BIOS 3017 INVERTEBRATE BIOLOGY

Credit Points 10

Legacy Code 300918

Coordinator Uffe Nielsen (https://directory.westernsydney.edu.au/search/name/Uffe Nielsen/)

Description Invertebrates are the most diverse and abundant organisms in aquatic and terrestrial environments. Due to their key role in many ecosystems, biologist E. O. Wilson coined the phrase of invertebrates as the 'little things that run the world'. Besides their ecological importance, many invertebrates are useful to humans, whereas others are harmful to agriculture, human and veterinary health. This unit highlights invertebrate diversity and life histories as well as their key ecological and economic importance. It also includes hands-on laboratory and field studies. This unit is designed for students with career pathways in science (e.g. animal, environmental, forensic and medical sciences) as well as agriculture, environmental management and education.

School Science

Discipline Biological Sciences, Not Elsewhere Classified.

Student Contribution Band HECS Band 2 10cp

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

Level Undergraduate Level 3 subject

Equivalent Subjects BIOS 3018 - Invertebrate Biology NATS 3026 - Forensic Biology

Restrictions Students must have completed 120 credit points, with at least 40 credit points at level 2.

Assumed Knowledge

A basic understanding of core concepts of biology and/or zoology is desirable.

Learning Outcomes

On successful completion of this subject, students should be able to:
1. Describe invertebrate biodiversity
2. Compare and contrast invertebrate morphology, anatomy, physiology, development, reproduction and behaviour
3. Apply acquired knowledge to identify and classify invertebrates
4. Apply concepts of diversity and abundance through sampling and surveying invertebrate biodiversity in the field
5. Create an invertebrate collection through catching, identifying, classifying, preserving and presenting specimens
6. Design and conduct experiments to study the biology of insects and and write these up as a formal report
7. Identify and evaluate the roles and interactions of invertebrates in the environment
8. Evaluate morphological, ecological and evolutionary relationships of invertebrates

Subject Content

1. Introduction to Invertebrate Diversity
2. Reproduction and Lifecycles of Invertebrates
3. Diversity, Classification, Morphology and Anatomy of: Insects, Crustaceans, Molluscs, Annelids
4. Collection and Identification of terrestrial and aquatic Invertebrates
5. Insect Behaviour
6. Insect-plant Interactions and climate change
7. Applied entomology
8. Insects and parasitoids
9. Bees and other pollinators

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.

Item	Length	Percent	Threshold	Individual/ Group Task
Practicals	2,000 words	20	N	Individual
Intra-session exam	1 hour	20	N	Individual
Professional Task	50 specimens	20	N	Individual
Final exam	2 hours	40	N	Individual

Prescribed Texts

- Relevant text will be scanned and made available online.

Teaching Periods