

# BIOS 3036 AGRICULTURAL BIOSECURITY

**Credit Points** 10

**Legacy Code** 301450

**Coordinator** Juntao Wang (<https://directory.westernsydney.edu.au/search/name/Juntao Wang/>)

**Description** Students will be exposed to current and emerging biosecurity issues world food production systems are expected to comply with and develop to ensure sustainable and safe animal and plant products. This subject will enable you to recognise, monitor and control animal and plant pests (invertebrates, microorganisms and weeds) and their impact on human society and food security. Major areas of study include strategies and procedures to identify, record and assess damage to animal and plant products. Included in this subject are key issues related to legislative, physical, biological, genetic and chemical control methods, along their benefits and limitations. Theory and practice of integrated pest and disease management systems and issues associated with quarantine and biosecurity are contextually embedded in subject content and activity.

**School** Science

**Discipline** Biological Sciences

**Student Contribution Band** HECS Band 2 10cp

Check your fees via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Undergraduate Level 3 subject

**Equivalent Subjects** LGYA 6250 Plant Microbiology and Protection BIOS 3021 Plant Health and Biodiversity

**Incompatible Subjects** LGYA 5948 Plant Microbiology Interactions  
LGYA 6200 Plant Protection

**Restrictions**

Successful completion of 120 credit points

## Learning Outcomes

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

1. Describe the biology of, and symptoms and losses caused by, the major groups of invertebrate pests, animal and plant pathogens as well as weeds.
2. Explain interactions between pests, diseases, their hosts and the environment.
3. Critically analyse strategies for protecting animals and plants from pest and disease damage, their benefits and limitations.
4. Propose practical methods for control of plant invertebrate pests, pathogens and weeds.
5. Identify the systems and implications for quarantine, plant biosecurity and trade.
6. Integrate a range of strategies in developing integrated pest and disease management programs, and biosecurity.

## Subject Content

1. Processes and procedures to identify symptomatology of animal and plant pathogens

2. Physical and mechanical control of vertebrate and invertebrate pests, pathogens and weeds
3. Sustainable management strategies of animal and plant pests and diseases.
4. Animal and plant breeding methodologies for resistance to pathogens and pests.
5. Chemical control and legislative requirements for invertebrate pests and pathogens.
6. Quarantine and biosecurity for sustainable food security and ecosystems

## 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	2,500 word report (NOTE: limit excludes references section)	25	N	Individual	N
Log/ Workbook	6 'fill-in-the-blank', short answer and paragraph prac reports	30	N	Group	N
Critical Review	Maximum 2,500 words	35	N	Individual	N
Participation	10 minute quiz during class session	10	N	Individual	N

Teaching Periods

## Spring (2025)

### Hawkesbury

#### On-site

**Subject Contact** Juntao Wang (<https://directory.westernsydney.edu.au/search/name/Juntao Wang/>)

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=BIOS3036\\_25-SPR\\_HW\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=BIOS3036_25-SPR_HW_1#subjects))