

Food Science and Technology (General)

The Food Science and Technology General course provides opportunities for students to explore and develop food-related interests and skills. Food impacts on every aspect of daily life and is essential for maintaining overall health and wellbeing. Students organise, implement and manage production processes in a range of food environments and understand systems that regulate food availability, safety and quality.

Knowledge of the sensory, physical, chemical and functional properties of food is applied in practical situations. Students investigate the food supply chain and value-adding techniques applied to food to meet consumer and producer requirements.

Principles of dietary planning, adapting recipes, and processing techniques, are considered for specific nutritional needs of demographic groups. Occupational safety and health requirements, safe food handling practices, and a variety of processing techniques, are implemented to produce safe, quality food products.

This course may enhance employability and career opportunities in areas that include nutrition, health, food and beverage manufacturing, food processing, community services, hospitality and retail.

Technologies

Courses

Course Structure

Year 11

Unit 1

- This unit focuses on the sensory and physical properties of food that affect the consumption of raw and processed foods.
- Students investigate balanced diets, the function of nutrients in the body and apply nutrition concepts that promote healthy eating. They study health and environmental issues that arise from lifestyle choices and investigate factors which influence the purchase of locally produced commodities.
- Students devise food products, interpret and adapt recipes to prepare healthy meals and snacks that meet individual needs. They demonstrate a variety of mise-en-place and precision cutting skills, and processing techniques to ensure that safe food handling practices prevent food contamination.
- Students recognise the importance of using appropriate equipment, accurate measurement and work individually and in teams to generate food products and systems.

Unit 2

- This unit focuses on the supply of staple foods and the factors that influence adolescent food choices and ethical considerations.
- Students recognise factors, including processing systems, that affect the sensory and physical properties of staple foods. They explore food sources and the role of macronutrients and water for health, and nutrition-related health conditions, such as coeliac and lactose intolerance, which often require specialised diets.
- Students consider how food and beverage labelling and packaging requirements protect consumers and ensure the supply of safe, quality foods.
- Students work with a range of staple foods, adapt basic recipes and apply the technology process to investigate, devise, and produce food products to achieve specific dietary requirements. They evaluate food products and demonstrate a variety of safe workplace procedures, processing techniques and food handling practices.

Technologies

Courses

Year 12

Unit 3

- This unit explores the societal, lifestyle and economic issues that influence food choices. Students research the effect of under-consumption and over-consumption of nutrients on health and investigate a range of diet-related health conditions that affect individuals and families.
- Using scientific methods, students examine the functional properties that determine the performance of food and apply these in the planning, preparation and processing of food.
- Students develop their expertise with technology skills to implement strategies to design food products and processing systems. They select resources to meet performance requirements and use evaluation strategies to monitor and maintain optimum standards.

Unit 4

- This unit focuses on food spoilage and contamination and explores reasons for preserving food. Students investigate food processing techniques and the principles of food preservation.
- Students investigate the food supply chain and value-adding techniques applied to food to meet consumer and producer requirements. Food choices are often determined by location, income, supply and demand and the environmental impact of food provision.
- Students examine influences on the nutritional wellbeing of individuals that arise from lifestyle and cultural traditions. They implement principles of dietary planning and adapt recipes and processing techniques when considering specific nutritional needs of demographic groups.
- Students apply the technology process to address a product proposal and produce a preserved food product. They justify the equipment, resources and processing techniques used, and evaluate sensory properties.