



FACULTY OF SCIENCE

Biological, Earth and Environmental Sciences

BIOS 1301

Ecology and Sustainability

Session 1, 2017

Faculty of Science - Course Outline

1. Information about the Course

NB: Some of this information is available on the [UNSW Handbook](#)¹

Year of Delivery	2017			
Course Code	BIOS 1301			
Course Name	Ecology and Sustainability			
Academic Unit	Biological, Earth and Environmental Sciences (BEES)			
Level of Course	Level 1			
Units of Credit	6 Units of credit			
Session(s) Offered	Session 1			
Assumed Knowledge, Prerequisites or Co-requisites	None			
Hours per Week	5 hours per week (2 lectures, 1 lab) + optional 1 hour discussion session for revision of material for final exam			
Number of Weeks	12 weeks (week 2-13)			
Commencement Date	7 th March 2017			
Summary of Course Structure (for further details see 'Course Schedule')				
Component	HPW	Time	Day	Location
Lectures	2			
Lecture 1		9-10am	Tuesday	Matthews Th B
Lecture 2		11am-12pm	Friday	Matthews Th B
Laboratory	3			
Lab Option 1		10am-1pm	Tuesday	Varies each week (see schedule)
Lab Option 2		2pm-5pm	Tuesday	Varies each week (see schedule)
Lab Option 3		10am -1pm	Wednesday	Varies each week (see schedule)
Lab Option 4		2-5pm	Wednesday	Varies each week (see schedule)
Lab Option 5		10am -1pm	Thursday	Varies each week (see schedule)
Lab Option 6		2-5pm	Thursday	Varies each week (see schedule)
Lab Option 7		1pm- 4pm	Friday	Varies each week (see schedule)
Revision Sessions	Run weeks 8-13. See Moodle for details			

¹ UNSW Online Handbook: <http://www.handbook.unsw.edu.au>

Special Details	<p>Lectures:</p> <p>There are two lectures per week. Students are encouraged to attend the lectures even if they have a webinar enrolment.</p> <p>Labs:</p> <p>You can only attend the lab in which you are enrolled. Special consideration may be granted under certain circumstances, if a lab is missed. Make-up labs can only take place in the same week as the missed lab. All make-up labs have to be approved. If you have missed a laboratory and would like to apply to sit a make-up lab please send an email to BIOS1101@unsw.edu.au</p>
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2. Staff Involved in the Course

Staff	Role	Name	Contact Details	Consultation Times
Course Coordinator		Professor Richard Kingsford	(room 567, Biological Science Bldg); BIOS1301@unsw.edu.au	By appointment
Additional Teaching Staff	Assistant Coordinator	Hayley Bates	Rm G23A, Biological Sciences building h.bates@unsw.edu.au BIOS1301@unsw.edu.au	
	Guest Lecturers	You will also have other lecturers from the University and from others working in conservation and environmental science. These people will give you different perspectives as well as bring real life experience to your course. This is deliberately done to expose you to a wide range of practitioners working in environmental science so that you can think about the applications of your study.		
	Lead Demonstrator	Tegan Gale	In person during lab	
	Technical & Laboratory Staff	Hayley Bates Rosa Ascencio Joshua Griffiths	Rm G23, Biological Sciences Building	
	Other Support	Moodle Course email BSB office s	https://moodle.telt.unsw.edu.au BIOS1101@unsw.edu.au Rm G27 Biological Sciences Building	Monday- Friday only Monday to Friday 9:00-16:30

3. Course Details

<p>Course Description² (Handbook Entry)</p>	<p>This course provides an introduction to ecology, sustainability and environmental science, introducing a range of biological topics and how scientists approach these topics to solve problems.</p> <p>The course develops student skills in critically assessing scientific information, routinely debated by the public and decision-makers. It provides a strong grounding in today's and tomorrow's environmental problems and the role of science in providing solutions.</p>
<p>Course Aims³</p>	<p>Environmental problems are increasingly a challenge for today's society. There is a rising concern about the effects of climate change, degradation of rivers, clearing of native vegetation, overharvesting of fishing resources and pollution on our world. The issues are often complex, involve major decisions by Governments and communities but are fundamental if we are to deliver a sustainable planet for future generations.</p> <p>Environmental science is a discipline that can address these problems and also provide potential solutions for management and policy decisions.</p> <p>This course will give you a good background in the full range of environmental issues and their effects on biodiversity and sustainability.</p> <p>There are five components in the Ecology, Sustainability and Environmental Science course:</p> <ol style="list-style-type: none"> 1) lectures which outline the main elements of the environment, problems of sustainability and ways of addressing these with environmental science; 2) practical classes which provide "hands on" experience; 3) quizzes for understanding how to access scientific information; 4) various textbooks, which cover basic issues of environmental science; and 5) assessment tasks, including an exam. <p>We also provide revision sessions, held after the formal laboratories are finished in the same time slot, which allow you to reinforce some of the themes you have learnt throughout the course.</p>
<p>Student Learning Outcomes⁴</p>	<p>You will learn about biodiversity (animals, plants and smaller organisms, ecosystems), the supporting ecological and biogeochemical processes and the major environmental issues in Australia and around the world. The environment also supports us through ecosystem services. Think about the key environmental issues (climate change, clearing of native vegetation, river degradation, salinity, forest management, harvesting of marine resources, effects of exotic species, overharvesting, too much fire) and you will meet them in this course. You will also learn something about how human population and consumption is affecting the environment.</p>

