



THE SCHOOL
FOR FIELD STUDIES

Directed Research SFS 4910

Syllabus

The School for Field Studies (SFS)
Centre for Rainforest Studies
Queensland, Australia

This syllabus may develop or change over time based on local conditions, learning opportunities, and faculty expertise. Course content may vary from semester to semester.



COURSE CONTENT SUBJECT TO CHANGE

Please note that this is a copy of a recent syllabus. A final syllabus will be provided to students on the first day of academic programming.

SFS programs are different from other travel or study abroad programs. Each iteration of a program is unique and often cannot be implemented exactly as planned for a variety of reasons. There are factors which, although monitored closely, are beyond our control. For example:

- Changes in access to or expiration or change in terms of permits to the highly regulated and sensitive environments in which we work;
- Changes in social/political conditions or tenuous weather situations/natural disasters may require changes to sites or plans, often with little notice;
- Some aspects of programs depend on the current faculty team as well as the goodwill and generosity of individuals, communities, and institutions which lend support.

Please be advised that these or other variables may require changes before or during the program. Part of the SFS experience is adapting to changing conditions and overcoming the obstacles that may be present. In other words, the elephants are not always where we want them to be, so be flexible!

Center Research Direction

The Centre for Rainforest Studies' research plan addresses the question: *How can the future of the Wet Tropics in a changing world be ensured?* Staff and students of SFS-CRS investigate this topic by engaging in research under three core components:

1. Understanding ecological and social systems;
2. Conflict, vulnerability and change;
3. Effective response to change.

Through our research, we aim to assist a range of stakeholders and research partners. These include local landholders; non-government conservation organisations conducting rainforest restoration or having a special interest in flora and fauna; several levels of government, particularly local and state government; regional research organisations, including universities and the Commonwealth Scientific and Industrial Research Organisation.

We aim to improve stability, sustainability, environmental awareness, and concern for natural resources in the Wet Tropics, in particular on the Atherton Tablelands. Our goal is to strengthen research, technical and practical collaboration between SFS-CRS and other research organizations, governmental agencies and non-governmental organizations to carry out this agenda.

Course Overview

The aim of this course is to provide students with the opportunity to apply ecological, biological, and/or social-scientific methods to a field research project that addresses a local issue related to the environment. This course prepares students to distinguish hidden assumptions in scientific approaches. We will also investigate the ways that various methods and theories differentiate (or do not) fact from interpretation, cause from correlation, and advocacy from objectivity. Through the Directed Research projects, students will contribute to a growing body of scientific research that informs local conservation and resource management decisions and furthers the Center's research agenda.

Each student will join a faculty-led team that will carry out field research, data analysis, and communication of results in one or across several of the following disciplines: ecology, natural resource management, and social sciences. The Directed Research course is designed to build on the information students have learned in the topical courses as well as Directed Research lectures and workshops specifically designed to assist students in understanding the scientific process, testing hypotheses and presenting results in both written and spoken formats (see below for these courses).

Some of the research projects being conducted this semester are still being finalized, pending discussions with collaborators and the outcomes of Scientific Purposes and ethics applications.

Assessment

You will present your DR projects in the standard scientific formats of a peer-review style report and a conference style presentation. You will also be graded on your data management/proposal. Comprehensive details of all assignments will be provided separately, see below for the general descriptions and expectations.

Assessment Item	Value (%)
Final Report	70
Oral Presentation	15
Poster	5
Data Management/proposal	10
TOTAL	100

Final Report: The final report is written in the style of a submission to a peer-reviewed journal in the appropriate field. You will have ample opportunity for guidance from your DR supervisor(s) throughout the DR period and especially during data collection, data analysis and draft writing. The analytical tools for research workshops in the DR course (and complementary classes in other courses) are designed to prepare you for producing the Results section and improve the quality of your work. The breakdown of marks awarded (out of 100) for the final report are as follows: Abstract (10); Introduction (25); Methods (10); Results (20); Discussion (30%), and; References (5).

Oral Presentation: You will present a subset of your DR work in a conference style presentation of 12 min length with additional time for questions. Unless the scope of your DR project is very small, you should not attempt to squeeze in everything from your final report into this presentation. Making sure that you are within the time limit is a very important skill and so thorough rehearsal is important.

Poster: You will design and produce a poster from your research to display at our Community Presentation function. The format for the poster will be provided by faculty.

