Food Technology - Stage 6 - Year 11 Preliminary course

Scope and sequence

	Food availability and selection	Food quality	Nutrition
Course allocation	30%	40%	30%
Term and week allocation	Term 1(9 weeks)	Term 1 (2 weeks) Term 2 (10 weeks)	Term 3 (8 weeks)
Outcomes	P1.1, P1.2, P4.2	P2.2, P3.2, P4.1, P4.4	P2.1, P3.1, P3.2, P4.3, P 5.1
Term 1: Week 1			
Week 2	✔		
Week 3	✔		
Week 4	✔		
Week 5	✔		
Week 6	✔		
Week 7	✔		
Week 8	✔		
Week 9	✔		
Week 10	✔		
Week 11		✔	
Term 2: Week 1		✔	
Week 2		✔	
Week 3		✔	
Week 4		✔	
Week 5		✔	
Week 6		✔	
Week 7		✔	
Week 8		✔	
Week 9		✔	
Week 10		✔	
Term 3: Week 1			✔
Week 2			✔
Week 3			✔
Week 4			✔
Week 5			✔
Week 6			✔
Week 7			✔
Week 8			✔
Week 9			Preliminary exams
Week 10			Preliminary exams

The following elements of quality teaching will be addressed:

Background knowledge: Students build on knowledge they have acquired in Stage 5 in areas such as: food safety and hygiene, food presentation and preparation skills, the function of food, and the historical development of food availability.

Knowledge integration: Identifiable connections are made between this unit of work and other areas of the curriculum:

- Stage 5 Science and History and Personal Development, Health and Physical Education (PD/H/PE): nutrition
- Stage 5 Food Technology: food safety and hygiene, food preparation and presentation
- Stage 5 Science and Stage 4 and 5 Mathematics: budgeting, multiplication, fractions, time management, creating sector graphs
- Literacy is supported in all units of work throughout the course
- Occupational health and safety (OH&S) incorporated throughout the course

Inclusivity: All students participate in classroom activities and all students' work and opinions are valued.

Narrative: To enhance literacy case studies, documentaries, guest speakers and newspaper articles are used to enhance significance and provide genuine real life examples which are relevant and up to date.

Higher order thinking: Students manipulate information to synthesize and solve problems related to the food and hospitality industry with regard to timing of tasks, budgeting and menu planning and supporting their analysis with unbiased and relevant material.

Substantive communication: Building upon significant reciprocal interaction between students and teachers through practical and theoretical activities. Teaching and modeling of skills such as active listening, constructive feedback and open ended questioning are encouraged and supported during lessons.

Deep understanding: Displayed through students' understanding of central concepts and ideas with regard to the hospitality industry. Evidence of learning through application to assessment tasks and contribution to in-class discussions and case studies.

Problematic knowledge: Social, cultural and political influences and implications with regard to the Australian food and hospitality industry are examined throughout the unit.

Connectedness: Genuine, current and relevant real-life examples are used in this unit and subject matter relates to everyday aspects of student lives. Students negotiate real life tasks and learning is linked to the media, the law and current food trends.

Explicit quality criteria: Clear and explicit rubrics are provided for all assessment tasks. Modeling of essays is used throughout all units of work.

Engagement: Student ownership is encouraged, particularly in the development of practical skills. Students' tasks and learning are scaffolded to support a variety of abilities with extension work provided for all aspects of the course.

Cultural knowledge: An understanding of diversity of different cultural and social backgrounds, and how these relate to food, is discussed and supported both through classroom activities and assessment strategies.

Social support: Teamwork and positive feedback is an integral aspect of all practical activities. Appropriate behaviour is acknowledged in all areas of learning. Ownership of student work is supported and encouraged.

Metalanguage: The importance of Metalanguage (subject-specific terminology) used in the food and hospitality industry is reinforced through all units of work.

Problematic knowledge: Development of student awareness of the variety of reasons for different recommended daily intakes (RDIs) and higher order thinking are developed through design and preparation of menus to meet specific dietary needs and cultural and social situations.

Unit 1: Food Availability and Selection

Communities endeavour to obtain an adequate supply of food. Throughout human history, the availability of food has been determined by local and/or external influences. Selection of food is influenced by physiological and psychological factors as well as broader social and economic factors.

Outcomes

A student:

P1.1 identifies and discusses a range of historical and contemporary factors which influence the availability of particular foods

P1.2 accounts for individual and group food selection patterns in terms of physiological, psychological, social and economic factors

P4.2 plans, prepares and presents foods which reflect a range of the influences on food selection

P4.1 selects appropriate equipment, applies suitable techniques and utilises safe and hygienic practices when handling food.

