

**MODULE FOD3110: FOOD PROCESSING**

**Level:** Advanced

**Theme:** Management

**Prerequisite:** FOD1010 Food Basics

**Module Description:** Students explore how technology affects our food supply, by using a variety of methods to process fresh foods.

**Module Parameters:** Personal or commercial food preparation facility.

**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>• describe factors affecting food safety and food spoilage in processed foods</li> <li>• identify and describe various ways of processing and preserving food</li> <li>• identify the impact of technological developments on foods and the food supply</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>• <b>concept test</b> or <b>project</b> in which the student demonstrates understanding of the following concepts:               <ul style="list-style-type: none"> <li>– micro-organisms and prevention of food-borne illness</li> <li>– maintenance of food quality through processing and during storage</li> <li>– function of ingredients, methods and rationale for a minimum of five ways of processing and preserving food</li> <li>– effect of processing on nutritive value of foods</li> <li>– role of food additives</li> <li>– technological developments and their impact on food supply.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>            Food for Today Testing Program (<i>Teacher Resource Binder or Testmaker</i>) or <i>Framework for Assessing a Project Plan: Food Processing, FOD3110–1</i></p> <p><i>Standard</i>            Correctly answer a minimum of 50% of questions or            Achieve a minimum performance rating of 3 in applicable areas of assessment</p>	<p>20</p>



**MODULE FOD3110: FOOD PROCESSING** (continued)

Concept	Specific Learner Expectations	Notes
Safety, Sanitation and Equipment	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• compare the positive and negative impact of micro-organisms and enzymes on foods</li> <li>• distinguish between prevalent micro-organisms responsible for food-borne illness considering:               <ul style="list-style-type: none"> <li>– source of micro-organism</li> <li>– environment favouring growth of micro-organism</li> <li>– causes and symptoms of food-borne illness</li> </ul> </li> <li>• compare the mechanics of maintaining food safety and food quality over extended periods of time, for various food processing methods, considering:               <ul style="list-style-type: none"> <li>– impact of processing method on enzymes and micro-organisms</li> <li>– function of ingredients in preservation of foods</li> <li>– significance of packaging materials</li> <li>– appropriate storage conditions and storage time</li> </ul> </li> <li>• identify and resolve equipment safety concerns related to Food Processing.</li> </ul>	Commercial: Canner, pressure cooker, dehydrator, smoker, vacuum packer.
Nature of Food	<ul style="list-style-type: none"> <li>• describe the methods and the rationale for processing or preserving foods.</li> </ul>	Freezing, pickling, marinating, canning, drying, jam- and jelly-making. <ul style="list-style-type: none"> <li>• Marinades: cooked and instant, oil and acid, oil and spice, salt and liquid, acid and spice, sweet, dry.</li> </ul>
Nutrition	<ul style="list-style-type: none"> <li>• describe the impact of various food processing methods on the nutritional value of foods.</li> </ul>	
Consumerism	<ul style="list-style-type: none"> <li>• describe food additives and their influence on food and the food supply.</li> </ul>	

**MODULE FOD3110: FOOD PROCESSING** (continued)

Concept	Specific Learner Expectations	Notes
Management	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• relate small-scale food preservation to the technology employed in commercial food processing</li> <li>• describe the impact technological developments may have on foods and the food supply considering factors such as:               <ul style="list-style-type: none"> <li>– preservation</li> <li>– enhancement of foods</li> <li>– nutritive value</li> <li>– safety issues and concerns</li> </ul> </li> <li>• identify and evaluate such technological innovations as:               <ul style="list-style-type: none"> <li>– packaging techniques</li> <li>– production methods</li> <li>– preserving methods.</li> </ul> </li> </ul>	<p>Tetrapak. Fish farming. Food irradiation.</p>
Preparation and Presentation	<ul style="list-style-type: none"> <li>• plan, prepare and evaluate processed foods, demonstrating understanding of various processing methods.</li> </ul>	<p>Freezing, pickling, marinating, canning, drying, jam- and jelly-making.</p>
Career Exploration/ Portfolio	<ul style="list-style-type: none"> <li>• describe career options where skills developed in Food Processing are particularly important</li> <li>• describe various occupational and entrepreneurial roles related to this module.</li> </ul>	<p>Food science, food research, food vendors; specialty food shops, marketing.</p>