



The University of Southern Queensland

Course Specification

Description: Research Practice and Ethics B

Subject	Cat-Nbr	Class	Term	Mode	Units	Campus
SCI	4406	24369	2, 2003	ONC	1.00	TWMBBA

Academic Group:	FOSCI
Academic Org:	FOS002
HECS Band:	2
ASCED Code:	019999

STAFFING

Examiner: Michael Kotiw

Moderator: Grant Daggard

RATIONALE

In the contemporary world, science and technology are increasingly seen as fundamental for human progress and survival. As the power of technology has increased, ethical considerations in the practice of science have become a critical component in the interaction between science and society. Additionally, the limited ability of society to support scientific research has led to ever increasing competition for these resources and emphasised the need for skills in both scientific communication and information technology. This course is designed to allow students to appreciate the role of philosophy and ethics in the practice of science and to be aware of, and develop, a range of communication skills required to successfully pursue a career in scientific research.

SYNOPSIS

This course is designed to build on scientific communication skills previously developed in Research Practice and Ethics A. The modular structure of the course is designed to allow the student to investigate a number of major contemporary issues in science including: the role of criticism and debate, ethics in science, scientific fraud, patenting and other legal issues. In addition, students are given an understanding of the principles involved in obtaining funding for scientific research.

OBJECTIVES

On successful completion of this course students will be able to:

- demonstrate skills in verbal and written presentation and critique of scientific data;
- demonstrate an awareness of contemporary ethical issues in science;
- demonstrate skills in the preparation and presentation of research grant applications;
- use computerised data base searching facilities.

TOPICS

Description	Weighting (%)
1. The course will consist of up to six modules of which four will be assessed. Modules to be undertaken, from the following list, will be designated by the course examiner at the commencement of the semester. 1. Database searching and referencing	10.00
2. Powerpoint presentations	10.00
3. Experimental Design and Analysis	10.00
4. Scientific Writing	10.00
5. Conference Presentation	10.00
6. Philosophy of Science	10.00
7. Criticism in Science	10.00
8. Ethical Issues in Science (I): Animal Ethics and Medical Research	10.00
9. Ethical Issues in Science (II): Legal Issues	10.00
10. Funding Science Each module will normally consist of two 2 hour sessions led by a module coordinator.	10.00

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Booth, V. 1992, *Communicating in Science, Writing a Scientific Paper and Speaking at Scientific Meetings*, 2nd edition, Cambridge University Press, Cambridge.

Briscoe, M.H. 1996, *Preparing Scientific Illustrations - A Guide to Better Posters, presentations and publications*, 2nd edition, Springer- Verlag, New York.

Daly, J. 1996, *Ethical Intersections, Health Research methods and Researcher Responsibility*, Allen & Unwin Publishers, Sydney.

Day, R.A. 1995, *How to Write and Publish a Scientific Paper*, Cambridge University Press, Cambridge.

Englehardt, H.T. 1996, *The Foundations of Bioethics*, Oxford University Press, New York.

Eunson, B. 1995, *Writing Technical Documents*, John Wiley, Brisbane.

Kimmel, A.J. 1996, *Ethical Issues in Behavioural Research*, Blackwell, Cambridge.

Lobban, C.S. and Schefter, M. 1992, *Successful Laboratory Reports; A manual for science students*, Cambridge University Press, Cambridge.

Oldroyd, D. 1986, *The Arch of Knowledge*, NSWUP, Kensington.

Oldroyd, D. 1982, *Science and Ethics*, NSWUP, Kensington.

Riggs, R.J. 1992, *Whys and Ways of Science: Introducing Philosophical and Sociological Theories of Science*, Melbourne University Press, Carlton.

Sides, C.H. 1992, *How to Write and Present Technical Information*, Cambridge University Press, Oakleigh.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Private Study	140
Tutorial	20

ASSESSMENT DETAILS

Description	Marks Out of	Wtg(%)	Required	Due Date
MODULE 1: SCIENT. MISCONDUCT	25.00	25.00	Y	22 Jul 2003
MODULE 2: SCIENTIFIC CRITIQUE	25.00	25.00	Y	22 Jul 2003
MODULE 3: ANIMAL ETHICS	25.00	25.00	Y	22 Jul 2003
MODULE 4: GRANT WRITING	25.00	25.00	Y	22 Jul 2003

IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:
To complete each of the assessment items satisfactorily, students must obtain at least 50% of the marks available for each assessment item.
- 3 Penalties for late submission of required work:
If students submit assignments after the due date without prior approval then a penalty of 5% of the total marks available for the assignment will apply for each working day late.
- 4 Requirements for student to be awarded a passing grade in the course:
To be assured of a passing grade, students must demonstrate, via the summative assessment items, that they have achieved the required minimum standards in relation to the objectives of the course by satisfactorily completing all summative assessment items.
- 5 Method used to combine assessment results to attain final grade:

The final grades for students will be assigned on the basis of the weighted aggregate of the marks obtained for each of the summative assessment items in the course.

6 Examination information:

There is no examination in this course.

7 Examination period when Deferred/Supplementary examinations will be held:

There will be no Deferred or Supplementary examinations in this course.

8 University Regulations:

Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/SECARIAT/calendar/Part5/> or in the printed version of the current USQ Handbook.