² UNSW Handbook: <http://www.handbook.unsw.edu.au>

³ [Learning and Teaching Unit: Course Outlines](#)

⁴ [Learning and Teaching Unit: Learning Outcomes](#)

Finally, Environmental Science is a rigorous discipline that requires logic and critical thinking and you will learn how this is done. We also cover the potential solutions for sustainable management. The course aims to give you a broad understanding of the major environmental problems of the world, encourage critical thought, provide experience in biological observation and measurement and teach you how to make careful and critical observations.

You may decide to specialise as an environmental scientist, environmental engineer, ecologist, marine biologist or a river scientist and this course will provide a fundamental base. Even if you are enrolled in a completely different degree (e.g. law, commerce, engineering), you will find this course a useful elective. There are few professions today that can ignore the effects of environmental issues. Of course your everyday life will also be informed by what you learn.

UNSW strives for excellence in teaching. Our focus is student learning and how best to create an environment that interests, challenges, and enthuses students. We also want our teaching to be relevant and engaging to prepare you for the future. As a research-led university, we want to approach teaching in a scholarly way: this means taking into account research on student learning, drawing upon established good practice in teaching, and encouraging critical reflection on practice. With these principles in mind, the Academic Board has agreed on a set of *Guidelines on Learning that Inform Teaching at UNSW*. This course is designed to challenge your thinking about the role of humans and their interaction with the environment and how this can be informed by environmental science. We will be presenting everyday real world problems and possible solutions. You will have lectures, a tutorial and laboratory classes that will integrate to increase your understanding of ecology, sustainability and environmental science.

The course has three streams: lectures, practicals and tutorials. The various streams re-enforce but do not duplicate each other. The practicals are designed to give you experience in hands-on work. Some of the practicals relate to specific lectures, others stand alone. Practical are not run every week so you need to check your timetable. In the weeks in which practical are not held a 1 hour tutorial will run. These tutorials will give you an opportunity as a student to discuss many of the issues raised during the lectures.

The lectures, practicals and tutorials (revision sessions) are underpinned by a range of other resources:

- Various reference books (held in the Library). You are encouraged to explore the textbooks to reinforce what you have learnt in lectures.
- Moodle - this contains material related to the lectures and tutorials

While we provide guidance to the links between the various components we expect that you will discover them yourself. One of the differences between school and university is that you have much more responsibility for developing an understanding of the course.

Graduate Attributes Developed in this Course ⁵		
Science Graduate Attributes ⁵	Select the level of FOCUS 0 = NO FOCUS 1 = MINIMAL 2 = MINOR 3 = MAJOR	Activities / Assessment
Research, inquiry and analytical thinking abilities	3	Technical competence and discipline specific knowledge. Ability to construct new concepts or create new understanding through the process of enquiry, critical analysis, problem solving, research and inquiry.
Capability and motivation for intellectual development	3	Capacity for creativity, critical evaluation and entrepreneurship. Ability to take responsibility for and demonstrate commitment to their own learning, motivated by curiosity and an appreciation of the value of learning.
Ethical, social and professional understanding	2	Ability to critically reflect upon broad ethical principles and codes of conduct in order to behave consistently with a personal respect and commitment to ethical practice and social responsibility. Understanding of responsibility to contribute to the community. Respect and value social, multicultural, cultural and personal diversity.
Communication	2	Effective and appropriate communication in both professional (intra and inter disciplinary) and social (local and international) contexts.
Teamwork, collaborative and management skills	2	Ability to recognise opportunities and contribute positively to collaborative scientific research, and to perceive the potential value of ideas towards practical applications. Demonstrate a capacity for self-management, teamwork, leadership and decision making based on open-mindedness, objectivity and reasoned analysis in order to achieve common goals and further the learning of themselves and others.
Information literacy	3	Ability to make appropriate and effective use of information and information technology relevant to your discipline.

