



# Course Outline (Higher Education)

<b>School:</b>	School of Science, Psychology and Sport
<b>Course Title:</b>	FOOD PROCESSING SYSTEMS 1
<b>Course ID:</b>	SCFST2023
<b>Credit Points:</b>	15.00
<b>Prerequisite(s):</b>	(SCFST1022)
<b>Co-requisite(s):</b>	Nil
<b>Exclusion(s):</b>	Nil
<b>ASCED:</b>	019905

## Description of the Course :

The course 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, etc.)

## Work Experience:

No work experience: Student is not undertaking work experience in industry.

**Placement Component:** No

**Supplementary Assessment:** Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

## Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**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.** Identify risks associated with stability of products and means to minimise hazards.
- 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.

**Course Content:**

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

Topics may include:

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

**Graduate Attributes**

The Federation University FedUni graduate attributes (GA) are entrenched in the Higher Education Graduate Attributes Policy (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course			
		Learning Outcomes (KSA)	Code A. Direct B. Indirect N/A Not addressed	Assessment task (AT#)	Code A. Certain B. Likely C. Possible N/A Not likely
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1-4, S3	A, A, A, A, A	AT2, AT3	A, A
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	N/A	N/A	N/A	N/A
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	N/A	N/A	N/A	N/A
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	A3	A	AT1, AT2	A, A
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	N/A	N/A	N/A	N/A

**Learning Task and Assessment:**

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1-4, S1-4, A1-3	Practicals	Written report	30-50%
K1-3, S4, A2-3	Assignment	Written report	20-30%
K1-4, A2	Demonstrate and apply knowledge from course content in response to questions	Test	30-50%

**Adopted Reference Style:**

Australian Harvard