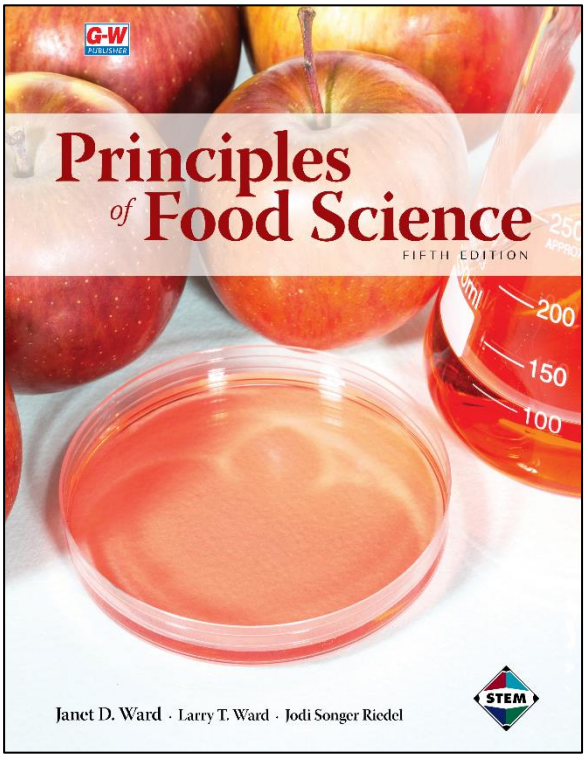
*Correlation of*
***Principles of Food Science,* Ward, Ward, and Riedel**
**(Goodheart-Willcox Publisher ©2022)**
**to**
# National Standards for Food Science, Dietetics, and Nutrition

In planning your program, you may want to use the correlation chart that follows. This chart correlates the Family and Consumer Sciences Education National Standards 3.0 with the content *of Principles of Food Science*. It lists the competencies for each of the content standards for Area of Study 9: Food Science, Dietetics, and Nutrition. It also identifies the text chapters that relate to each competency.

After studying the content of this text, students will be able to achieve the following comprehensive standard:

*Family and Consumer Sciences Education National Standards 3.0 (NASAFACS 2018–2028). Permission granted for use.*




| Competencies | G-W Content |
|---|---|
| **Content Standard 9.0: Integrate knowledge, skills, practices required for careers in food science, food technology, dietetics, and nutrition.** | |
| **Content Standard 9.1: Analyze career paths within food science, food technology, dietetics, and nutrition industries.** | |
| **9.1:** Explain the roles and functions of individuals engaged in food science, food technology, dietetics, and nutrition careers. | Chapters 1, 26<br>All *Under the Microscope* unit openers |
| **9.1.2:** Analyze opportunities for employment and entrepreneurial endeavors. | Chapter 26<br>All *Under the Microscope* unit openers |
| **9.1.3:** Summarize education and training requirements and opportunities for career paths in food science, food technology, dietetics, and nutrition. | Chapter 26 |

| Competencies | G-W Content |
|---|---|
| **9.1.4:** Analyze the correlation between food science, dietetics, and nutrition occupations and local, state, national, and global economies. | Chapters 1, 26 |
| **9.1.5:** Create an employment portfolio to communicate food science, food technology, dietetics, and nutrition careers knowledge and skills. | Chapter 26 |
| **9.1.6:** Analyze the role of professional organizations in food science, food technology, dietetics, and nutrition careers. | Chapters 16, 26 |
| **Content Standard 9.2: Apply risk management procedures to food safety, and sanitation.** | |
| **9.2.1:** Analyze factors that contribute to foodborne illness. | Chapters 6, 18 |
| **9.2.2:** Analyze food service management safety and sanitation programs. | Chapter 18 |
| **9.2.3:** Implement industry standards for documenting, investigating, and reporting foodborne illnesses. | Chapter 18 |
| **9.2.4:** Use the Hazard Analysis Critical Control Point (HACCP) during all food handling processes (the flow of food) to minimize the risks of foodborne illness. | Chapter 18 |
| **9.2.5:** Demonstrate practices and procedures that assure personal and workplace health and hygiene. | Chapter 18 |
| **9.2.6:** Demonstrate standard procedures for receiving, storage, and preparation of raw and prepared foods. | Chapter 18 |
| **9.2.7:** Classify cleaning and sanitizing materials and their correct use. | Chapter 2 |
| **9.2.8:** Use Occupation Safety and Health Administration's (OSHA) Right to Know Law and Material Safety Data Sheets (MSDS) and explain their requirements in handling hazardous materials. | Chapter 2 |
| **9.2.9:** Demonstrate waste disposal and recycling methods. | Chapters 2, 18 |
| **Content Standard 9.3: Evaluate nutrition principles, food plans, preparation techniques and specialized dietary plans.** | |
| **9.3.1:** Analyze nutrient requirements across the life span addressing the diversity of people, culture, and religions. | Chapters 10, 22 |
| **9.3.2:** Analyze nutritional data. | Chapters 8, 9, 10, 11, 14 |
| **9.3.3:** Apply principles of food production to maximize nutrient retention in menus. | Chapter 13 |
| **9.3.4:** Assess the influence of cultural, socioeconomic and psychological factors of food and nutrition and behavior. | Chapter 3 |