⁵ Contextualised Science Graduate Attributes: <http://www.science.unsw.edu.au/our-faculty/science-graduate-attributes>

<p>Major Topics (Course Outline)</p>	<p>This is the structure of the course and lets you know what you are to learn. The lectures will be given primarily by academics from the School of Biological, Earth and Environmental Sciences but we will also bring in specialist scientists from Government Agencies, the University and other organisations to give you some idea of environmental scientists with jobs and the world's environmental problems and solutions. Always refer to this module to see where lectures fit. Sometimes they will not be sequential as consideration has to be made for some of the outside lecturers who have busy schedules.</p> <p>There are five modules with different numbers of lectures in each. Not all lectures will be sequential. You will see from this presentation that this is the framework of the course. Unless specified, lectures will be from Associate Lecturer Hayley Bates.</p> <p>Module 1 Introduction (Dr Hayley Bates) Sustainability Issues (Professor Richard Kingsford) Definitions of Sustainability (Professor Richard Kingsford) Environmental Science 1 and 2 (Professor Richard Kingsford)</p> <p>Module 2 Carbon, Water and Hydrogen Cycles (Professor Richard Kingsford) Distribution and Abundance of Organisms (Dr Hayley Bates) Biodiversity in Australia (Dr Hayley Bates) Disturbance Ecology (Professor Richard Kingsford)</p> <p>Module 3 Climate Change and Australian Ecosystems (Professor Lesley Hughes) Fire and Ecosystems (Dr Mike Letnic) Water, Rivers and River Regulation (Professor Richard Kingsford)</p> <p>Module 4 Land Degradation in Australia (Dr Alan Kwok) Pollution in Marine Ecosystems (Dr Graeme Clarke) Exotic Animal and Plant Species (Professor Richard Kingsford) Trade in Biodiversity – (Dr Dan Robinson) Future of Australian Terrestrial Ecosystems (Professor Mike Archer)</p> <p>Module 5 Conservation Policy and Management (Professor Richard Kingsford) Role of Zoos in Conservation (Dr David Slip, Taronga Conservation Society) Biodiversity Management (Dr Hayley Bates) Fisheries Management (Dr James Smith) Challenges in Managing Antarctica – (Assoc. Prof. Tracey Rogers) Protected Area management (Professor Richard Kingsford)</p>
<p>Relationship to Other Courses within the Program</p>	<p>This course is a six unit credit course in Semester 1 in Stage 1 of your degree. It will equip you for a number of different courses in Environmental Science and other courses in the University.</p>

4. Rationale and Strategies Underpinning the Course

Teaching Strategies	<p>Lectures</p> <p>There are two lectures a week. Lectures cover a lot of ground on global environmental problems as well as basic ecology. Lecturers are usually active in research and have well-established reputations in the fields in which they teach. At UNSW the people who teach you biology have made significant contributions to your area of study.</p> <p>Some lectures will be given by guest lecturers from outside of UNSW. This means their information will give you a different perspective that is usually from someone working in conservation biology. It is also examinable like the rest of the material presented in lectures.</p> <p>We do not take the roll at lectures but you would be surprised how much a lecturer notices from the front. It is up to you to attend and learn. There is also a positive relationship between attendance at lectures and final results. We need to make sure that we cater in our lecturing for the range of differences in background knowledge of first year students. So, the lectures will aim to encourage students with little or no background in biology. That means you do not treat lectures as a time to catch up on your social life. There are plenty of other times and places for this. It is also rude to your fellow students who want to follow the lecture and the lecturer. Disruption of lectures by talking, or other inappropriate behaviour, constitutes academic misconduct and we have to deal with those of you who continue to cause problems. Material in lectures may not be covered anywhere else, so you are strongly encouraged to attend lectures. Don't forget to turn your mobile phones off during lectures, practicals and tutorials.</p> <p>Practicals - general information</p> <p>More specific information for each of the practicals can be found in the later sections devoted to these practicals. All practical sessions are for three hours. There is a mixture of self-guided and set practical sessions.</p> <p>Set practical sessions of three hours occur on one of Tuesday 10am-1pm, 2pm-5pm, Wednesdays 10am-1pm, Thursday 10am-1pm, and 2pm-5pm, Friday 1pm- 4pm. You must attend one of these sessions when there is a set practical class. There are 6 set practicals (1-5 and 8) in weeks 2-9 and an additional two self-guided practicals, one to Taronga zoo and the other to the Australian Museum. The self-guided practicals incur an entry fee. You can do these at any time, including the designated practical times, however, they are designed primarily for weeks 7-10.</p> <p>You need to check and enrol in the practical sessions. There are limited places in each practical time slot. You have to pick a time for your laboratory and stick to that time. Numbers may be limited for some and so spots will be allocated on a first in first serve basis. With limited places in the laboratories for students, you may not get your first choice of laboratory times. Read the instructions in advance for each practical set out in the Practical section of this guide. Practical sessions will not be held every week but you must attend when they occur. The roll will be marked.</p> <p>The practical aspect of biology is so important that participation in practical classes is a fundamental requirement for the award of a pass. Should you be unable to attend your practical class for any reason, you should contact the BEES Student Office to arrange an alternate time in the same week. For unavoidable absences from practical classes that cannot be made up at an alternate time, you must contact the office and</p>
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	<p>provide a medical certificate. Any student who misses more than one practical class and does not provide a medical certificate to cover any such absence may be awarded an unsatisfactory failure (UF) grade for having failed to complete an essential element of the subject.</p> <p>This practical course is designed to explore just some of the many different ways of investigating ecology and sustainability as an environmental scientist. It is divided into five different practicals that will be linked to the lecture course.</p> <p>Each practical comes with an outline in this course book. You will have tutors to help you. There are a series of questions and exercises that you will need to answer for each of the practicals.</p> <p>For practical classes held in the lab you must bring:</p> <ul style="list-style-type: none"> - BIOS 1301 Ecology and Sustainability Manual. Read the instructions in advance for each practical and perform the set pre-lab quizzes on Moodle. - A laboratory coat and closed shoes (not sandals). This is required by Workplace Health and Safety (WHS) regulations, and you will not be permitted to participate in practicals if you are inappropriately clothed. - Material for recording your observations and findings appropriate for each class. These items include: a HD pencil, eraser and ruler.
<p>Rationale for learning and teaching in this course^{6,7}</p>	<p>Presentation of contemporary topics in lectures by leading researchers and practitioners is intended to build enthusiasm and learning in students. Case studies are discussed. Students are taught to be critical about information. In addition the practical course is intended to introduce students to the environment and ways in which different aspects of the environment and biodiversity can be measured.</p>

