



Course Outline

SCIF1131

Introductory skills for science

School of Biological, Earth
and Environmental Sciences

Term 1 2021

1. Staff

Position	Name	Email	Consultation times and locations
Course convenor	Torsten Thomas	scif1131@unsw.edu.au	During course via email or online
Course convenor	David Edwards	scif1131@unsw.edu.au	During course via email or online
Tutors	Lee-Ann Rollins, Russell Bonduriansky, Carol Oliver, Tracey Rogers, Robert Brooks, Suhelen Egan, Daniel Falster, Will Cornwell, Losia Nakagawa-Lagisz, Shinichi Nakagawa, Richard Kingsford, Michael Kasumovic		Class time only

2. Course information

Units of credit: 6

Teaching will be online. Links to the online resources can be found in the course's Moodle page.

Tutorials will be held synchronous and students need to be enrolled into one of the four following teaching times: Thursday 10am-12pm, Thursday 2-4pm, Friday 10am-12pm or Friday 2-4pm. Tutorial will be held in weeks 1-5 and 8-10.

A course introduction will be given as a seminar in week 1 (Monday 12pm – 2 pm). A course conclusion may be given in week 10 (Monday 12pm – 2 pm).

2.1 Course summary

This course will teach a range of professional skills and attributes to be successful and productive scientist. These include presentation and communication skills, the ability to access and evaluate large amounts of existing scientific information, management of large and complex projects, high ethical standards and an understanding of the impact and opportunities of science. Very few of these skills and attributes are used in isolation. Connections between individuals, as well as building on past and present ideas, are essential for scientific work and the course will provide opportunities to develop collaborations and networks for this.

2.2 Course aims

The course aims to provide students with:

1. Practise in graduate attributes

This course aims to explore through instructions, activities and assessment tasks a range of skills relevant to an academic and professional future.

2. Enable students to recognise those skills which may need further development through their studies

These graduate attributes cannot be mastered in one course, but students can recognise those which need to be honed through their academic career. Students will also reflect on their future professional opportunities and pathway.

3. Opportunity to connect with other students in Advanced Science, Advanced Mathematics and related Programs

The course engages students with each other, encouraging an exchange of experiences and ideas. This connection builds a cohort, bringing with it a sense of belonging to an academic and professional community, in an environment which can be isolating.

4. Provide an insight into what it is like to be a science professional

Through research and collaboration, students will learn how to address a scientific question/topic. They will also learn how other scientists have progressed their own research.

2.3 Course learning outcomes (CLO)

By the end of the course students will have:

1. Recognise the characteristics of effective communication and apply them to their writing and speaking, identifying areas for personal improvement. Students will practice and enhance their ability to communicate through writing, presentation and oral communication.

2. Work collaboratively throughout the term in a group, drawing together discipline-specific knowledge and professional skills. Students will enhance their ability to work within groups to address a scientific topic and produce a presentation.

3. Identify the skills needed for problem solving, critical thinking and apply them to achieve initiative and creativity. Students will develop attitudes towards personal initiative and be provided with the opportunity to refine independent thoughts.

4. Integrate discipline specific skills with professional capabilities and reflect on what it means to be a skilful scientist. Students will understand what is required to be a scientist and reflect about their own future professional development.

2.4 Relationship between course and program learning outcomes and assessments

Course Learning Outcome (CLO)	LO Statement	Program Learning Outcome (PLO)	Related Tasks & Assessment
CLO 1	Effective communication	Communicate ideas and knowledge in a variety of formats to diverse audiences	Assessments 1 and 3
CLO 2	Collaboration and group work	Demonstrate the ability to work in a group and generate outcomes	Assessment 3
CLO 3	Problem solving, critical thinking, initiative and creativity	Demonstrate critical thinking and problem-solving skills	Assessments 1, 2 and 3
CLO 4	Discipline-specific professional skills	Demonstrate a coherent knowledge of the underlying disciplines and concepts in one or more disciplines	Assessments 1, 2 and 3

3. Strategies and approaches to learning

3.1 Learning and teaching activities

The graduate attributes and skills will be practised in weekly online tutorial. These tutorials will rely heavily on group discussion and participation to practise and consolidate concepts.

3.2 Expectations of students

- **Attendance**

Student attendance will be recorded for the online tutorials and seminars. Absences must be explained by a medical certificate or equivalent. Any student with an unexplained absence will forfeit the marks for assessable tasks from that tutorial, and there will be no means for regaining those marks.

- **Communication**

There are several means of communication associated with this course:

- All course-wide information will be placed in the announcement section of Moodle. Please regularly read all these postings as they will be relevant to every student in the course.
- Students can ask questions via the Q & A forum in Moodle and the course convenors will answer them in a timely manner. It is worthwhile to read all these question and answers as they may give you the information you need.
- Important information will be emailed directly to your UNSW email address. If you wish to email questions to the course convenor, you are required to use your UNSW email address.

Students are expected to read all postings and emails pertaining to the course, as this can clear up uncertainties.

