

PROC 3007 FOOD INNOVATION AND PROCESSING TECHNOLOGIES

Credit Points 10

Legacy Code 301454

Coordinator Vijay Jayasena (https://directory.westernsydney.edu.au/search/name/Vijay_Jayasena/)

Description This subject will extend your understanding of current and emerging food processes and packaging technologies. You will gain an appreciation of the physicochemical processes involved in food manufacture and their integration to produce safe, nutritious and palatable food. You will become familiar with methods to monitor shelf life of foods, learn about packaging science and be able to select the most appropriate packaging solution for a range of food applications. The environmental impact of food processing and packaging will also be explored, along with the factors affecting the sustainability of food manufacture.

School Science

Discipline Food Processing Technology

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Equivalent Subjects PROC 3001 Advanced Food Science and Technology PROC 3002 Advanced Food Science and Technology

Incompatible Subjects NATS 2016 Food Processing and Analysis PROC 3006 Packaging Science and Technology

Restrictions

Students must have passed 120 credit points of subjects

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Describe current and emerging food processing and packaging technologies, and the applications of these technologies in the manufacture of food.
2. Apply knowledge of the physico-chemical processes involved in food manufacture to solve food quality problems.
3. Conduct food process operations and associated laboratory assays safely and competently, individually or as a member of a group, summarise results and report on findings
4. Articulate an awareness of the environmental impact of food processing and packaging and ways to improve the sustainability of food manufacture
5. Critically evaluate literature in a chosen area of interest and design a research proposal, including objective, justification, research plan and methodology

Subject Content

1. Emerging food processing technologies and new processes, including extrusion, thermal and cold processes and drying and how these can be applied in the development of new foods.

2. Choice of materials for food packaging, including coatings and active packaging technologies; packaging operations, including filling, closing, printing and labelling.
3. Consumer and environmental issues related to packaging, including recycling of packaging materials and tamper evident packaging.
4. Methods for monitoring and control of food quality, including shelf-life testing and prediction and impact of packaging on shelf life.
5. Research skills and intellectual property management in food science and technology.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Report	1,000 words	20	N	Individual	N
Report	1,000 words	40	N	Individual	N
Proposal	2,000 words	40	N	Individual	N

Prescribed Texts

- Campbell-Platt, G 2017, Food science and technology, Wiley-Blackwell, Chichester, West Sussex, UK

Teaching Periods

Spring (2024)

Hawkesbury

On-site

Subject Contact Vijay Jayasena (https://directory.westernsydney.edu.au/search/name/Vijay_Jayasena/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=PROC3007_24-SPR_HW_1#subjects)

Spring (2025)

Hawkesbury

Hybrid

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View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=PROC3007_25-SPR_HW_3#subjects)