Data Management: It is important to record and store research data in a manner that is useful. You will need to provide (as applicable) Excel sheets with your research data in a format that is intelligible to someone else. You may need to provide both raw and manipulated data you used to create figures, tables and to run statistical tests. You need to annotate your spreadsheets (use text boxes if appropriate) so that an outsider can understand what the data are. You may be required to provide field notes on your findings for review.

OR

Proposal (Socio-econ DR): Students who will be involved in the EP, Socio-economic Value and Syntropic farming DR project will be required to come up with proposals consisting of an introduction and methods sections.

Collaborative and Individual research options

Students will be expected to follow either an individual or collaborative research track. Collaborating students will undertake the assessment tasks collaboratively and will be awarded marks based on their supervisor and peer-assessed level of contribution to the group effort. Each group member will complete a confidential **"marks allocation form"** indicating the percentage contribution of individual members to the assessment task. Students following the individual track will be graded based on their sole effort.

In awarding the final individual marks to collaborating students, the supervisor will not necessarily be bound by the peer-assessed distribution of the marks.

Grading Scheme

A	95.00 - 100%	B+	86.00 - 89.99%	C+	76.00 - 79.99%	D	60.00 - 69.99%
A-	90.00 - 94.99%	B	83.00 - 85.99%	C	73.00 - 75.99%	F	59.99-00.00%
		B-	80.00 - 82.99%	C-	70.00 - 72.99%		

General Reminders

Plagiarism: Using the ideas and material of others without giving due credit, is cheating and will not be tolerated. A grade of zero will be assigned if anyone is caught cheating or aiding another person to cheat actively or passively (e.g., allowing someone to look at your exam). All assignments unless specifically stated should be individual pieces of work.

Deadlines: Deadlines for written and oral assignments are instated for several reasons: they are a part of working life to which students need to become accustomed and promote equity among students. Deadlines allow faculty ample time to review and return assignments before others are due.

Late assignments will incur a 10% penalty for each day that they are late. No assignment will be accepted after three days. Assignments will be handed back to students after a one-week grading period.

Participation: Since we offer a program that is likely more intensive than you might be used to at your home institution, missing even one lecture can have a proportionally greater effect on your final grade simply because there is little room to make up for lost time. Participation in all components of the program is mandatory because your actions can significantly affect the experience you and your classmates have while at SFS. Therefore, it is important that you are prompt for all DR activities, bring the necessary equipment for field research, and simply get involved.

Course Content

DR Coursework Component: The coursework component of the DR is designed to prepare students to conduct scientific research. The lectures are delivered throughout the semester, in conjunction with the topical courses, so that students are well prepared to work with their faculty mentor on meaningful research.

L: Lecture, FL: Field Lecture, FEX: Field Exercise, T: Test, D: Discussion or Breakout Session.

No.	Lecture Title and Description	Type	Time (hrs.)
DR01	DR Course Introduction	L	1.5
DR02	Introduction to Scientific Writing & Reading Explore the difference between primary and secondary sources; expectations and standards of scientific writing; describe expectations for DR papers.	L	1.5
DR03	Research Ethics Introduce students to the ethical considerations involved in research (e.g. human subject's protection, data integrity and management).	L	2
DR04	Risk & Time Management in Field Research	L	1
DR05	Effective Scientific Communication Skills Students will understand the importance of practicing scientific communication skills (oral and poster presentations) and start to think about how to address different audiences.	L	2
DR06	Introduction to Statistical Analysis You will be given a brief introduction to basic statistical analyses during a series of three workshops: a. Introduction to basic statistics; describing a single population (descriptive statistics, 95% confidence intervals, 95% prediction intervals); comparing two or more groups (<i>t</i> -tests and one-way ANOVA). b. Relationships between variables (correlations and regressions). c. Analysing proportions (chi-square test of independence).	L/LAB	4.5
DR07	Project Development & Proposal Faculty and students will meet to refine their specific DR topics.	D	2
	Total		12

DR Research Component: The rest of the DR course is made up of research time, which includes: data collection; synthesis; and dissemination.

<i>Research Component Activity</i>	Days Allocated
Data Collection Students work within their DR group to go into the field to collect data	11
Data Synthesis Students work closely with their faculty mentors to analyze their collected data and write up their findings in a structured scientific paper	8
Research Dissemination Students prepare, practice, and then deliver presentations for both internal SFS and community audiences.	3
Total	22 days