

HORT 3002 PROTECTED CROPPING TECHNOLOGY

Credit Points 10

Legacy Code 301448

Coordinator Michelle Mak (<https://directory.westernsydney.edu.au/search/name/Michelle Mak/>)

Description This subject will develop your understanding of the role technology plays in underpinning plant production, in built environments, as well as the impact on processing and consumption of established and emerging opportunities. This subject explores the factors affecting growth, maturation and physiology of plant products in the protected cropping environment. Industry issues of controlling pests and disease, assessing harvest maturity, post-harvest management are underpinned by systems modelling and sustainable practices.

School Science

Discipline Horticulture

Student Contribution Band HECS Band 1 10cp

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

Level Undergraduate Level 3 subject

Restrictions

Successful completion of 60 credit points

Assumed Knowledge

This subject assumes that students have a basic knowledge of biology, plant morphology and anatomy, chemistry and mathematics. Students are also assumed to be familiar with the World Wide Web and the tools for database searching and basic computer packages such as WORD and EXCEL.

Learning Outcomes

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

1. Describe the principles that underpin the production and preservation of protected plant products.
2. Examine the elements of protected cropping technology that alter plant production.
3. Explain how protected cropping technology and data driven systems can be used to manage plant products, from production to consumption.
4. Analyse the factors that contribute to sustainable disease, pest and waste control in protected cropping environments.
5. Critically evaluate the postharvest processes and factors that contribute to plant product transport, storage, processing and quality.

Subject Content

1. Principles of plant product development in protected cropping environments.
2. Pathophysiology disorders of plant products, pre- and post-harvest, in controlled environments.
3. Develop healthy foods and managing waste by modifying plant nutrients and environment.

4. Sustainable protected cropping technology and data driven systems.
5. Postharvest technology and plant product management.

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
Quiz	4x 20min Quiz	20	N	Individual	N
Practical	4x 1000 words	40	N	Individual	N
Final Exam	2hours	40	N	Individual	N

Prescribed Texts

- Wills, RBH, McGlasson, WB & Graham, D 2007, Postharvest: an introduction to the physiology and handling of fruit, vegetables and ornamentals, 5th edn, New South Wales University Press, Sydney.

Teaching Periods

Spring (2025)

Hawkesbury

Hybrid

Subject Contact Michelle Mak (<https://directory.westernsydney.edu.au/search/name/Michelle Mak/>)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=HORT3002_25-SPR_HW_3#subjects)