No	Core Competency	After Completing the Course, Students will be Able to:	Introduction to Agricultural Technology	Research Methods	Agricultural Product Process Engineering	Preservation Technology	Waste Handling Technology	Product Development	Material Science	Technopreneurship	Packaging and Storage	Calculus	Principles of Agricultural Products Processing	Statistics	Experimental Design	Agribusiness Communication	Fermentation Technology	Agricultural Industry Biotechnology	Biochemistry I	Biochemistry II	Functional Food and Food Phytochemistry	Nutritional Science	Nutrition Evaluation in Processing	General Microbiology	Food and Processing Microbiology	Hygiene, Sanitation and Food Industry Safety	Thermo bacteriology	Quality Assurance	Agricultural Product Chemistry	Agricultural Product Analysis	Analytical Chemistry	Tropical Horticulture Processing Technology	Sensory Evaluation	Food and Nutrition	Physical Chemistry	Operation Unit I	Operation Unit II	Physiology and Post-Harvest Technology	Applied Computer	Food Crops Processing Technology	Plantation Crops Processing Technology	Engineering Economics	Agricultural Industry Management
1	Attitudes and Values	AV.1. Fear Good Almighty and be able to show a religious attitude																																								
		AV.2. Upholding human values in carrying out duties based on religion, morals, and ethics	●	●	●	●				●					●	●								●	●											●	●						
		AV.3. Contribute to improving the quality of life in society, nation, state, and the progress of civilization based on Pancasila	●		●																							●	●	●												
		AV.4. Act as citizens who are proud and love their homeland, have nationalism and a sense of responsibility to the country and nation			●																								●	●												
		AV.5. Respect the diversity of cultures, views, religions, and beliefs, as well as the opinions or original findings of others		●	●																							●	●	●			●								
		AV.6. Work together and have social sensitivity and concern for society and the environment	●		●		●		●				●			●						●	●						●	●		●	●	●			●		●	●		
		AV.7. Obey the law and discipline in social and state life																										●					●	●								
		AV.8. Internalize academic values, norms, and ethics	●	●		●				●	●	●		●	●	●	●	●	●	●	●	●	●	●	●					●			●	●				●			●	●
		AV. 9. Demonstrate a responsible attitude towards work in their field of expertise independently	●						●				●					●					●		●	●	●	●	●	●		●	●			●		●	●		
		AV.10. Internalize the spirit of independence, struggle, and entrepreneurship	●		●	●		●		●															●			●	●		●	●			●		●	●		
2	Chemistry and Agricultural Product Analysis	KA.1.1. Explain the main chemical events that underline the properties and reactions of various components of agricultural production																											●					●							
		KA.1.2. Explain how to control chemical reactions that occur in agricultural products																											●												
		KA.1.3. Explain the relationship between chemical reactions and the mechanism of damage and shelf life of agricultural products				●																							●												
		KA.1.4. Explain the principles of techniques and methods of analysis of food/agricultural products																												●	●										
		KA.1.5. Have skills in performing various basic and applied chemical analysis techniques on agricultural products							●																					●	●										
3	Microbiology and Agricultural Product Safety	KA.2.1. Identify pathogenic microbes and causes of damage to agricultural products and their growing conditions																							●																
		KA.2.2. Explain environmental factors that affect microbial growth																						●																	
		KA.2.3. Identify conditions for inactivating and killing spoilage and pathogenic microbes																							●		●														
		KA.2.4. Describe the principles of preservation and processing of agricultural products by the fermentation process				●											●																								
		KA.2.5. Explain and have skills in performing microbiological analysis techniques in agricultural products																						●																	
4	Biochemistry, Nutrition and Health	KA.3.1. Explain biochemical processes, basic concepts of nutrition science and the relationship between food consumption and nutritional status, and health																	●	●		●												●							
		KA.3.2. Describe the process of digestion and metabolism of nutrients																		●		●																			
		KA.3.3. Explain the differences between nutrients and functional foods in relation to health and fitness																			●													●							
		KA.3.4. Describe changes in nutrients during processing and storage																					●																		
		KA.3.5. Describe laboratory techniques commonly applied in biochemistry and evaluation of the biological value of food																●	●											●												
5	Engineering and Processing of Agricultural Products	KA.4.1. Describe the characteristics of raw materials, ingredients and food additives and their effect on the characteristics of agricultural production							●																													●				
		KA.4.2. Describe the mechanism of damage to agricultural product and identify how to control it				●																																●				
		KA.4.3. Describe mass and energy balance in the processing of agricultural product			●																															●						
		KA.4.4. Describe principles of heat and mass transfer process of agricultural product processing			●																						●									●						
		KA.4.5. Describe the principle of unit operation and unit process in the agricultural product industry															●																			●	●					
		KA.4.6. Identify the appropriate operating unit and process equipment in the processing of agricultural products											●				●																			●	●					
		KA.4.7. Describe the principles and techniques of handling and processing agricultural products, as well as the influence of process parameters on quality, safety and shelf life of agricultural product			●								●																									●				
		KA.4.8. Describe the characteristics and uses of packaging materials									●																															
		KA.4.9. Describe water requirements for processing agricultural products and how to manage waste from processing products agriculture					●																																			
6	Applied Agricultural Product Science	KA.5.1. Applying and incorporating the principles of agricultural products science in practice and real conditions in the produce industry agriculture				●			●																													●	●	●		●
		KA.5.2. Mastering the basic principles of sensory evaluation/sensory assessment of agricultural product																															●								
		KA.5.3. Choose packaging and storage techniques for agricultural products in extending the shelf life of agricultural products									●																															
		KA.5.4. Apply the principles of statistics and computers in the field of agricultural product												●	●													●					●									
		KA.5.5. Develop agricultural products based on the principles of agricultural science						●																								●							●	●		
		KA.5.6. Implement a quality assurance system in the agricultural product processing chain											●															●													●	
		KA.5.7. Apply the principles of cleaning and sanitation in the processing of agricultural products					●																		●																	
		KA.5.8. Apply food safety regulations and management									●														●																	
		KA.5.9. Understand the latest issues in the field of agricultural products	●					●										●			●																		●				
7	Life Skills	KA.6.1. Demonstrate oral and written communication skills related to the technical and non-technical aspects		●												●																●										
		KA.6.2. Think critically, identify the root of the problem and solve it comprehensively,, and make the right decisions based on analysis of information and data		●				●																											●						●	
		KA.6.3. Have professional integrity and is committed to ethical values								●																																	
		KA.6.4. Have an attitude to life-long learning	●																																●							
		KA.6.5. Lead and work in a team, independent and responsible for his work		●																																						
		KA.6.6. Cooperate with individuals who have diverse social and cultural backgrounds								●						●																●										
		KA.6.7. Searching, tracing, extracting scientific and non-scientific information independently and critically		●																																						
		KA.6.8. Adapt to the situation at hand and handle various activities simultaneously in various condition								●																																