| Competencies | G-W Content |
|---|---|
| **9.3.5:** Analyze recipe/formula proportions and modifications for food production. | Chapters 2, 3 |
| **9.3.6:** Critique the selection of foods to promote a healthy lifestyle. | Chapters 9, 10, 11, 14 |
| **9.3.7:** Plan menus, applying the exchange system to meet various nutrient needs. | |
| **Content Standard 9.4: Apply basic concepts of nutrition and nutrition therapy in a variety of settings, considering social, geographical, cultural, and global influences.** | |
| **9.4.1:** Analyze nutritional needs of individuals. | Chapters 5, 7, 9, 10, 13, 22 |
| **9.4.2:** Use nutritional information to support care planning. | Chapters 8, 10, 11, 22 |
| **9.4.3:** Determine when to provide a selective menu approach in nutrition therapy settings. | Chapters 9, 11, 13 |
| **9.4.4:** Construct a modified diet based on nutritional needs and health conditions. | Chapters 8, 9, 10, 11, 14, 15 |
| **9.4.5:** Design instruction on nutrition to promote wellness and disease prevention. | Chapters 9, 10, 11, 13, 14 |
| **Content Standard 9.5: Demonstrate use of science and technology advancements in food product development and marketing.** | |
| **9.5.1:** Analyze various factors that affect food preferences in the marketing of food to a variety of populations. | Chapters 3, 15, 25 |
| **9.5.2:** Analyze data in statistical analysis when making development and marketing decisions. | Chapters 2, 25 |
| **9.5.3:** Prepare food for presentation and assessment. | Chapters 3, 16, 25 |
| **9.5.4:** Maintain test kitchen/laboratory and related equipment and supplies. | Chapter 2 |
| **9.5.5:** Implement procedures that affect quality product performance and sustainability. | Chapters 16, 17, 18 |
| **9.5.6:** Conduct sensory evaluations of food products. | Chapters 3, 6, 22, 25 |
| **9.5.7:** Conduct testing for safety of food products, utilizing available technology. | Chapters 18, 19, 25 |
| **Content Standard 9.6: Demonstrate food science, dietetics, and nutrition management principles and practices.** | |
| **9.6.1:** Build menus to customer/client preferences. | Chapter 25 |
| **9.6.2:** Implement food preparation, production, and testing systems. | Chapters 12, 16, 17, 18, 19, 20, 21, 23, 24, 25 |
| **9.6.3:** Apply standards for food quality and sustainability. | Chapters 1, 18, 19, 26 |
| **9.6.4:** Create standardized recipes. | Chapter 25 |

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|---|---|
| **9.6.5:** Manage food production to meet needs and preferences of diverse customer populations. | Chapter 25 |
| **9.6.6:** Analyze new products utilizing most current guidelines and innovations in technology. | Chapters 3, 25 |
| **9.6.7:** Implement procedures that provide cost effective products. | Chapters 2, 25 |
| **9.6.8:** Establish par levels for the purchase of supplies based on an organization's needs. | |
| **9.6.9:** Utilize Food Code Points of time, temperature, date markings, cross contamination, hand washing, and personal hygiene as criteria for safe food preparation. | Chapters 1, 18, 19 |
| **Content Standard 9.7: Demonstrate principles of food biology and chemistry.** | |
| **9.7.1:** Explain the properties of elements, compounds, and mixtures in foods and food products. | Chapter 4 |
| **9.7.2:** Analyze the effects of thermodynamics on chemical reaction in foods and food products. | Chapter 5 |
| **9.7.3:** Explain the process of ionization in the formation of acids and bases and effect on food and food products. | Chapters 4, 6 |
| **9.7.4:** Explain the impact of molecular structure of simple and complex carbohydrates on digestion, nutrition, and food preparation procedures. | Chapters 4, 5, 6, 8 |
| **9.7.5:** Relate the composition of lipids and proteins to their functions in foods and their impact on food preparation and nutrition. | Chapters 10, 11 |
| **9.7.6:** Explain the value of molds and enzymes in food products. | Chapters 12, 17, 21 |
| **9.7.7:** Analyze the impact of food presentation methods and techniques on nutrient value, safety and sanitation, and consumer appeal of food products. | Chapters 3, 16, 18, 25 |