Week	Students learn about	Students learn to	Teaching and assessment strategies	Reg
1 2 3	Influences on food availability • historical changes to the availability of food, including: - the global migration of cultural groups - use of foods native to Australia. **Learning Intention:** identify and discuss how historical events have changed food availability in Australia.	• outline the historical changes to food availability in Australia. **P1.1** **P4.1**	Pretest (Moodle) Staple Foods – Moodle – worksheets based on website https://www.nationalgeographic.org/encyclopedia/food-staple/ Class discussion on factors which influenced the development of Australia's food availability. List factors which have influenced Australia's food availability. Identification game on Bush Foods. (worksheet) Mindmap on Bush Foods and Aboriginal practices **Global Migration** - Research task – research one country and complete task http://carly862.wixsite.com/foodavailability/influences-on-food-availability **Formative Assessment:** Global Migration Ext Response **Practical:** Wattleseed Choc Cookies / Scones	
4 5	Technological developments influential on food availability, including: • production and manufacturing processes and equipment techniques • storage and distribution techniques • market place practices. **Learning Intention:** identify and discuss how technological developments have changed food availability in Australia.	**P1.1** **P4.1**	Food Security – Videos in Moodle, discussion, Question to answer Brainstorm "How has the production and processing of food changed over the last century?". **Notes**: Technology impact on food industry. Comparison of food production systems, flowchart of processes. (w/s) **Complete questions** on technological developments in production, processing equipment, storage and distribution techniques. Guided summary - Textbook Ref 10-19 Viewing of Videos – Moodle + Discussion **Practical:** Risotto / Stir Fry	

Week	Students learn about	Students learn to	Teaching and assessment strategies	Reg
6 7	Social, economic and political influences on food availability, including: • effects of poverty and affluence • type and state of the economy • government policy, eg taxation, embargoes, subsidies, war, export strategies, GST, World Trade Organisation (WTO) **Learning Intention:** identify and discuss the impact of food availability in developed and developing regions of the world.		Video / discussion - poverty and the difference between absolute and relative poverty. Moodle Use powerpoint as a base – discuss and add information. Ch 8 of Moodle book. Discussion of poverty in developed and developing countries. How is it measured Video – Moodle Define malnutrition - Explain the consequences of malnutrition. Identify dietary diseases associated with malnutrition. Identify the role of agencies which provide aid. Define politics of food and 3 major challenges developing countries face in regards to social justice. Define terms related to government policy. **Practical:** Lentil Burger / Mushroom Meatballs Pasta	
8	Factors affecting food selection • physiological factors, including: • hunger, appetite, satiety • nutritional requirements, eg age, gender, size, activity level • reactions to food, eg appearance, odour, • taste, allergy **Learning Intention:** identify and discuss the physiological factors that affect food selection of individuals and groups. • psychological factors, including: • values, beliefs, habits, attitudes, emotions, self-concept, experiences **Learning Intention: identify and discuss the**	• explain how various factors influence selection of food by individuals and groups • prepare foods that reflect various factors influencing food selection **P1.2** **P4.2**	Mind map Factors influencing food selection. Define the terms physical, psychological, social, economical. Students to list all food and drink they have consumed in the last 48 hours. Classify these as either physical, psychological, social, economic. **Physiological** Discuss, read info and view videos http://carly862.wixsite.com/foodavailability Complete worksheet. **Psychological** Discuss, read info and view videos http://carly862.wixsite.com/foodavailability Complete worksheet. **Practical –** Vegetable Pasta Bake	

Week	Students learn about	Students learn to	Teaching and assessment strategies	Reg
	psychological factors that affect food selection of individuals and groups.			
9	• social factors, including: • traditions and culture • lifestyle eg employment, education, household structures, roles, geographic location, interests • social interaction eg peer group, family hospitality • media. **Learning Intention:** identify and discuss the social factors that affect food selection of individuals and groups.	• analyse the eating patterns of a selected group to identify influences on food selection **P1.2** **P4.2**	**Social** Discuss, read info and view videos http://carly862.wixsite.com/foodavailability Complete worksheet. **Practical** : Chocolate Mousse	
10	• economic factors, including: • the marketplace (retail and purchasing practices) • resource availability such as food processing equipment and food preparation skills • occupation and finances. **Learning Intention:** identify and discuss the economic factors that affect food selection of individuals and groups.	• investigate current food consumption and expenditure patterns in Australia **P1.2** **P4.2**	**Economic** Discuss, read info and view videos http://carly862.wixsite.com/foodavailability **Assessment task** due and presentation of practical.	

