



UNSW
SYDNEY

Course Outline



BIOS3061 PLANT ECOLOGY

School of BEES
Faculty of Science

T2, 2022

1. Staff

Position	Name	Email	Consultation times and locations	Contact Details
Course Convenor	Prof Angela Moles	a.moles@unsw.edu.au	By appointment	Phone 0448080128
Lecturer & facilitator	A/Prof Stephen Bonser	s.bonser@unsw.edu.au	By appointment	Phone 0400476745
Technical support	Guy Taseski	g.taseski@unsw.edu.au	By appointment	

2. Course information

Units of credit: 6UOCNSW

Pre-requisite: BIOS 2011

Teaching times and locations:

Component	HPW	Time	Day	Location
<i>Discussion class</i>	2	9-11am	Wednesday (weeks 1-5, 7-10)	Mathews 103
<i>Discussion or lab</i>	2	3-5pm	Friday (weeks 1-5, 7-10)	Ainsworth G01

2.1 Course summary

Our classes are discussions facilitated and led by lecturers. Discussion topics include: plant-animal interactions, biological invasions; disturbance, the effects of human influences on plant communities; species' responses to climate change, rapid evolution, and novel ecosystems. We incorporate evolutionary, population and community approaches to plant ecology, and include examples from Australia and around the world.

2.2 Course aims

The course is designed to explore current research areas in the ecology and evolution of plants

2.3 Course learning outcomes (CLO)

Students taking this course will explore current research in plant ecology. You will learn to:

- 1) Think critically about research and plant ecology.
- 2) Find, read and interpret the primary plant ecology literature.
- 3) Identify directions of important research in plant ecology.
- 4) Conduct research, including having the initial idea, designing the data collection protocol, collecting data, statistical analysis of data, and presenting findings in the form of a scientific paper.
- 5) Communicate science.

3. Strategies and approaches to learning

3.1 Learning and teaching activities

Learning and teaching in plant ecology will focus on student driven research. Weekly discussion groups will allow students to explore ideas and explain viewpoints. Discussion groups will require students to engage with current research in plant ecology.

Independent research projects will be conducted during a field trip to the UNSW field station at Smiths Lake. Open labs before the data are collected will provide students extra support in developing research ideas. Similarly, open labs after the data have been collected will provide students support in analysis and interpretation of their data.

The assessments are designed to promote progress in research, an understanding of current plant ecological research, and to build a foundation of skills associated with being a research scientist.

3.2 Expectations of students

Class attendance is expected, in person. Student participation in discussion groups cannot be replaced by listening to recorded classes (listening to others discuss ideas is not the same as discussing ideas yourself). Students whose attendance at classes is affected by illness, obligatory religious ceremonies, or other commitments (representing the university, military service etc.) should discuss ways of dealing with this clash with Prof. Moles.

3.3 UNSW's Covid rules for face-to-face teaching

Masks are to be worn by students at all times. Masks are to be worn by staff at all times, except when presenting.

Shared equipment must be wiped down at the end of the class.

There are no physical distancing limits to class numbers.

4. Course schedule and structure

This course consists of 4 hours of class contact hours per week. You are expected to take an average of 5 additional hours of non-class contact hours per week to complete assessments, prepare your review paper, carry out your research project, do the readings and prepare for the end of term test.

Week	Class 1 (Wednesday, 9-11am, Mathews 103)	Class 2 (Friday, 3-5pm, Ainsworth G01)	Assessment
1 June 1	Introduction part 1 (how the course will run; review paper) Q1. Is the biotic interactions hypothesis a zombie idea?	Introduction part 2 (research project) Q2. The evolution of plant strategies – was my ecology textbook wrong?	
2 June 8	Q3. How severe are the impacts of introduced plant species? Q4. What makes communities susceptible to invasion?	Open lab	Quiz
3 June 15	Q5. Are specialists safer biocontrol agents than generalists? Q6. The overlooked underground of plant ecology.	Open lab	Quiz
4 June 22	Experimental design and data analysis	Open lab	Review paper due 24 June
5 June 29	Q7. Why are the mutualisms between plants and their symbionts stable? Q8. How is plant disease impacted by new stresses and changing climates?	Open lab	Quiz
6	FLEXI WEEK - No classes. Field trip 6-10 July, at Smiths Lake		
7 July 13	Q9. How will factors that limit species ranges impact the capacity to respond to climate change? Q10. How important is rapid evolution for plants?	Open lab	Quiz
8 July 20	Q11. Are human activities reducing community biodiversity? Q12. How does disturbance affect diversity?	Open lab	Quiz
9 July 27	Q13. Do we spend too much time focussing on rare species? Q14. Plant communities under climate change	Q15. The emergence of novel ecosystems	Quiz Research project due 26 July
10 Aug 3	Revision and summary	End of term test	End of term test 5 Aug

