



Course Outline (Higher Education)

School:	School of Science, Psychology and Sport
Course Title:	PRODUCT & PROCESS DEVELOPMENT
Course ID:	SCFST3026
Credit Points:	15.00
Prerequisite(s):	(SCCHM2001 and SCFST2023 and SCMIC2001 and SCMOL2001)
Co-requisite(s):	Nil
Exclusion(s):	(SF723)
ASCED:	019905

Description of the Course :

The course provides students with an advanced knowledge of tools and methods of product and process development in the food industry. Students develop project management and problem solving skills, and learn to plan and lead projects in all stages from development of concepts through to implementation, considering consumer insight, regulatory requirements, formulation and costs analysis, scale-up, sensory evaluation, stability and shelf life validation, and to deliver results within allocated time, resources and project success criteria. The course also applies and integrates basic principles of science and technology learnt in previous semesters through formulation of food products and development of manufacturing processes.

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"/>	<input type="checkbox"/>

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Advanced	■	■	✓	■	■	■

Learning Outcomes:

Knowledge:

- K1.** Recognize the key criteria for successful product/process development
- K2.** Demonstrate an in-depth knowledge of functional food properties, food safety and statutory regulations
- K3.** Identify factors that influence the economic feasibility of product/process development
- K4.** Investigate the role of consumer surveys and marketing in product development

Skills:

- S1.** Formulate a specific research problem for the food industry (product/process) with defined objectives
- S2.** Develop investigative and analytical skills to solve a research problem
- S3.** Construct a feasibility study centred around a product/process
- S4.** Apply process flow charting, basic plot plan and basic plant layout to a product/process
- S5.** Summarise and present research findings to a scientific audience
- S6.** Demonstrate the capacity to work effectively in a team

Application of knowledge and skills:

- A1.** Develop a viable food product that meets consumer expectations
- A2.** Evaluate the viability of the product/process developed by applying economic concepts
- A3.** Prepare a written report in an accepted format using appropriate scientific language
- A4.** Translate written format works into oral formats

Course Content:

The course is concerned with both the theoretical and practical aspects of formulating foods and process development and improvement .

Topics may include:

- Developing the product concept
- The product development process
- Product design and the consumer
- The mechanics of product development and food formulation
- Economics of food product development
- Old and new plants for manufacturing new food products
- Integration of material properties, process protocols, machinery and land to develop prototype plant with full economic feasibility;
- Transfer of the product from the bench top through commercial production into the marketplace;
- Regulation compliance, shelf-life testing, microbial and food safety

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, S1	A, A, A, A, A	AT1, AT2	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.	K1, K4, S1, A1	A, A, A, A	AT1, AT2	A, 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.	A1-2	B, B	AT1, AT2	B, B
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.	S5-6, A3-4	A, A, A, A	AT1, AT2, AT3	A, 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.	S6	B	AT1, AT2, AT3	B, B, B

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1-K4, S3, S6	Product/ Process development synopsis proposal	Written report	10-20%
K1-K4, S1-S6, A1-A3	Product/ Process development report	Written report	20-40%
K1-K4, S5, S6, A3, A4	Product/ Process development presentation	Oral presentation	10-30%
K1-K4	Demonstrate and apply knowledge from course content in response to questions	Test	20-40%

Adopted Reference Style:

Australian Harvard