Unit Outline (Higher Education)

Institute / School: Institute of Innovation, Science & Sustainability

Unit Title: Food Processing Systems 1

Unit ID: SCFST2023

Credit Points: 15.00

Prerequisite(s): (SCFST1022)

Co-requisite(s): Nil

Exclusion(s): Nil

ASCED: 019905

Description of the Unit:
The unit provides students with an advanced knowledge of technical aspects of food processing systems from handling of ingredients through to packaging of finished product in large scale food manufacturing. Students will also develop analytical and problem solving skills in industry-related scenarios, and learn to apply theoretical principles of science and technology in different scales and conditions of food processing.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory						
Intermediate			✔			
Advanced						

Learning Outcomes:

Knowledge:

K1. Describe application of both traditional and innovative food processing techniques in food manufacturing.

K2. Recognise the important role food ingredients play in maintaining food quality

K3. Define and control interaction and functionality of ingredients

K4. Demonstrate the effect of processing methods and conditions on the physico-chemical and sensory properties of food.

Skills:

S1. Apply fundamentals of science and technology to describe changes in processing and storage of food products.

S2. Apply fundamentals of science and technology to describe changes in processing and storage of food products.

S3. Demonstrate ability to apply technical principles in different settings and scale of food preparation without compromises to quality.

S4. Demonstrate the capacity to search and select best practices and innovative approaches to food processing.

Application of knowledge and skills:

A1. Measure and characterise various quality parameters in a laboratory setting

A2. Critically evaluate scientific data

A3. Prepare a written report in an acceptable format using appropriate scientific language.

Unit Content:

The unit is concerned with both theoretical and practical aspects of food processing.

Topics may include:
1.Food ingredients, additives and their functionality (eg, hydrocolloids)
2.Food manufacturing utilities
3.Physico-chemical properties (eg, emulsion, texture, colour, rheological and sensory parameters) as affected by processing
4.Unit operations and unit processes (eg, thermal and non-thermal treatments)
5.Fruit and vegetable processing industries
6.Dairy industries (eg, liquid milk, powders, solid and semi-solid dairy products
7.Other Industries focusing on regional resources and priorities

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, K3, K4, S1, S2, S3, S4, A1, A2, A3	Practicals	Written report	30-50%
K1, K2, K3, S4, A2, A3	Assignment	Written report	20-30%
K1, K2, K3, S4, A2	Demonstrate and apply knowledge from course content in response to questions	Test	30-50%

Adopted Reference Style:

Australian Harvard

Refer to the library website for more information

Fed Cite - referencing tool