⁶[Reflecting on your teaching](#)

5. Course Schedule

Some of this information is available on the [Online Handbook](#)⁷ and the [UNSW Timetable](#)⁸.

Week	Lectures Date, Time & Location – Lecturers & Topics – Modules			Practical	Revision Sessions	Assessments
Week 2	Tuesday 7/3/17 9am-10am Matthews B	Hayley Bates Introduction	1	Practical 1: Ice breaker and Assignment 2 group allocation. (Room G01)		
	Friday 10/03/17 11am-12pm Matthews B	Professor Richard Kingsford Sustainability Issues	1			
Week 3	Tuesday 14/3/17 9am-10am Matthews B	Professor Richard Kingsford- Definitions of Sustainability	1	Practical 2: Centennial Park Field Trip (Check lab manual for location map) Time- same as your normal practical.		
	Friday 17/03/17 11am-12pm Matthews B	Professor Richard Kingsford Environmental Science 1 and 2	1			
Week 4	Tuesday 21/3/17 9am-10am Matthews B	Professor Richard Kingsford Carbon, Water and Nitrogen Cycle	2	Practical 3: Randwick Environment Park (Check lab manual for location map) Time- same as your normal practical.		
	Friday 24/03/17 11am-12pm Matthews B	Hayley Bates Distribution and Abundance of Organisms	2			
Week 5	Tuesday 28/3/17 9am-10am Matthews B	Hayley Bates Biodiversity in Australia	2	Practical 4: Biodiversity Measurement & Assessment. Leaf Litter and Flying Insects (Room G01)		
	Friday 31/03/17 11am-12pm Matthews B	Professor Richard Kingsford Disturbance Ecology	2			

✓ **Assessment 1:
Scientific Literature Quiz
& Scientific Report
Structure Quiz on
Moodle (5% total)**

DUE: Must be completed
by **Friday 31/3/2017**
(Week 5)

⁷ UNSW Virtual Handbook: <http://www.handbook.unsw.edu.au>

⁸ UNSW Timetable: <http://www.timetable.unsw.edu.au/>

Week	Lectures Date, Time & Location – Lecturers & Topics – Modules			Practical	Revision Sessions	Assessments	
Week 6	Tuesday 4/4/17 9am-10am Matthews B	Professor Lesley Hughes [Macquarie University] Climate Change and Australian Ecosystems	3	Practical 5: Landscape Investigations (GIS & Statistics) (Computer Rooms G11 & G07)	Revision Sessions run from weeks 8 to 13. Revision sessions are designed to provide a platform for students to engage, discuss and revise the core concepts presented in each lecture module. The revision sessions help students prepare for the final course exam. Attendance is optional. Please see Moodle for further details.	✓ Assessment 2: Biodiversity Measurement and Assessment Report (15%) DUE: Friday 28/04/2017	
	Friday 7/04/17 11am-12pm Matthews B	Dr Mike Letnic Fire and ecosystems	3				
Week 7	Tuesday 11/4/17 9am-10am Matthews B	Professor Richard Kingsford Waters, Rivers and River Regulation	3	Practical 6: Taronga Zoo & Practical 7: Australian Museum Practicals 6 and 7 are self-guided excursions. They can be completed at any time during weeks 7 to 10. You can also do these practicals whenever the zoo, museum and environment park are open and you have sufficient time. Check the details about payment and getting to these locations in the detailed practical info provided in your lab manual.			
	GOOD FRIDAY PUBLIC HOLIDAY (No Lecture)						
Week 8	Mid semester break (14 th to 23 rd April)			Practical 8: Measurement Techniques for Environmental Science (Room G01)			
	ANZAC DAY PUBLIC HOLIDAY (No Lecture on Tuesday)						
	Friday 28/04/17 11am-12pm Matthews B	Dr Alan Kwok Land Degradation in Australia	4				
Week 9	Tuesday 2/5/17 9am-10am Matthews B	Dr Graeme Clark Pollution in Marine Ecosystems	4	Practical 8: Measurement Techniques for Environmental Science (Room G01)			✓ Assessment 3: Threats to Global Biodiversity Video (15%) DUE: Friday 12/05/2017
	Friday 5/05/17 11am-12pm Matthews B	Professor Richard Kingsford Exotic Animal and Plant Species	4				
Week 10	Tuesday 9/5/17 9am-10am Matthews B	Dr Dan Robinson Trade in Biodiversity	4	No Practicals			
	Friday 12/05/17 11am-12pm Matthews B	Professor Mike Archer Future of Australian Terrestrial Ecosystems	4				