5. Assessment

5.1 Assessment tasks and feedback

Task	Knowledge & abilities assessed	Assessment Criteria	% of total mark	Date of		Feedback		
				Release	Submission	WHO	WHEN	HOW
Review paper	Depth of knowledge of research area, writing. The submitted report will be similar to a scientific paper	Detailed marking schedule available on Moodle.	25	1 June	24 June	Prof Bonser / Prof Moles	By 15 July	Written comments and grades
Research project	Quality of submitted report. The submitted report will be similar to a scientific paper.	Detailed marking schedule available on Moodle.	45	3 June	26 July	Giancarlo Chiarenza	By 19 August	Written comments and grades
End of session test	General knowledge of research material presented by their peers throughout the session	Graded answers.	10	4 Aug	5 August	Prof Bonser / Prof Moles	by 19 August	Marks will be posted on Moodle
Quizzes on readings	Understanding of weekly assigned readings.	Graded answers.	20	June 3 June 10 June 24 July 8 July 15 July 22	June 8 June 15 June 29 July 13 July 20 July 27	Prof Bonser / Prof Moles	1 week after each quiz.	Grades

Further information

UNSW grading system: <https://student.unsw.edu.au/grades>

UNSW assessment policy: <https://student.unsw.edu.au/assessment>

5.2 Assessment criteria and standards

Please see Moodle for marking rubrics for each assessment

5.3 Submission of assessment tasks

Assignments will be done in class (quizzes, test), or submitted online via Moodle. Students who are not able to complete the assignments on time should discuss their situation directly with Prof. Moles or Prof. Bonser.

Late submissions will attract UNSW's standard late submission penalty of:

- 5% per day
- for all assessments where a penalty applies
- capped at five days (120 hours), after which a student cannot submit an assessment, and
- no permitted variation

5.4. Feedback on assessment

See assessment tasks section 5.1 for details on feedback provided for each assignment

6. Academic integrity, referencing and plagiarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage.¹ At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity and **plagiarism** can be located at The *Current Students* site <https://student.unsw.edu.au/plagiarism>

The *Conduct and Integrity Unit* provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>.

¹ International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

7. Readings and resources

Textbooks	<p>There is no textbook assigned for this course. Rather, we explore the primary peer-reviewed literature (journals) on research in plant ecology.</p> <p>Web of Science and Scopus are excellent resources for searching and exploring the scientific literature. Both resources can be accessed through the UNSW library website. The UNSW library provides electronic access to most relevant journal articles</p>
Course Manual	<p>There is no course manual for plant ecology. Rather, resources (such as these course introduction pages) will be posted on the course Moodle site. A handout with information for the field trip will be provided early in the session.</p>
Required Readings	<p>Readings for discussion groups are available on the course Moodle site. Students are expected to read and discuss the issues raised in these papers.</p>
Additional Readings	<p>Optional additional readings listed in discussion group information</p>
Societies	<p>Ecological Society of Australia (ecolsoc.org.au); Ecological society of America (esa.org); British Ecological Society (britishecologicalsociety.org)</p>



8. Administrative matters

School information	School website: http://www.bees.unsw.edu.au/ The Biosciences Student Office is where to go for administrative matters relating to BEES courses: BEESinfo@unsw.edu.au
Occupational Health and Safety	Information on relevant Occupational Health and Safety policies can be found on the UNSW OHS Home page: http://safety.unsw.edu.au/
Equity and Diversity	Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course Convenor prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equity and Diversity Unit (http://www.studentequity.unsw.edu.au/). Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.
Student complaint procedure	http://student.unsw.edu.au/complaints School grievance officer A.Prof. Scott Mooney s.mooney@unsw.edu.au University contact Student Conduct and Appeals Officer (SCAO) within the Office of the Pro-Vice-Chancellor (Students) and Registrar. Telephone 02 9385 8515, email studentcomplaints@unsw.edu.au

9. Additional support for students

- The Current Students Gateway: <https://student.unsw.edu.au/>
- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- Student Wellbeing, Health and Safety: <https://student.unsw.edu.au/wellbeing>
- Disability Support Services: <https://student.unsw.edu.au/disability-services>
- UNSW IT Service Centre: <https://www.it.unsw.edu.au/students/index.html>