Michigan Family and Consumer Sciences

Food Sciences, Dietetics and Nutrition: Grades 9-12

Analyze career paths within food science, food technology, dietetics, and nutrition industries. 9.1

1. **Explain the roles and functions of individuals engaged in food science, food technology, dietetics, and nutrition careers.** 9.1.1
2. **Analyze opportunities for employment and entrepreneurial endeavors.** 9.1.2
3. **Summarize education and training requirements and opportunities for career paths in food science, food technology, dietetics, and nutrition.** 9.1.3
4. **Analyze the correlation between food science, dietetics, and nutrition occupations and local, state, national, and global economies.** 9.1.4
5. **Create an employment portfolio to communicate food science, food technology, dietetics, and nutrition careers knowledge and skills.** 9.1.5
6. **Analyze the role of professional organizations in food science, food technology, dietetics, and nutrition careers.** 9.1.6

Apply risk management procedures to food safety, food testing, and sanitation. 9.2

1. **Analyze factors that contribute to food borne illness.** 9.2.1
2. **Analyze food service management safety and sanitation programs.** 9.2.2
3. **Implement industry standards for documenting, investigating, and reporting foodborne illnesses.** 9.2.3
4. **Use the Hazard Analysis Critical Control Point (HACCP) during all food handling processes (the flow of food) to minimize the risks of food borne illness.** 9.2.4
5. **Demonstrate practices and procedures that assure personal and workplace health and hygiene.** 9.2.5
6. **Demonstrate standard procedures for receiving, storage, and preparation of raw and prepared foods.** 9.2.6
7. **Classify cleaning and sanitizing materials and their correct use.** 9.2.7
8. **Use Occupational Safety and Health Administration's (OSHA) Right to Know Law and Material Safety Data Sheets (MSDS) and explain their requirements in handling hazardous materials.** 9.2.8

	9 Demonstrate waste disposal and recycling methods. 9.2.9
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. 9.3.1
	2 Analyze nutritional data. 9.3.2
	3 Apply principles of food production to maximize nutrient retention in menus. 9.3.3
	4 Assess the influence of cultural, socioeconomic and psychological factors on food and nutrition and behavior. 9.3.4
	5 Analyze recipe/formula proportions and modifications for food production. 9.3.5
	6 Critique the selection of foods to promote a healthy lifestyle. 9.3.6
	7 Plan menus, applying the exchange system to meet various nutrient needs. 9.3.7
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. 9.4.1
	2 Use nutritional information to support care planning. 9.4.2
	3 Determine when to provide a selective menu approach in nutrition therapy settings. 9.4.3
	4 Construct a modified diet based on nutritional needs and health conditions. 9.4.4
	5 Design instruction on nutrition to promote wellness and disease prevention. 9.4.5
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. 9.5.1
	2 Analyze data in statistical analysis when making development and marketing decisions. 9.5.2
	3 Prepare food for presentation and assessment. 9.5.3
	4 Maintain test kitchen/ laboratory and related equipment and supplies. 9.5.4
	5 Implement procedures that affect quality product performance and sustainability. 9.5.5
	6 Conduct sensory evaluations of food products. 9.5.6
	7 Conduct testing for safety of food products, utilizing available technology. 9.5.7
Demonstrate food science, dietetics, and	1 Build menus to customer/ client preferences. 9.6.1

nutrition management principles and practices. 9.6	**2** Implement food preparation, production, and testing systems. 9.6.2
	3 Apply standards for food quality and sustainability. 9.6.3
	4 Create standardized recipes. 9.6.4
	5 Manage food production to meet needs and preferences of diverse customer populations. 9.6.5
	6 Analyze new products utilizing most current guidelines and innovations in technology. 9.6.6
	7 Implement procedures that provide cost effective products. 9.6.7
	8 Establish par levels for the purchase of supplies based on an organization's needs. 9.6.8
	9 Utilize Food Code Points of time, temperature, date markings, cross contamination, hand washing, and personal hygiene as criteria for safe food preparation. 9.6.9
Demonstrate principles of food biology and chemistry. 9.7	**1** Explain the properties of elements, compounds, and mixtures in foods and food products. 9.7.1
	2 Analyze the effects of thermodynamics on chemical reactions in foods and food products. 9.7.2
	3 Explain the process of ionization in the formation of acids and bases and effect on food and food products. 9.7.3
	4 Explain the impact of molecular structure of simple and complex carbohydrates on digestion, nutrition, and food preparation procedures. 9.7.4
	5 Relate the composition of lipids and proteins to their functions in foods and their impact on food preparation and nutrition. 9.7.5
	6 Explain the value of molds and enzymes in food products. 9.7.6
	7 Analyze the impact of food presentation methods and techniques on nutrient value, safety and sanitation, and consumer appeal of food and products. 9.7.7