Week	Lectures Date, Time & Location – Lecturers & Topics – Modules			Practical	Revision Sessions	Assessments
Week 11	Tuesday 16/5/17 9am-10am Matthews B	Professor Richard Kingsford Conservation Policy and Management	4	No Practicals	Revision Sessions run from week 8 to 13.	✓ Assessment 4: Lab Manual (15%) DUE: Friday 19/05/2017
	Friday 19/05/17 11am-12pm Matthews B	Dr David Slip Role of Zoos in Conservation	5			
Week 12	Tuesday 23/5/17 9am-10am Matthews B	Hayley Bates Biodiversity Management (Vegetation clearing)	5			
	Friday 26/05/17 11am-12pm Matthews B	Dr James Smith Fisheries Management	5			
Week 13	Tuesday 30/5/17 9am-10am Matthews B	Associate Professor Tracey Rogers Challenges in Managing Antarctica	5			
	Friday 2/06/17 11am-12pm Matthews B	Professor Richard Kingsford Protected Area Management	5			
Study Period 5 th June to 8 th June 2017						
Exam Period 9 th June to 25 th June 2017						

6. Assessment Tasks and Feedback

Task	Knowledge & abilities assessed	Assessment Criteria	% of total mark	Date of		Feedback		
				Release	Submission	WHO	WHEN	HOW
Assessment 1: Scientific Literature Quiz & Scientific Report Structure Quiz on Moodle	Students are taught the importance of scientific literature. How to find appropriate peer reviewed articles to use as references for their assessments. Students are also assessed on the structure of a scientific report.	Two Moodle quizzes. Students must select the correct answers from the quiz.	5	Week 2	Anytime weeks 2 to 5 Must be completed by Friday 31/3/2017	From Moodle	Immediately after completion	From quiz
Assessment 2: Biodiversity Measurement and Assessment Report	Research skills, group work, data analysis, report writing skills.	Written presentation, analysis, framework for scientific report, references, accuracy of answers and overall conclusions.	15	Week 5	Week 8 Electronically via Moodle <u>DUE</u> : Friday 28/04/2017	Lab Demonstrator	Week 10	Via Moodle (see Moodle for details)
Assessment 3: Threats to Global Biodiversity Video (15%)	Knowledge of research topic. Creativity, science communication skills, research skills, ability to work as a member of a group.	Quality and presentation of information conveyed. Creativity, ability to work as a member of a team.	15	Week 2	Week 10 <u>DUE</u> : Friday 12/05/2017	Lab Demonstrator	Week 12	Via Moodle
Assessment 4: Lab manual	Independent learning, field skills, data collection, practical skills, data analysis and comparison,	Completion of practicals with correct answers. Ability to answer the comparative short response questions provided.	15	Week 3	Week 11	Lab Demonstrator	Week 13	Via Moodle
Total Practical Assessments			50	Study week		Administrator		Moodle
Final Exam	Knowledge of course	Content of lectures	50					Final Grade

