

**North Carolina 2013 – Core Alignment Correlation to
Principles of Food Sciences**

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Core Subject Area: Family and Consumer Sciences Education / Foods II – Technology 7075

Recommended Grade Levels 9-12

Course Description: This course explores the food industry from the farm to the table using skills in food science, technology, engineering, and mathematics. Government regulations, emerging trends, biotechnology, and technological career opportunities from scientists to technicians will be presented. The student examines production, processing, preparation, preservation, and packaging principles along the farm to table continuum. The student begins to understand how food technology affects the food that he/she eats. English language arts are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, school-based enterprise, service learning, and job shadowing. Family, Career and Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

STANDARD / OBJECTIVE		PAGES / DESIGNATED SECTIONS / URLs
A. BASIC FOOD TECHNOLOGY PRINCIPLES		
FT01.00	Understand food analysis.	
FT01.01	Understand objective methods in a food analysis laboratory.	31–51
FT01.02	Understand subjective methods in a food analysis laboratory.	63–77
FT02.00	Understand the physical and chemical properties of food.	
FT02.01	Understand the changes to the chemical properties of food.	103–106
FT02.02	Understand the changes to the chemical properties of food.	103–106
B. FOOD CONSTITUENTS		
FT03.00	Understand the functions of food constituents.	
FT03.01	Understand the functions of water in food.	185–193
FT03.02	Understand the functions of nutrients in food.	179, 185–193, 222–229, 245–248, 284–288, 314–319, 349–357, 388–389
FT03.03	Understand the functions of enzymes and phytochemicals.	339–357, 401–421
FT04.00	Understand food additives and food substitutes.	
FT04.01	Understand food additives and food substitutes.	18, 433–447, 450–481

FT04.02	Understand government regulations related to food additives and food substitutes.	11–12, 385–387, 436–440, 442–444, 446, 460–465, 558, 655–656, 786–791
C. FOOD MICROBIOLOGY AND FOOD SAFETY		
FT05.00	Understand how microorganisms affect food quality and safety.	
FT05.01	Understand microorganisms associated with food quality and safety.	499–504, 535–549, 551–555
FT05.02	Understand fermentation and its influence on food quality and safety.	504–517
FT06.00	Understand non-microbial food hazards and allergen labeling	
FT06.01	Understand non-microbial food hazards and allergen labeling.	9–12, 19–20, 532–534
FT06.02	Understand ways to control common food hazards.	10–15, 553–557
D. FOOD PRODUCTION, BIOTECHNOLOGY, AND FOOD PROCESSING		
FT07.00	Understand food production systems.	
FT07.01	Understand “farm to table” as related to food production.	15
FT07.02	Compare organically-produced foods to conventionally-produced foods.	7–9, 14, 411, 764
FT08.00	Understand the impact of biotechnology on the food industry.	
FT08.01	Understand how biotechnology affects the quality and safety of food.	16, 652–659
FT08.02	Understand the ethical issues of biotechnology and its use in the food industry.	652–659, 736
FT09.00	Apply procedures to get a new food product to market.	
FT09.01	Understand the types of preservation methods used in food product development.	572–595, 604–621, 632–650
FT09.02	Classify food packaging procedures used in product development.	389, 479, 582–583, 641–652
FT09.03	Implement steps to get a new food product to market.	30–51, 62–77, 731–747