

Baking Science Fundamentals: Assessment and Certification Competencies

1	Careers: Explore careers in the field of baking science (Weight = 8%)
1A.	Describe the roles and responsibilities for individuals engaged in baking and milling careers.
1B.	Evaluate opportunities for employment and entrepreneurship in the baking industry.
1C.	Summarize the education, training, and certification requirements for careers in baking.
2	Food Safety and Sanitation: Demonstrate food safety and sanitation procedures (Weight = 17%)
2A.	Demonstrate safe food handling and preparation techniques to integrate Hazard Analysis and Critical Control Points (HACCP).
2B.	Outline steps for cleaning and sanitizing food-preparation utensils and equipment.
2C.	Apply practices for allergen management.
2D.	Maintain Safety Data Sheets (SDS) for workplace and food safety.
3	Baking Equipment: Maintain kitchen and lab equipment (Weight = 12%)
3A.	Differentiate equipment for baking in residential and commercial settings.
3B.	Describe the process for cleaning, storing, and safe operation of equipment.
4	Baking Math: Apply mathematical and business skills (Weight = 12%)
4A.	Modify a recipe based on yield.
4B.	Determine recipe yields.
4C.	Estimate the production cost of baked products.
4D.	Determine the amounts of product needed in a baking and pastry recipe, using the baker's percentage method.
5	Baking Ingredients: Identify baking and pastry ingredients and their functions (Weight = 17%)
5A.	Describe the sources and functions of baking ingredients.
5B.	Demonstrate mis en place for baking and pastry preparation.
5C.	Evaluate the relationship between ingredients and the quality of results.
6	Baking Techniques: Demonstrate baking and pastry preparation techniques (Weight = 17%)
6A.	Prepare a variety of baked goods (e.g., quick breads, cakes, cookies, pies, tarts)
6B.	Prepare yeast-leavened doughs.
6C.	Evaluate baked goods for irregularities in appearance, texture, or taste.
7	Baking Food Science: Demonstrate food science techniques (Weight = 17%)
7A.	Describe the role of science and food-science in the development of baked goods.
7B.	Explain basic chemistry concepts and how ingredients react in food-science applications.
7C.	Explain the purpose of sensory evaluation panels and the process for conducting a sensory panel using controls.
7D.	Conduct testing of baked goods using current technology.