7. Additional Resources and Support

Text Books	<p>No textbook is specified for this class but there is a list of suggestions of textbooks that will be held in the library for use throughout the semester by students:</p> <p>Attiwill, P. & Wilson, B. (2003). <i>Ecology: an Australian perspective</i>. Oxford University Press, Melbourne.</p> <p>Botkin, D.B. & Keller, E.A. (2011). <i>Environmental Science: Earth as a Living Planet</i> (8th Edition). John Wiley and Sons</p> <p>Campbell, N. A. & Reece, J. A. (2011). <i>Biology</i>, 9th Edition. Benjamin/Cummings, San Francisco, and Augée, M.L. & Fox, M. (1999). <i>Biology of Australia and New Zealand</i>. Benjamin Cummings, Redwood City (a supplement to Campbell <i>et al.</i>)</p> <p>Keith, D. (2004). <i>Ocean shores to desert dunes. The native vegetation of NSW and the ACT</i>. NSW Department of Environment and Conservation, Sydney.</p> <p>As well, you will have access to particular scientific papers suggested by individual lecturers.</p> <p>A biological dictionary can be very useful. The campus book shop usually has several different dictionaries. Highly recommended is “Henderson's Dictionary of Biology 14th edition (2008) Pearson: Benjamin Cummings”.</p>
Course Manual	<p>BIOS 1301 Ecology and Sustainability. Available in hardcopy from the UNSW Bookshop or as a pdf on the Moodle course page.</p>
Required Readings	<p>See text book above</p>
Additional Readings	<p>Provided via the Moodle course page</p>
Recommended Internet Sites	<p>Provided via the Moodle course page</p>
Societies	<p>Provided via the Moodle course page</p>
Laboratories or Study Spaces	<p>Practicals take place in different locations each week. Please refer to the course schedule and Moodle course page.</p>

8. Required Equipment, Training and Enabling Skills

Equipment Required	<p>Practical equipment</p> <p>You will need to bring equipment (to all practicals) and ensure that you wear the correct clothing and footwear for field trips and laboratory practicals.</p> <p>You will need:</p> <ul style="list-style-type: none">• A lab coat (obtainable at University shops on campus or the BSB office)• The course manual (this book)• Material for recording your observations and findings as appropriate for each class. These items include: a HB pencil, eraser, ruler, lined paper for written observations and plain paper for drawings. <p>YOU MUST WEAR APPROPRIATE ENCLOSED TOE SHOES (NOT OPEN SANDALS) & A LABORATORY COAT WHILST IN THE LABORATORIES.</p>
Enabling Skills Training Required to Complete this Course	N/A

9. Course Evaluation and Development

Mechanisms of Review	Last Review Date	Comments or Changes Resulting from Reviews
Major Course Review	2015-2017	A course update is currently in progress. We will be trialing new assessments and practicals in Session 1, 2017.

CATEI ¹¹	2016	<p>Course feedback provided by students on CATEI has been used to modify this course over the last 2 years.</p> <p>We have added more practicals. Existing practicals have become more hands on. Apps have been created to use and complement the practicals. Assessments have been changed.</p> <p>Revision Sessions take place allowing student to engage with teachers on a regular 1-1 basis.</p>
Other	<i>Selection of student CATEI (course review) comments for BIOS1301 2016</i>	<ul style="list-style-type: none"> • Very interesting, interactive practicals and excursions, very informative and engaging lab lessons. • Lectures relate to real world situations • Great variety of subjects and guest lecturers. The course content made it interesting and engaging. • Interesting case studies at the beginning of the lectures. I liked the lectures on climate change. The labs were also engaging and fun. • The lectures were very good. It was really interesting content and I thorough enjoyed this course. The labs were interesting and the assessment methods were good. <p>https://moodle.telt.unsw.edu.au</p>

¹¹ CATEI process: <http://www.science.unsw.edu.au/our-faculty/course-and-teaching-evaluation-and-improvement-catei>

10. Administration Matters

Expectations of Students	<p>It is up to you to attend and learn. The practicals and revision sessions are your best point of contact to obtain help.</p> <p>Practicals are compulsory and the roll will be marked. More specific information for each of the practicals can be found in the later sections devoted to these practicals. All practical sessions are for three hours. A practical attendance of more than 80% is required to receive a pass mark for this course.</p> <p>Where to go for help</p> <p>You should always check for course information provided on the internet (Moodle). Please check this first and constantly check for updates on changes to times for laboratories, upcoming assessment tasks and when they are due.</p> <p>The BSB Student Office (Ground Floor Biological Sciences Building, room G27) is where to go for help with any administrative matters to do with BIOS1301, alternatively you can contact the course administrator Hayley Bates via the course email Bios1301@unsw.edu.au</p> <p>Information of interest to students enrolled in courses within BEES is posted from time to time on the Student Office screen. This information will include notice of various meetings and seminars. As a university student you are encouraged to attend any of the various research seminars held in the Faculty of Science and you should not hesitate to take advantage of such opportunities. Please check the notice board every week.</p> <p>There is also a wealth of information for students on the School's web site http://www.bees.unsw.edu.au/. Depending on your interest, you can find out about courses, future postgraduate opportunities and even the research areas of your lecturers.</p> <p>Academic matters</p> <p>The first contact for help with course work is a demonstrator (i.e. the person who is present at one of the practical sessions). Consult the demonstrator if you have any difficulty with the subject material. There is a demonstrator for each bench in the laboratory. In some cases your demonstrator will also be the laboratory supervisor, or alternatively a demonstrator may refer you to the supervisor or the course administrator (H.Bates). Outside of class time all BIOS1301 enquires should be directed to bios1301@unsw.edu.au.</p> <p>Absence</p> <p>If, due to sickness or some equally compelling reason, you must miss a practical the first thing you should do is contact Hayley Bates via the course email in the same week as the missed day in order to see if it is possible to slot you in with another class. One day of sickness does not grant an automatic one week extension. If your absence is on the day of a test or examination, a zero mark will be recorded unless a medical certificate covering that day is submitted to the Student Office. If your certified absence is from a test or examination you must be prepared to do an equivalent assessment in subsequent weeks. Like all rules, these may not fit every situation. If you have a problem that is not covered, please ask Hayley Bates or e-mail Bios1301@unsw.edu.au. Most problems are easily solved with timely notice.</p>
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	<p>Deadlines Deadlines are all clearly set out in this guide (see assessment). Only in exceptional circumstances will extensions be granted, and that must be arranged with your practical supervisor, and the class record annotated appropriately.</p> <p>Assignments submitted after the due date will be penalised at the rate of 10% per day unless accompanied by a medical certificate and special consideration application. All outstanding assignments must be handed in by the end of Week 13. Work will only be accepted after this date if accompanied by a special consideration application. (This is School 'policy'.)</p> <p>If all else fails The academic responsible for BIOS1301 Ecology and Sustainability is Richard Kingsford. To make an appointment to see him, inquire at BIOS1301@unsw.edu.au.</p>
<p>Assignment Submissions</p>	<p>You should be aware that there is a 10% reduction for every week day that any assignment is late unless covered by a medical certificate and special consideration claim (lodged via myUNSW).</p>

