HORT 7003 GREENHOUSE CROP PRODUCTION

Credit Points 10

Legacy Code 301360

Coordinator Robert Sharwood (https://directory.westernsydney.edu.au/search/name/Robert Sharwood/)

Description This subject focuses on key concepts relating to the functioning of a range of greenhouse horticultural crops in their environment, biological mechanisms, crop growth and development, integrated pest management, crop production, quality and postharvest technology. Students will learn concepts and knowledge relevant to plant physiology, environmental sciences, horticultural production, food technology, and postharvest physiology. Students will be able to measure and interpret plant physiological, biochemical, genetic, and produce quality traits in greenhouse experiments in the context of the functional diversity in crops. The students will also integrate knowledge using plant growth modelling techniques, interpret model output, and address questions on functional diversity in crops by combining model output and experimental data.

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 Postgraduate Coursework Level 7 subject

Restrictions

Must be enrolled in a postgraduate program

Assumed Knowledge

Students entering this subject should have knowledge of one of the following subject areas: horticultural production systems; environmental sustainability analytics; computing and technological applications; marketing principles and business management.

Learning Outcomes

After successful completion of this Subject, students will be able to:

1. Explain the current greenhouse crop production in Australia in comparison to advancements in international greenhouse control systems.
2. Articulate key global and Australian challenges and opportunities faced by future greenhouse crop production.
3. Appraise principles of greenhouse crop production and their effective application and management in Australian and overseas protected cropping.
4. Apply experimental and modelling skills for a range of greenhouse crops and their suitable production systems.
5. Communicate the role of greenhouse crop production in contributing to the wider environmental protection, social benefits and business prosperity.

Subject Content

1. Greenhouse horticultural crop growth, development and production
2. Integrated pest management in protected cropping systems
3. Conventional and molecular breeding techniques for horticultural crops
4. Methods for monitoring crop physiology in greenhouse environments
5. Plant growth modelling techniques for managing crop growth and quality
6. Advances in postharvest physiology for protected cropping products
7. Relationship between greenhouse production techniques and produce quality
8. Future global innovations of greenhouse crop production and their use for Australian protected cropping

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	Three online quizzes of 60 minutes each including multiple choice and short answer questions	30	N	Individual	N
Report	One practical report (1,000 words)	15	N	Group	N
Presentation	15 minutes	15	N	Group	N
Essay	2,000 words	40	N	Individual	N

Teaching Periods

Autumn (2025)

Hawkesbury

On-site

Subject Contact Robert Sharwood (https://directory.westernsydney.edu.au/search/name/Robert Sharwood/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=HORT7003_25-AUT_HW_1#subjects)