Unit 2: Food Quality

Quality food products result from safe and hygienic handling of food in domestic, commercial and industrial settings. The sensory characteristics and functional properties of food determine the most appropriate storage, preparation and presentation techniques used.

Outcomes

A student:

P2.2 identifies and explains the sensory characteristics and functional properties of food

P3.2 presents ideas in written, graphic and oral form using computer software where appropriate

P4.1 selects appropriate equipment, applies suitable techniques and utilises safe and hygienic practices when handling food

P4.4 applies an understanding of the sensory characteristics and functional properties of food to the preparation of food products.

Week	Students learn about	Students learn to	Teaching and assessment strategies	Reg
1 & 2	Safe preparation and presentation of food • preparation methods to produce food products across a range of settings • layout of food for visual appeal, including styling for photography and plating for service	• select and apply suitable preparation methods to produce quality food products and plate meals for service across a range of settings • style foods for photography	Discussion and note taking on safe preparation and presentation of food. Case Study 'Plate of Origin' **Practical**: Savoury Bread cases with garnish (also aeration) **Moodle:** Research safe food handling, construct a memo and complete quiz.	
3	Safe storage of food • methods of storing foods to maintain quality such as dry storage, cold storage and freezing	storage of food • describe methods of storing foods to maintain sensory characteristics and ensure safety	Revise health hazards associated with food Discussion and notes on safe storage of food inc. HACCP Investigate food storage in home and commercial, quiz and relection. **Practical:** Lemon and Poppy Seed Muffins.(also dextrinisation)	
4	Sensory characteristics of food • sensory characteristics of foods, including appearance, odour, taste (flavour), texture (mouth feel) • sensory assessment of a variety of foods	• identify sensory characteristics that constitute quality in a variety of foods • evaluate the appeal of foods using sensory assessment	Taste testing (blindfolded) of foods and discussion of reactions to foods eg taste, previous experience, reactions, smell. (Jelly) Class notes on sensory assessment. Class notes and discussion on choosing fresh foods. **Moodle:** Case Study 'Puffer Fish'	
5 & 6	Functional properties of food • functional properties of food, including: • the role of proteins in denaturing, coagulation, gelation, foaming and browning	• explain some of the functional properties of food • identify the factors that affect the functional properties of food	Video: Functional Properties of Food. Explanation of specific terms, note taking, practical work. **Practical:** Beef Stroganoff (Browning) Case Study 'Making cheddar cheese'.	

Week	Students learn about	Students learn to	Teaching and assessment strategies	Reg
7& 8	• the role of carbohydrates in gelatinising, dextrinising, caramelising and crystallising • the role of fats in emulsifying and aerating	• explain some of the functional properties of food • identify the factors that affect the functional properties of food	Explanation of specific terms, note taking and practical work. • caramelising: chocolate caramel slice, honeycomb • crystallising: fudge Note: many practical applications include more than one principle eg lemon meringue pie (aeration and gelatinisation). **Assessment task -** lemon meringue pie & analysis of factors	
9 & 10	• factors that affect the functional properties of food, including: • oxygen • temperature • acidity • agitation • enzymes • addition of other ingredients	• prepare a range of foods which demonstrate the functional properties of food • investigate through experimentation the factors that affect the functional properties of foods	Using fruits and vegetables conduct experiments and practical activities which demonstrate factors which affect functional properties of foods. Effects of oxidation, temperature acidity and enzymes on fruits and vegetables. **Practical:** Egg experiments, temperature, agitation, effect of additives.	

Unit 3: Nutrition

Nutrition is a significant factor contributing to the health of the individual and to the economic and social future of the people of Australia. Planning diets to meet the requirements of particular individuals, preparing foods that are nutritious, and assessing the nutritional value of products requires knowledge of nutrition and skills in food preparation.

Outcomes

A student:

P2.1 explains the role of food nutrients in human nutrition

P3.1 assesses the nutrient value of meals/diets for particular individuals and groups

P3.2 presents ideas in written, graphic and oral form using computer software where appropriate

P4.3 selects foods, plans and prepares meals/diets to achieve optimum nutrition for individuals and groups

P5.1 generates ideas and develops solutions to a range of food situations.