<p>Work Health and Safety¹²</p>	<p>UNSW takes matters of Work Health and Safety policies very seriously. You should be aware of your responsibilities (http://www.safety.unsw.edu.au/).</p> <p>General conduct A laboratory is for serious work not horseplay. Eating, drinking or smoking in laboratories is not allowed. Further- no food should be brought into a laboratory. Students must read the instructions to their laboratories carefully beforehand and be aware of all possible hazards.</p> <p>No undergraduate students will be allowed to work in the laboratories outside class hours without permission and some supervision.</p> <p>All accidents and injuries must be reported to the lecturer or demonstrator in charge of the practical class for treatment if necessary. A 'Hazard/Incident' report should be filled in if an accident or incident occurs without causing an injury. With injury, an additional 'Injury/Loss of Time' report is also required.</p> <p>Never dispose of broken glass or other dangerous rubbish in waste paper baskets. Put broken glass into bins marked 'broken glass' and other sharp objects labeled 'sharps' or 'contaminated sharps'.</p> <p>Secure all gas cylinders to walls or benches. They should not stand free or lie on the floor. Cylinders that have to be moved from place to place should be held in non-topple frames.</p>
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¹² [UNSW OHS Home page](#)

Laboratory and protective clothing

Clothes should protect your body and not be highly inflammable. Laboratory coats are essential in all laboratories. You will be asked to leave if a supervisor feels your attire puts you at risk. Where necessary, safety equipment will be provided and should be used as directed.

Closed-in shoes are compulsory so they can give adequate protection against corrosive liquids and cuts. Persons wearing thongs or arriving in bare feet will not be allowed into practical classes.

Fire hazards

Preventing fires

Most fires in laboratories can be prevented by adequate precautions and forethought. Never use flames near volatile, inflammable solvents. If any inflammable solvents are spilled on the floor they should be mopped up and the room well ventilated. Never use a fan to disperse the vapour. Most fans make sparks and are a potential source of ignition.

Students with long hair should tie it up while working in the laboratory, since long, loose-hanging hair can be a nuisance and a serious fire hazard.

Use of fire extinguishers

Electrical fires must not be fought with liquid-foam extinguishers dry powder, CO₂ or BCF (Bromochlorodifluoromethane) types are more suitable. Fires caused by **sodium** should not be fought with liquid-foam or CO₂. Use solid powder or BCF.

Report any use of a fire extinguisher so that the cylinder can be refilled. After using BCF or CO₂ extinguishers, ventilate the area thoroughly to remove vapours.

If clothes catch fire

1. If your own clothing catches fire

Do not run. If there is no one to help you, promptly lie on the floor and roll over and over to smother the flames.

2. If another person's clothing catches fire

Force the person to lie down on the floor immediately. This prevents the flames from reaching the eyes and entering the nose. Roll the person over and over on the floor to smother the flames. A fire blanket or laboratory coat may be used to smother the flames. **Never** use a chemical fire extinguisher.

Evacuation

If there is a fire, explosion or other major calamity an alarm will sound.

Follow the instructions from your lecturer or demonstrator. Close all the doors and windows if possible. Quickly check to see that everyone is out of the room. Move steadily to the nearest stair well and out of the building. **Do not**

use the lifts. Assemble in the grassy area in front of the Biological Science Building. Supervisors should bring the class roll and check that everyone has left the building.

