Agriculture, Food and Natural Resources

Pathway: Food Products and Processing Systems

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
AGPA01.01	Food Products and Processing Systems	#2: Introduction to Food Products and Food Processing Systems #5: Internship in Food Products and Food Processing Systems #6: Food and the Consumer	Apply principles of food processing to the food industry.	Develop management plans to maintain equipment and facilities.	Develop and maintain a Standard Sanitation Operating Procedure (SSOP).
					Explain and demonstrate Good Manufacturing Practices (GMP), including employee safety.
				Interpret and follow, develop and implement Hazard Analysis Critical Control Point (HACCP) procedures to establish operating parameters.	Conduct a hazard analysis.
					Identify Critical Control Points (CCP).
					Establish critical limits for each Critical Control Point (CCP).
					Establish monitoring procedures.
					Establish corrective actions.
					Establish verification procedures.

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AGPA01.02	Food Products and Processing Systems	#2: Introduction to Food Products and Food Processing Systems #3: Advanced Food Products and Processing Systems #10: Food Laws, Regulations and Regulatory Processes	Apply principles of food science to the food industry.	Apply food science principles to enhance product development.	Conduct research.
					Apply the use of chemistry.
					Comply with and apply USDA/FDA standards.
					Use product development (e.g., consumer opinion, taste testing).
					Conduct nutritional analysis (e.g., biochemistry).
					Compare and contrast the nutritive value of food groups.
					Identify and compare various food constituents.
AGPA01.03	Food Products and Processing Systems	#3: Advanced Food Products and Processing Systems #4: Agricultural Economics #9: Food Product Development	Plan, implement, manage, and/or provide services for the preservation and packaging of food and food products.	Analyze product preparation options to prepare products for distribution.	Conduct micro-test.
					Interpret and perform quality assurance tests (e.g., fat, moisture, protein).
					Demonstrate approved product handling techniques.
					Use weights and measures (e.g., US , metric) to formulate product.
					Demonstrate documentation techniques.
					Package products.
					Store products.

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			(CONTINUED)	Compare and select food preservation methods to develop food preservation programs.	Calculate and inventory parts per million (ppm) of restricted ingredients (e.g., milk).
					Explain methods of chemical preservation (e.g., pH, salt, water activity [aw], additives).
					Explain the impact of temperature in food preservation.
					Compare and contrast packaging preservation (e.g., film, plastic, can).
					Compare and contrast process preservation (e.g., irradiation, pasteurization, sterilization).
AGPA01.04	Food Products and Processing Systems	#7: Scientific Study of Food Products and Processing Systems #8: Principles of Food Processing #9: Food Product Development	Identify processing, handling, and storage factors to show how they impact product quality and safety.	Develop a “quality factors program” to comply with local, national, governmental, and international standards.	Perform and interpret quality check of food products per industry standards.
					Explain methods of food storage to assure product quality.
					Interpret and follow industry/government standards.

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			(CONTINUED)	Develop slaughter/inspection techniques to process food products and analyze food product options.	Demonstrate approved techniques for preparing ready-to-eat food products.
					Compare and contrast slaughter techniques (e.g., zero tolerance).
					Conduct pre-mortem and post-mortem inspections.
					Process meat and poultry products.
					Process dairy products.
					Process fruits and vegetables.
					Process grains.
					Process bio-engineered foods.
					Select raw materials for processing.