

Course Outline (Higher Education)

School:	School of Science, Psychology and Sport
Course Title:	SUSTAINABLE AGRICULTURAL PRACTICES
Course ID:	SCFSS3300
Credit Points:	15.00
Prerequisite(s):	SCSUS1500 and 180 credit points
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	050101

Description of the Course:

This course provides students with a foundation in the processes and practices that underpin sustainable food production, focusing on pre-harvest stages of food production. The course will provide an overview of current best practice in the agricultural and aquacultural sectors, covering sustainable use of resources such as water, energy, fertilizer, nutrients, herbicides, and pesticides; with consideration given to the broader ecological impacts of the use of these resources. In developing an understanding of sustainable practices students will be exposed to the production of a broad range of commodities, and will consider organic food production as a sustainable practice. Future trends in sustainable foods will be discussed, leading to consideration of the impact these trends might have on primary production practices. 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	■	■	■	■	■	■
Intermediate	■	■	■	■	■	■
Advanced	■	■	✓	■	■	■

Learning Outcomes:

Knowledge:

- K1.** Describe sustainable practises in food production, with a focus on the sustainable use of water, energy, fertiliser, and agricultural chemicals
- K2.** Describe best practices in sustainability for production of different commodities, including fruit, vegetables, grain, seafood, meat, and animal products
- K3.** Recognise that different production systems have different needs and approaches to sustainability
- K4.** Discuss the advantages and challenges of organic farming as a sustainable agricultural practise
- K5.** Recognise projected future trends in consumer preferences and how they will impact on sustainable agriculture

Skills:

- S1.** Critically assess sustainability measures in agriculture
- S2.** Explain agricultural sustainability measures to relevant stakeholders
- S3.** Demonstrate ability to work in small groups to develop solutions to complex issues in agricultural sustainability

Application of knowledge and skills:

- A1.** Apply theoretical knowledge to develop possible solutions to ameliorate ecological and social impacts of current (non-sustainable) farming and/or aquaculture systems
- A2.** Recognise the need to apply specific approaches to sustainability dependent on the commodity, geographical location and socio-economic factors
- A3.** Appraise new approaches to sustainable agriculture and aquaculture

Course Content:

Topics may include:

- Examples of current best practice for the use of water, fertiliser, and agricultural chemicals
- Energy sources and usage in agriculture
- Understanding nutrient cycles to help reduce chemically derived fertilisers
- Organic agriculture
- The broader social and environmental costs and benefits of sustainable agriculture
- The sustainable primary production of specific food commodities
- Local and global sustainability in agriculture and aquaculture
- Future trends in consumer expectation and their impacts on agricultural practices

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 agriculture, 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-K4, 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.	K1-K5, S1, S2, A1-A3	AT1, AT2, AT3
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-K5, S1, S2, A1-A3	AT1, 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, S3	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.	K1-K5, S1-S3, A1-A3	AT1, AT2, AT3

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1-K5, S1, A2, A3	Case study reports. Brief written reports to be submitted for up to three case studies.	Written report	20 - 40%
K1-K3, K5, S1-S3, A1-A3	In small groups (up to 4 students) one case study will be examined in detail, with insights shared amongst their peers through an oral presentation.	Group presentation	20 - 40%
K1, K4, K5, S1, S3, A1, A3	Major written assignment completed in small groups, focusing on organic farming and/or future trends. Students will be provided the opportunity to reflect on their learning experience.	Written assignment	30 - 50%

Adopted Reference Style:

Australian Harvard

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

Fed Cite - [referencing tool](#)