Accidents

Fire or serious injury

Telephone 56666 and then describe carefully:

- The location of the emergency, giving the name of the building, the floor and the room number.
- The type of emergency.
- Your name and extension number.

Minor injuries

Telephone the University Health Service on 55425 or 55426 or 55427.

First Aid

First Aid may be obtained by phoning:

Ms Rosa Ascencio	9385 2016
Mr Chris Myers	9385 8031
Mr Frank Hemmings	9385 3274
Ms Rochelle Johnston	9385 3257
Ms Penny McCracken	9385 8054
Ms Shinoo Swapnil	9385 1647
Ms Joanne Wilde	9385 3257
Mr Geoff McDonnell	9385 2077

Acid splashes on skin should be washed well with water. If they are painful, advise the lab supervisor immediately.

In case of an electric shock, shout for help. Disconnect the current or remove the person from the current using some **insulated** material. If there is no pulse and no breathing, start external cardiac compression and mouth to mouth artificial respiration. When the pulse and breathing have been restored get medical aid immediately. If high voltage current is involved, **do not** attempt to assist the person until the current has been disconnected at the mains.

(FOR ADDITIONAL INFORMATION SEE THE COPY OF THE UNIVERSITY'S SAFETY MANUAL IN THE LECTERN IN EACH LABORATORY)

<p>Assessment Procedures</p> <p>UNSW Assessment Policy¹³</p>	<p>Assessment Breakdown</p> <p>Assessments 50%</p> <p>Final exam 50%</p>
<p>Equity and Diversity</p>	<p>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 (9385 4734 or http://www.studentequity.unsw.edu.au).</p> <p>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. Information on designing courses and course outlines that take into account the needs of students with disabilities can be found at: www.secretariat.unsw.edu.au/acboardcom/minutes/coe/disabilityguidelines.pdf</p> <p>Language Difficulties</p> <p>Biology deals with many concepts which have to be explained in words. This requires careful and accurate use of English. In addition biology, as with any discipline, has its own specialist language which you will need to learn. In some cases particular words have a specialised use in biology which is different from their everyday meaning.</p> <p>The textbook contains an extensive glossary, and most terms are explained when first introduced. In addition lecturers and demonstrating staff will explain new terms. We don't expect you to pick up this new vocabulary instantly, but eventually it will become second nature.</p> <p>If you do not have a good command of English you may find the course difficult. UNSW provides a range of opportunities for you to improve your language skills - if you are having difficulty please contact the Learning Centre 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 (9385 4734 or http://www.studentequity.unsw.edu.au/).</p> <p>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.</p>

¹³ [UNSW Assessment Policy](#)

¹⁴ [Student Complaint Procedure](#)

Student Complaint Procedure¹⁴	Contacts
	<p style="text-align: center;">School's Grievance Officer.</p> <p>In all cases you should first try to resolve any issues with the course convenor. If this is unsatisfactory, you should contact the School Student Ethics Officer (A/Prof Stephen Bonser, s.bonser@unsw.edu.au) or the Deputy Head of School (A/Prof Scott Mooney s.mooney@unsw.edu.au) who is the School's Grievance Officer and Designated Officer under the UNSW Plagiarism Procedure. UNSW has formal policies about the resolution of grievances that can be reviewed in MyUNSW A to Z Guide (see https://student.unsw.edu.au/complaints).</p> <p>Faculty Contact Dr Chris Tisdell Associate Dean (Education) cct@unsw.edu.au Tel: 9385 8223</p> <p>University Contact Dr Gavin Edwards Associate Dean (Undergraduate Programs) g.edwards@unsw.edu.au Tel: 9385 8063</p>

11. UNSW Academic Honesty and Plagiarism

What is Plagiarism?

Plagiarism is the presentation of the thoughts or work of another as one's own.

*Examples include:

- direct duplication of the thoughts or work of another, including by copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

For the purposes of this policy, submitting an assessment item that has already been submitted for academic credit elsewhere may be considered plagiarism.

Knowingly permitting your work to be copied by another student may also be considered to be plagiarism.

Note that an assessment item produced in oral, not written, form, or involving live presentation, may similarly contain plagiarised material.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

The Learning Centre website is main repository for resources for staff and students on plagiarism and academic honesty. These resources can be located via:

www.lc.unsw.edu.au/plagiarism

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle
† Adapted with kind permission from the University of Melbourne

BEES Academic Honesty and Plagiarism

Please note:

In addition to the UNSW Policy on Academic Honesty and Plagiarism, the School of Biological, Earth and Environmental Sciences (BEES), also considers any work submitted that has been produced outside of a given course in a given year to be plagiarism i.e.:

* Work produced for a third party e.g. your place of employment, is considered intellectual property of the third party, and as such if such work is submitted in place of a required course work, it is deemed plagiarism.

* All work submitted for assessment must be created specifically for the given assessment task in the given year. Work produced in previous years or for other assessments is not acceptable.