4. Course schedule and structure

This course consists of 2-hours weekly tutorials and a 2-hour seminar class in Weeks 1 and 10. You are expected to take an additional 3-4 hours per week outside these class to participate in group meetings and complete assessment tasks, on-line activities and preparation.

The tutorial program and assessment activities are as follows:

Week	Tutorial class	Seminar class	Activities and/or assessments
Week 1	Building a career in science	Course introduction	- Topic selection and group formation - Personality test
Week 2	Visual and oral presentation		Calibration exercise
Week 3	Searching and understanding scientific literature		Group agreement
Week 4	Writing for readers		- Group work - Science lectures
Week 5	Scientific literacy 1: data processing, analyses, synthesis and beyond		- Group work - Science lectures
Week 6	Good Friday – no tutorial		Planning presentation
Week 7	Flexibility week – tutorial		Group work
Week 8	Impact of science on policy		Group work
Week 9	Scientific literacy 2: Reproducibility crisis, transparency and questionable research practices		Group work
Week 10	Ethics	Course conclusion	- Final presentation and peer-review - internship application

5. Assessment

5.1 Assessment tasks

Assessment task	Mark	Due date
Assessment 1: Internship application	36%	Week 10
Assessment 2: Tutorial and lecture assessment	29%	Various times (please see assessment description and timetable in Moodle)
Assessment 3: Presentation	35% (2% group agreement: group-based mark) (6% planning presentation: group-based mark) (22% final presentation: group-based mark) (5% peer-assessment: individual-based mark)	Week 3 Week 6 Week 10 Week 10

Further information

UNSW grading system: student.unsw.edu.au/grades

UNSW assessment policy: student.unsw.edu.au/assessment

5.2 Assessment criteria and standards

Rubrics for assessment tasks will be provided in Moodle. In general, task criteria will include effective, precise and engaging communication, evidence of effective and productive group work, participation in set tasks and demonstration of professional skills.

5.3 Submission of assessment tasks

Submission of the assessment tasks will be through Moodle. Feedback will be via Moodle, with marks provided in the Moodle gradebook.

Late submissions will be penalised at a rate of 10% per day (including weekends and public holidays), unless Special Consideration is sought. Appropriate notification to the course convenor, along with an application and documentation submitted in Special Consideration link in myUNSW, is required (see Administrative Matters below).

5.4 Feedback on assessment

Unless stated otherwise, feedback will be provided within two weeks of submission depending on the nature of the task.

6. Referencing, academic integrity, 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 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 ideas of others 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 student.unsw.edu.au/plagiarism, **and**
- The *ELISE* training site subjectguides.library.unsw.edu.au/elise

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

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

7. Readings and resources

All resources and on-line modules will be provided in Moodle.

8. Administrative matters

School information	There is 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.
Occupational Health and Safety	Information on relevant Occupational Health and Safety policies and can be found on the following website: http://www.bees.unsw.edu.au/health-and-safety http://safety.unsw.edu.au (UNSW OHS Home page)
Equity and Diversity	<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 or https://www.edi.unsw.edu.au/students/disability/equitable-learning-services. Issues to be discussed may include access to materials, signers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.</p> <p>Language Difficulties: Science deals with many concepts, which must be explained in words. This requires careful and accurate use of English. In addition, science, 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 science, which is different from their everyday meaning. We do not expect you to pick up this new vocabulary instantly, but eventually it will become second nature. 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 (https://student.unsw.edu.au/skills).</p>
Special consideration	<p>Students who believe that their performance may have been affected by illness or other circumstances may apply for special consideration. Applications can be made for compulsory class absences, such as tutorials and assessments tasks. Students must make a formal application for Special Consideration for the course/s affected as soon as practicable after the problem occurs and within three working days of the assessment to which it refers.</p> <p>Students should consult the “Special Consideration” section of the UNSW current students’ website for further information https://student.unsw.edu.au/special-consideration.</p> <p>HOW TO APPLY FOR SPECIAL CONSIDERATION: Applications must be made via Online Services in myUNSW. You must obtain and attach Third Party documentation before submitting the application. Failure to do so will result in the application being rejected. Log into myUNSW and go to MyStudent Profile tab > My Student Services channel > Online Services > Special Consideration. After applying online, students must also verify their supporting documentation by submitting to UNSW Student Central:</p> <ul style="list-style-type: none"> • Originals or certified copies of your supporting documentation (Student Central can certify your original documents), and

	<ul style="list-style-type: none"> • A completed Professional Authority form. <p>The supporting documentation must be submitted to Student Central for verification within three working days of the assessment or the period covered by the supporting documentation. Applications which are not verified will be rejected. Students will be contacted via the online special consideration system as to the outcome of their application. Students will be notified via their official university email once an outcome has been recorded.</p>
Student complaint procedure	<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 complaints that are available online for review (see https://student.unsw.edu.au/complaints).</p>

9. Additional support for students

- The Current Students Gateway: student.unsw.edu.au
- Academic Skills and Support: student.unsw.edu.au/skills
- Student Wellbeing, Health and Safety: student.unsw.edu.au/wellbeing
- Equitable Learning Services: student.unsw.edu.au/els
- UNSW IT Service Centre: myit.unsw.edu.au/services/students