Week	Students learn about	Students learn to	Teaching and assessment strategies	Registration
1	**Food nutrients** • food nutrients: carbohydrates, proteins, lipids, vitamins, minerals and water • structure of carbohydrates • sources of carbohydrates • functions of carbohydrates	• identify food nutrients • identify types of carbohydrates, • identify the nutrient composition of various foods • explain the functions of food nutrients in human nutrition	Video: Nutrients Revise nutrition and processes in body Overview of functions of nutrients in body. Brainstorming types of carbohydrates (students take notes). Chemical structure of Carbohydrates and functions. **Moodle: Carbohydrates research task** **Practical** Vegetarian wholemeal lasagne. Analysis of various food products and labels to identify carbohydrate content and determine type of carbohydrates in different food products. Fibre: sources and role in the diet. The link between high fibre and low fat foods. Analysis of fibre rich foods and health benefits associated with fibre. **Moodle:** presentations and quizzes on nutrients, micronutrients and macronutrients. (www.foodafactoflife.org.uk)	
2	• structure of proteins, lipids • sources of proteins, lipids • functions of proteins and lipids in the body	• identify types of proteins and lipids	Brainstorming types of proteins and lipids and students take notes. Chemical structure of protein and lipids and functions. **Moodle:** Collage of fibrous and globular proteins **Moodle:** Lipids – reflection, changes to meal to be lower in fat. **Practical:** Spinach and Tomato Quiche (also ascorbic acid + iron int.) Discussion and task related to complete proteins and achieving requirement for these as a vegetarian.	

Week	Students learn about	Students learn to	Teaching and assessment strategies	Registration
			Computer Lab lesson for research task. **Assessment Task:** Investigation of nutrient needs and factors affecting stage of life cycle + practical	
3	• sources of vitamins, minerals and water • functions of vitamins, minerals and water in the body	• identify types of vitamins and minerals and the importance of water.	Notes on vitamins minerals and water: Case study 'The eyes have it' **Practical** Variety of soups eg Potato and Leek Computer Lab lesson for research task. **Moodle:** Research task on folate. **Moodle:** Vegetable analysis **Moodle:** Iron investigation	
4	• significant interrelationships between nutrients, including: • iron and vitamin C • iron and fibre • calcium and phosphorous • calcium and vitamin D • calcium and fibre • calcium and lactose • folate and vitamin B12 • sodium and potassium • digestion, absorption and metabolism of food	• combine foods to demonstrate nutritionally beneficial interrelationships between foods • describe the process of digestion, absorption and metabolism of food	Video: Nutrients: their Interactions. Notes on interrelationship. **Practical:** Shepherd's Pie Deluxe (Sodium + Potassium) Digestion: matching parts of digestive tract to functions. Notes on digestion/metabolism. **Moodle:** Activity / Quiz on digestion Computer Lab lesson for research task.	
5	Diets for optimum nutrition • nutritional requirements throughout the lifecycle • pregnancy, breastfeeding, infancy	• investigate the recommended dietary intake of energy, protein, vitamins and minerals for particular individuals and groups using appropriate data such as RDI tables in print or electronic format • select foods to provide a balanced intake of nutrients for particular individuals and groups to	Discussion of stages through the lifecycle and notes given for each stage. Investigation of RDIs during pregnancy, breastfeeding, infancy and menu planning considerations. Case study '2 a day safe limit on drinks' Case Study 'Poor diets put teenagers health at risk'. **Moodle:** Play game to understand energy balance. Investigate energy balance and complete case study.	

Week	Students learn about	Students learn to	Teaching and assessment strategies	Registration
		meet a variety of nutritional needs • plan, prepare, present and evaluate meals/diets that address the need for optimal nutrition throughout the lifecycle	**Moodle:** Diet through life tutorial and worksheet. **Practical:** Fettuccine Neopolitan	
6 & 7	• childhood, adolescence, adulthood • athletes, religious considerations, illness	• select foods to provide a balanced intake of nutrients for particular individuals and groups to meet a variety of nutritional needs • plan, prepare, present and evaluate meals/diets that address the needs for optimal nutrition throughout the lifecycle	Notes and discussion. Computer Lab lesson for research task. **Practical:** Assessment Task item Assessment Task Presentations	
8	• current food selection guides and nutritional information that assist in planning and evaluating meals/diets • preparation techniques to produce nutritious foods	• use suitable preparation methods to optimise the nutritional value of foods • assess meals/diets in regard to meeting nutritional needs throughout the lifecycle • plan, prepare, present and evaluate meals/diets that address the needs for optimal nutrition throughout the lifecycle.	Examination and use of educational aids to assess dietary intake such as: Target on Healthy Eating, Healthy Diet Pyramid, Australian Dietary Guidelines, for children, adolescents and adults. Notes and discussion. Review the food preparation techniques used throughout the year and discussion of which are most suitable to nutrient retention and ensuring nutritious foods are produced.	
9 & 10	Year 11 Preliminary examinations			