borne diseases, their symptoms and effect
Food Science	2	Safety	2.4	Demonstrate safe food production, food processing and preservation techniques
Food Science	3	Careers in Food Science	3.1	Examine career pathways in food science
Food Science	3	Careers in Food Science	3.2	Identify advanced training and postsecondary education opportunities in food science
Food Science	4	Food Economics	4.1	Describe the global economic and political implications of food science technology
Food Science	4	Food Economics	4.4	Recognize value-added products and their impact on consumer purchasing trends
Food Science	4	Food Economics	4.5	Describe the process that an agricultural product takes from producer to consumer
Food Science	4	Food Economics	4.6	Explain food cost trends locally, regionally, nationally and internationally

Ag Food Processing – 01.0401/CIP				
Content Area	Standard	Standard Title	Benchmark	Description
Food Science	5	Food Chemistry, Biology and Nutrition	5.1	Explain the food nutrition pyramid guide
Food Science	5	Food Chemistry, Biology and Nutrition	5.2	Identify food borne microorganisms
Food Science	5	Food Chemistry, Biology and Nutrition	5.3	Describe the positive and negative effects of pesticides, chemicals and preservatives on foods
Food Science	5	Food Chemistry, Biology and Nutrition	5.4	Describe the biochemistry of digestion and assimilation of food
Food Science	5	Food Chemistry, Biology and Nutrition	5.5	Explain the physical and chemical processes involved in various food production and food processing techniques
Food Science	6	Food Processing Technology	6.1	Identify various food products common in the agriculture industry
Food Science	6	Food Processing Technology	6.2	Identify and explain equipment and procedures utilized for food processing
Food Science	6	Food Processing Technology	6.3	Explain the impact customer demand has on food production, processing and presentation
Food Science	6	Food Processing Technology	6.4	Describe the use of biotechnology in food processing
Food Science	7	Quality and Assurance	7.1	Identify how the quality of global foods is assured
Food Science	7	Quality and Assurance	7.2	Identify food industry standards and grades
Food Science	7	Quality and Assurance	7.3	Describe safe food preparation techniques, along with the food inspection system
Food Science	7	Quality and Assurance	7.4	Identify food additives and enhancers by examining food labels for content
Management, Economics and Marketing	10	Inventory Control and Warehousing	10.1	Describe inventory records
Management, Economics and Marketing	15	International Agribusiness	15.1	Describe the U.S. and foreign import/export policy for agricultural products
Management, Economics and Marketing	15	International Agribusiness	15.4	Identify current and future global market trends for agricultural products and services
Plant and Soil Science	2	Safety	2.3	Describe crop production food safety procedures that ensure safe food for consumers