



Course Outline (Higher Education)

School:	School of Science, Psychology and Sport
Course Title:	SUSTAINABLE FOOD PRODUCTION
Course ID:	SCFSS2300
Credit Points:	15.00
Prerequisite(s):	SCSUS1500 and 120 credit points
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	019905

Description of the Course:

This course provides students with the opportunity to view food production and processing through the lens of sustainability, focusing on post-harvest stages of food production. The course will provide students with the knowledge and skills to analyse current and future food processing systems in the context of water efficiency, material and energy balance, life cycle assessment, gas emissions, and food supply chain analysis. In developing an understanding of sustainable processing practices students will be exposed to production facilities, including small-scale and large-scale operations. Future trends in sustainable foods will be addressed, including the role of processing to help meet future needs. Site visits and/or virtual tours will be used to demonstrate sustainable practices and form the basis of some assessment tasks.

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

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"/>					
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>					

Learning Outcomes:**Knowledge:**

- K1.** Describe sustainable practises in food processing, with a focus on the sustainable use of water, energy, and materials
- K2.** Recognise that different food processes have different needs and approaches to sustainability
- K3.** Discuss projected future trends in consumer preferences and how they will impact on sustainable food processing

Skills:

- S1.** Critically assess sustainability measures in food processing
- S2.** Define and describe food processing sustainability measures to relevant stakeholders

Application of knowledge and skills:

- A1.** Appraise food processing systems for sustainability
- A2.** Evaluate the costs and benefits of improving sustainability within a food processing plant
- A3.** Apply specific approaches to sustainability and compare their applicability in various contexts such as product, geographical location and target market

Course Content:

Topics may include:

- Materials balance and the importance of efficient processing systems that minimise commodity loss
- Energy flow and energy balance, sustainable energy production, and mechanisms to improve energy efficiency
- Water efficiency in food processing
- Measures to minimise pollution of the atmosphere and water
- The 'circular economy' and utilising by-products and waste streams
- Supply chain analysis and the role processing can play in improving supply chains
- Food packaging and associated challenges in the context of sustainability

Values:

- V1.** Develop an awareness of the importance of sustainable practises in current society, and the need to embed sustainability in food production
- V2.** Appreciate the importance of innovation in modern food processing, and the role university graduates can play in developing and supporting innovation
- V3.** Recognise the broader impacts, both positive and negative, food production can have on the environment and society

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)	Assessment task (AT#)
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.	K2, K3, S1, A1-A3	AT1, AT2, AT3
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.	K3	AT2
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.	K1-K3, S1, S2, A1-A3	AT2, AT3
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.	S2	AT2, AT3
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.	K2, K3, S1, A1-A3	AT2, AT3

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1-K3, S1, A1-A3	Use a problem-based learning framework to determine the impact of sustainability approaches on hypothetical food processing operations.	Written report	20 - 40%
K1-K3, A1, S2	Poster presentation and short oral communication in small groups to communicate the benefits of sustainability measures in the food industry, particularly associated with processing.	Poster presentation	20 - 40%
K1-K3, S1, S2, A2, A3	Students will conceptualise a sustainable process for a food processing plant and communicate the benefits of the sustainable process through written and oral communication.	Written report and oral presentation	30 - 50%

Adopted Reference Style:

Australian Harvard

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)