

**SKILLS FRAMEWORK FOR FOOD SERVICES  
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

<b>TSC Category</b>	Food and Beverage Operations					
<b>TSC</b>	Food Science Application					
<b>TSC Description</b>	Apply food science principles food preparation					
<b>TSC Proficiency</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
	<Insert TSC Code>	<Insert TSC Code>	<b>FSS-FBS-3010-1.1</b>	<b>FSS-FBS-4010-1.1</b>	<b>FSS-FBS-5010-1.1</b>	<Insert TSC Code>
			Apply food science principles in daily food preparation to preserve nutritional qualities of food	Apply food science principles in daily food preparation to enhance customer's food consumption experience	Develop food menu, preparation and storing guidelines based on food science principles	
<b>Knowledge</b>			<ul style="list-style-type: none"> <li>Chemical components in food and their characteristics</li> <li>Nutritional value of food</li> <li>Importance of each chemical component's role to the human body and characteristics of dishes</li> <li>Common food sensitivities, allergies, and possible reactions</li> <li>Cooking techniques that preserve nutritional values of food</li> </ul>	<ul style="list-style-type: none"> <li>Culinary and baking science</li> <li>Types of ingredients that can be substituted for healthier options</li> <li>Methods and importance of increasing nutrient density of food products</li> <li>Methods to reduce gluten, wheat, egg and sugar in baking and culinary formulas</li> <li>Low-fat or dairy-free formulas</li> <li>Relationships between food presentations and customers' food consumption experiences</li> <li>Evolution and current trends of customers' taste and habits</li> <li>Relationships between various senses and food</li> </ul>	<ul style="list-style-type: none"> <li>Chemical reactions and changes involved in each food component during food preparation and techniques to enhance or prevent them</li> <li>Chemical, physical and biological changes in foods during preparation and storage</li> <li>Roles of microbiology in food preparation, storage, and safety</li> <li>Modern and industrial cooking tools, techniques and ingredients</li> <li>Implications of using food additives on operational efficiency, product quality, storing methods, and business profitability</li> <li>Interplays between foods and other offerings in dining courses and experiences</li> </ul>	
<b>Abilities</b>			<ul style="list-style-type: none"> <li>Adjust existing ingredients to achieve desired flavours</li> <li>Apply cooking techniques that preserve</li> </ul>	<ul style="list-style-type: none"> <li>Substitute ingredients with healthier options</li> <li>Utilise gluten free flour, applesauce, whole grain</li> </ul>	<ul style="list-style-type: none"> <li>Design food preparation and storage guidelines that maintain nutritional value and prevent microbial growth</li> </ul>	

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			<p>nutritional qualities of food</p> <ul style="list-style-type: none"> <li>• Apply strategies to reduce negative health impact of foods</li> <li>• Identify trending food science applications to food</li> </ul>	<p>flour to achieve more nutrient-dense formulas</p> <ul style="list-style-type: none"> <li>• Prepare food presentations that can enhance customers' food consumption experiences</li> <li>• Apply cooking techniques that incorporate multiple chemical ingredients and reactions to enhance food consumption experiences</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporate novel ingredients in food preparation</li> <li>• Create policies and guidelines on the use of food additives in food preparation activities</li> <li>• Create a good dining experience using various food flavours during dining courses</li> <li>• Develop new food menus based on current food science trends and changing health needs and tastes of customers</li> </ul>	
<b>Range of Application</b>			<p>Novel ingredients may include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Thickening and gelling agents</li> <li>• Miracle fruit</li> <li>• Chia</li> <li>• Designer grains</li> </ul>			